PUBLIC

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET IN COMMITTEE ROOM 1, PARLIAMENT HOUSE, HOBART ON TUESDAY, 23 FEBRUARY 2020

TASMAN HIGHWAY INTELLIGENT TRANSPORT SYSTEMS

Mr TIM BICKERSTAFF, PROJECT SPONSOR, MANAGER NETWORK PERFORMANCE, **Ms SUK MAAN KONG**, PROJECT MANAGER, STATE ROADS AND **Mr IAN BOOTH**, PROJECT MANAGEMENT TEAM LEADER, DEPARTMENT OF STATE GROWTH, WERE CALLED, MADE THE STATUTORY DECLARATIION AND WERE EXAMINED.

CHAIR - I would like to introduce the committee - Felix Ellis MP, Jacquie Petrusma MP, Jen Butler MP, and Rob Valentine MLC; and secretary Scott Hennessy and Rosemary and Karen on Hansard. Apologies from Tania Rattray MLC.

Welcome members of the public who may be tuning in today to the hearing. It is always good to be able to offer these proceedings to members of the public who have an interest.

Welcome to the Parliamentary Standing Committee on Public Works and welcome also to the members of the public.

The Public Works Committee is a joint standing committee of parliament charged with the examination of particular public works such as we have referred to today.

I would like to read a statement to the witnesses, and I thank you for the earlier site visit provided for us, which was quite informative. It is a privilege to welcome you here today to provide evidence but before you begin giving your evidence, I will inform you of some of the important aspects of committee proceedings.

A committee hearing is a proceeding in parliament. This means it receives the protection of parliamentary privilege. This is an important legal protection that allows individuals giving evidence to a parliamentary committee to speak with complete freedom without the fear of being sued or questioned in any court or place out of parliament. It applies to ensure parliament receives the very best information in conducting its inquiries.

It is important to be aware that this protection is not afforded to you if statements that may be defamatory are repeated or referred to by you outside the confines of parliamentary proceedings. This is a public hearing and members of the public and journalists may be present and this means your evidence may be reported.

Do you understand?

Messrs BICKERSTAFF and BOOTH and Ms KONG - Yes.

CHAIR - Thank you.

There is an opportunity for an opening statement and I believe you have a presentation to make so over to you.

Ms KONG - Thank you, Chair. We will go through with an agenda today for the Tasman Highway Intelligent Transport System. The agenda today will start with a background, objectives, funding, stakeholders, on-road travel information systems, lane use management system, the key dates and the questions towards the end.

The background of this project - this project is part of the Greater Hobart Transport Vision under the Hobart City Deal. This project comprises two main components - OTIS at various locations around Greater Hobart, including variable message signs and new traffic cameras, and for the Tasman Bridge, LUMS to replace existing lane control system.

The objective of the project is aimed at improving travel times and network efficiency and improving the work health and safety outcomes of the user management of the traffic flow system, including tidal flow transition.

The project will make the network more resilient and able to accommodate changes in traffic conditions that may arise due to crashes, breakdowns or other unplanned events.

This project is jointly funded by the Australian Government and the Tasmanian Government, and the available budget is $23 million. The delivery of the project will be across two financial years, which is financial year 2021 and financial year 2021-22.

The stakeholder engagement will be a critical part of this project. The project is high profile as the Tasman Bridge is the highest volume road in Tasmania. The locations of the OTIS signs have also been chosen to maximise exposure to our users.

Some of the key stakeholders for this project are listed here. The Tasmanian Government and the Australian Government are the funding sources for this project and the project is a part of the Hobart City Deal. The Department of State Growth is the state road agency and is the asset owner of the Tasman Bridge and the state road network. Emergency Services are important only as road users and in incident response, but Tasmania Police also has infrastructure on the Tasman Bridge that will need to be retained, including speed and surveillance cameras.

TasPorts has a range of assets on the Tasman Bridge, including navigational aids. They also have the ability to stop traffic on approach to the bridge, which they do when large ships pass underneath.

Various local government authorities are involved, particularly in relation to the OTIS component of the project, with some of the proposed sign locations on council-owned roads. The Tasman Bridge and many of the other roads affected by this project are key public transport routes.

Finally, the general public is one of the most important stakeholder groups as the ultimate beneficiary of the project, but also as a group with significant potential for disruption and impact during the construction and commissioning of the project. Management of these impacts will be critical tasks during the project.

The map now being presented shows location of the proposed OTIS signs. They span across multiple municipalities, which are in Hobart, Glenorchy, Kingborough and Clarence. This is a detailed list of the indicative location of the proposed OTIS signs.

Here are some examples of the type of signs we are anticipating. The specific type of sign will depend on a range of factors including the speed, environment and number of lanes. The key objective of all the signs will be to display travel times, but also messages related to incidents when they occur.

Tasman Bridge lane use management system - this is the LUMS part. The Tasman Bridge links the Tasman Highway from Queens Domain to the Eastern Shore in Hobart, Tasmania. It is one of the most critical roads in Tasmania and carries the highest daily volumes of traffic of any road in Tasmania. The existing gantry locations can be seen in the slide: starting on the western shore, gantry 1 is located near the intersection of Tasman Highway and Davey Street and the project extends past gantry 13 to the East Derwent Highway interchange and Tasman Highway.

The bridge consists of five lanes, the middle lane of these changes direction of traffic flow to provide additional capacity for inbound traffic during the morning peak period weekdays and is referred to as 'tidal flow control'.

The existing version of the legacy lane control system dates back to the early 1990s and is bespoke, unsupported and gives limited operator flexibility. The new system delivered through the project will provide a level of tidal flow automation, a new tidal flow methodology, more flexibility, say, for operations, more reliability and a better road user experience.

The Tasman Bridge LUMS project corridor will be a fully managed intelligent transport system solution with CCTV, AID (Automatic Incident Detection), OHVD (Over Height Vehicle Detection), VMS (Variable Message Signs) and LUMS (Lane Use Management System) in key locations. There is also work on ITS (Information Technology System) cabinets and electrical and communications cabling.

This is an example of the existing lane control system which we saw in the site visit earlier. The current tidal flow and lane control system incorporates a range of devices that advise operators of the middle lane availability, and includes overhead gantries that show static traffic signs and physical delineation barriers.

The Department of State Growth engages the services of a contractor to provide installation of physical traffic control barriers for tidal flow control every weekday. In this slide you can see how the current system display the lane available at gantry 8 heading east. The centre lane has a sliding sign that changes between the directional signage at 'No Entry'. All lanes on this gantry have lane control symbols.

Here is another example of the existing lane control system and the gantry. There are differences between gantries along the Tasman Highway and the bridge corridor. In this slide you can see gantries 7 and 6 only in the eastbound direction. The gantry on the left has a sliding sign and lane status symbols, whereas the gantry on the right has only lane status symbols.

Here are some key dates for the delivery of the project. The project is currently being advertised and will close in March. It is anticipated that the contract will be happening in April, with the design commencing shortly after that. We expect the construction and installation of OTIS signs later in July and the construction and installation of LUMS in late 2021. The project will be completed in June 2022. That is the end of my presentation, thank you.

CHAIR - Thank you. Do you have any further comments in your opening statement?

Mr BICKERSTAFF - No, I don't think so.

CHAIR - It's open to our members to ask questions. I usually provide an opportunity for an overview question to be asked - does any member have an overview question or are we happy to go through the report? Okay, we will go through the submission. We usually do the submission page by page to make sure we have been thorough and haven't missed anything. As there aren't any page numbers. I will go by section numbers. Does anyone have any questions on section 1.2, the project summary?

Mrs PETRUSMA - Chair, I suppose this is an overview question, as well as all these points, and also to follow on from the presentation. I live on the Eastern Shore in Lauderdale, so each day I can choose to go by either the South Arm Highway or the Tasman Highway. For somebody who lives on the Eastern Shore, what is the main advantage of these new systems? What is the benefit going to be to road users?

Ms KONG - We have a few signs on South Arm Highway and a couple of them on the Tasman Highway. As you approach from either way, you will have an early warning telling you whether there are any incidents, along with traffic conditions and travel time.

CHAIR - Where on the South Arm Highway is that?

Mr BICKERSTAFF - It would be prior to the turn off at Shoreline. You have the option of deciding to continue on the South Arm Highway or potentially travelling on the Tasman Highway.

CHAIR - As we heard during the onsite briefing, a kilometre from that point, maybe there would be a sign?

Mr BICKERSTAFF - I am not sure of the exact distance, but it is plenty of time to make that decision.

CHAIR - And change lanes if necessary.

Mr BICKERSTAFF - The key benefit of all the signs is the information they provide to motorists that allow you to understand what conditions you might be encountering on your journey. It is to explain any delays you might be experiencing and to give you that information and peace of mind that you are not just sitting in traffic for no reason.

Mrs PETRUSMA - Do you perceive it will help with congestion? We are one of the most congested cities in Australia, so how do you think this will help smooth traffic flow?

Mr BICKERSTAFF - There are a number of elements to that. We can provide information to people when an incident has created congestion, and that can allow people to decide to change their behaviour to avoid adding to that congestion. They can take an alternate route or perhaps decide to turn around and try again a bit later when the conditions have cleared. That is the OTIS, the On Road Travel Information Service. The LUMS will allow us greater control over the way traffic flows over the Tasman Bridge, which is a highly susceptible location for crashes, and will allow us greater control of what happens. When an incident does

happen, we have greater control of how we can manage traffic to flow past or around that incident to minimise the delays they might experience.

CHAIR - Regarding the Tasman Bridge arrangements there at the moment - what's the number of staff involved compared to what the number of staff might be under a new system?

Mr BICKERSTAFF - We don't have detailed understanding of what the future staffing arrangements might be. The intent is to greatly increase the automation and reduce the manual elements of that tidal flow system. The staff involved in the tidal flow transition at the moment also do other duties in terms of maintenance on the bridge. As to the overall number of staff involved in maintaining the bridge, I am not sure at this stage.

CHAIR - That is a contract at the moment, isn't it?

Mr BICKERSTAFF - Yes, it is.

Mrs PETRUSMA - With the new lane use and management system on the bridge, we have the current situation where at 7 a.m. it changed to three, then after 9 a.m., it changes to two. If some accident happened later on in the day, would it now be more flexible in the future where, say, if there is a backlog all the way through to Hobart, you could potentially open up four lanes if needed to get people across? It probably wouldn't work at the end, but it allows more flexibility during the day, instead of only being restricted between 7 a.m. and 9 a.m., if need be, to clear congestion, wherever it may be?

Mr BICKERSTAFF - Absolutely. Yes, the system as it is at the moment is fairly limited in how we can apply it. The new system will give us a lot more flexibility, subject to detailed planning and business rules around what scenarios we will permit and can do safely - but yes, there will be greater flexibility to respond to conditions as they arise.

Ms BUTLER - In relation to the expanded traffic camera coverage, is there a possibility that other agencies may also be able to access that expanded camera coverage, such as Tasmania Police when undertaking investigations and so forth? Could that be a benefit across government?

Mr BICKERSTAFF - Absolutely. Our traffic cameras are at the moment made available to Tasmania Police, so they have access to them in real time. We do not record our traffic cameras at the moment, and that is a policy decision we have taken for now. In order to record, there are a few things we would need to do, but it is something we have considered.

Ms BUTLER - Quite a horrible incident happened in Davey Street, but they went over the Tasman Bridge on their way there. Police being able to tap into an expanded camera system to see where things are happening could be of benefit as well.

Mr BICKERSTAFF - Yes, absolutely. Certainly, we are working closely with Tasmania Police. In their radio room, they have vision from all our cameras up on their wall, so they are seeing what we are seeing.

Ms BUTLER - So there will be more?

Mr BICKERSTAFF - In real time, yes.

CHAIR - But in the approval of this today, we are not considering this aspect, presumably, with regard to what the police may or may not do. That is for other jurisdictions to be concerned with.

To the next page, section 1.3, there was a little bit of a technical problem, because the maps shown did not actually have the yellow on them. I do not know what happened there. It may have been on the original that came through.

Mrs PETRUSMA - Chair, the version Scott sent through on email had the -

CHAIR - By email it did, yes. I went off the hard copy, as I like to make notes on my hard copy, but we have them listed and we certainly understand.

I will ask a question about one on that page - the draft for VMS locations, where it says Southern Outlet northbound, south of Olinda Grove. At that point, I think that is not the Southern Outlet?

Mr BICKERSTAFF - That location is basically the border between the Kingborough Council area and the City of Hobart council area. If you can picture it as you drive through, there is a phone booth -

CHAIR - A small roundabout?

Mr BICKERSTAFF - No, this is on the main line of the Southern Outlet, so you have the opportunity to divert at Olinda Grove if needed.

CHAIR - Okay. It says south of Olinda Grove. I am thinking Olinda Grove is some way in and south of that?

Mr BICKERSTAFF - South of the Olinda Grove interchange.

CHAIR - Okay, it is clarified.

Mrs PETRUSMA - Further to that question, Chair, how would these final 13 locations be selected. Is it only to allow the approximate kilometre distance before the next available route change?

Mr BICKERSTAFF - Yes. The process of identifying locations was one of thinking through, what are the key arterials and roads that are used by people travelling around that network? Where are locations where they might want to be able to take an alternative route? The signs we've identified create opportunities for people to have that information before they reach a decision point.

In a perfect world, you might have information on every single block, but that becomes too much for motorists to deal with, so we've tried to be strategic in providing information at key locations where those major decision points are.

Ms BUTLER - For the record, why is there the turn-off at Granton, where the Brooker Highway meets the Lyell Highway, just before the Bridgewater Bridge - that's a really congested area around there. Is that because Granton is just outside the Glenorchy City Council cut-off? Why wasn't that on here?

Mr BICKERSTAFF - I guess the current planning and ultimate construction of the new Bridgewater Bridge will change arrangements in that area, and that project may have similar sorts of facilities for providing information as part of that project.

Ms BUTLER - Thank you.

CHAIR - Are there any further questions on that page? Across to the next - it all seems pretty straightforward. Over to Operations Management and Control System.

Mrs PETRUSMA - Chair, it says -

> "The OMCS used by State Growth is based on the Transmax STREAMS product …"

Can you explain what that is, please?

Mr BICKERSTAFF - Sure. Transmax is a subsidiary company to the Queensland Government, in fact. Streams is a software it has produced, and it's a way of bringing a whole lot of different systems together into one interface that allows for integration and efficiencies in the way those are operated from one location, rather than having to go to several different applications to run.

Mrs PETRUSMA - Does that mean it's something that can be used now and in the future? If it's owned by the Queensland Government, it will probably stay timely and up to date - is that what your rationale is?

Mr BICKERSTAFF - Yes, it's widely used around Australia. As a department we've used the software for several years, and we continue to expand our use of it. This system is facilitating the upgrade of OTIS and LUMS.

CHAIR - Is that system maintained by Queensland Government personnel?

Mr BICKERSTAFF - It is maintained by Transmax - I guess it's a government-owned business.

CHAIR - Okay. It's a government business enterprise, in effect. For clarity, was there a feasibility study in relation to this project?

Mr BICKERSTAFF - No. The upgrade of the lane control system is something that we need to do to maintain its operation, and the OTIS elements were something identified as a way we can manage the network more efficiently.

CHAIR - For the record, the current system was introduced in 1990, did you say?

Mr BICKERSTAFF - In the 1990s.

CHAIR - And is running on a DOS system.

Mr BICKERSTAFF - Windows 95 now, I think.

CHAIR - Just for members of the public to be made aware of that. That's fair enough.

Mr ELLIS - Chair, I imagine there'd be efficiencies to be gained by bringing the OTIS and the LUMS systems together on the same software, and the ability to talk across the networks about the status of both?

Mr BICKERSTAFF - Absolutely. The value of the OMCS as a system is that, with a single click, we can control a number of different systems, and do that very quickly and efficiently. In an incident response that's very helpful. We don't have to think about what message we put on this VMS while we think about the message. We've already planned that out.

We press one button and all the messages are deployed based on a predefined response plan, and each system and device talks to the OMCS, so we know when it's malfunctioning or when it has a fault, and we can respond to that as well.

Mrs PETRUSMA - How long has the Transmax been operating in Tasmania now?

Mr BICKERSTAFF - I do not have a precise date for you - several years. Our use of it has been limited up until very recently.

CHAIR - You actually make a statement the OMCS has the capability to integrate with various systems currently used and other systems in the future. Do you have any other systems you can tell us about today that might be on the drawing board?

Mr BICKERSTAFF - The Lane Use Management System is the main one that we do not know what system that will be. One of the requirements of the tender is that it does integrate with the STREAMS product.

CHAIR - Presumably the STREAMS product has quite a few aspects in terms of traffic management. Would you like to explain?

Mr BICKERSTAFF - STREAMS is a software that brings together lots of separate systems. The systems that run the speed limit signs go into STREAMS. The traffic lights talk to STREAMS; our cameras can go through STREAMS. It is just a way of coordinating.

CHAIR - That explains it well. Any other questions on that page?

Ms BUTLER - I have a question on the network operations planning. I am not sure whether Ian or Tim is best to answer this question. Has staggering school start times - for example, with Collegiate sitting up the top of Hobart just as the Southern Outlet traffic comes down - been explored at all as another potential avenue to reduce congestion in Hobart CBD? The system has been well established in places such as Newcastle with great success and very minimal cost.

Mr BICKERSTAFF - I am not aware of any conversation on school start times.

Mr BOOTH - I am not either; it is not in our area.

CHAIR - It is outside the project scope I would suggest.

Ms BUTLER - It could very much assist with breaking down that congestion, as this will.

CHAIR - At the moment we are doing the Greater Hobart traffic inquiry, which I cannot talk about because we have not finished. There are lots of submissions that suggest all sorts of things and certainly an area of interest for many. With regard to the projects scope, any questions?

Mrs PETRUSMA - In regards to the current lane control system - when you talk about the contraflow lane and how it is has passed its serviceable life and requires urgent replacement, can you please explain more?

Mr BICKERSTAFF - The software that runs the system is on Windows 95 and a operating system developed for the department back in the 1990s, and it was quite good then. It does not meet contemporary practices and standards for a lane control system. The infrastructure in terms of the lights and things are also aging, so there are more frequently occurring minor faults indicative of needing to make sure we replace it to avoid those sorts of faults occurring in the future.

Mrs PETRUSMA - Also, because it is a safety issue in conjunction with the lane control system, it is also the fact before 7 o'clock in the morning that you have somebody going along and manually putting the barrier in the road and then at 9 o'clock going through. Can you explain what hopefully the vision might be in the future or what would road users experience at 7 and 9 o'clock in the morning under this new system?

Mr BICKERSTAFF - Hopefully road users do not experience too much change at all, but the efficiencies will be how quickly we can make that transition from one tidal flow state to another. It currently takes about half an hour; we are hoping we can reduce that time and also reduce the manual involvement of workers on the road during that transition time.

Mrs PETRUSMA - Somebody will not be physically going along and putting the barrier in the road?

Mr BICKERSTAFF - We need to wait to see what the tenderers put forward, but it is our hope that we do not have that exposure to live traffic.

CHAIR - It is an interesting issue. How you do that transition, because at the moment you have people physically on the truck putting in the candy sticks or whatever they call them? No doubt with an automated system you have traffic that is already on the bridge and having to cope with that, so you have to shut off first one end and then presumably wait.

Mr BICKERSTAFF - It is a very complicated process.

CHAIR - It is not a small procedure and potentially quite a dangerous circumstance if not done correctly.

Mr BICKERSTAFF - Absolutely, and that is part of the planning in process. The system will have checks and balances to make sure you cannot have two green lights conflicting with each other.

Mrs PETRUSMA - During the presentation, you mentioned it is the only bespoke sort of situation in Australia where this sort of lane change happens. Is that correct? Our bridge is the only one in Australia where somebody has to go along and physically put in the barriers in the road and take up again?

Mr BICKERSTAFF - I am not sure it is the only one in Australia, but it is certainly one of the only ones.

CHAIR - It is not common.

Mr BICKERSTAFF - No, it is not common, no. Other bridges use tidal flow. The Sydney Harbour Bridge still uses tidal flow. It still has some manual involvement as well as automated system.

CHAIR - There is a statement under Options Evaluation, second paragraph from the bottom -

> Only a small number of major road projects are planned in the Hobart area over the next couple of years. Installation of VMS and cameras associated with these products would result in some areas having good coverage while others would have no coverage. Importantly, the location of major road upgrades are unlikely to correspond with locations on the network where VMS would provide the most strategic advantage, consequently option1 is not preferred.

An interesting statement - can you expand on what sort of major upgrades are in the wind that causes this statement to be made?

Mr BICKERSTAFF - I guess the context of that statement is that if we were only to install variable message signage as part of the notice system at locations where we are doing a major project and can incorporate these signs into those, we are then limited to where those projects are occurring. The alternative we have adopted here is to put those signs where they provide strategic benefit to the travelling public.

If were to only look at locations where there was a road upgrade occurring, we would take a long time to do it.

Mr ELLIS - Would it be fair to say then, we are not going to build another Tasman Bridge and not necessarily build another Brooker Highway, so those major pieces of critical infrastructure that are already in there would not be having the system under that plan?

Mr BICKERSTAFF - Even if were going to do any of those projects, it is not going to happen in the immediate term. This is a problem we are trying to resolve for now and a more timely fix.

CHAIR - Fair enough.

Ms BUTLER - Even though I know that work is still out for tender, can you run through how the variable message signs might be powered?

Mr BICKERSTAFF - They will be connected to mains power.

Ms BUTLER - Will they have backups at all in case of emergencies?

Mr BICKERSTAFF - Yes, they will have an UPS, uninterruptable power supply, in case of power failure.

CHAIR - So that is part of the specification?

Mr BICKERSTAFF - Yes.

CHAIR - To recap again, what is the distance time to read? You were saying roughly a kilometre before the decision point needs to be made.

Mr BICKERSTAFF - Generally we have tried to locate them at locations where there is space to place them, but also to give drivers opportunities to respond to any messaging they might receive and change their route as they need to.

Mr ELLIS - I notice there is a lot of emphasis on utilising existing infrastructure. Is that about providing value for money for the taxpayer?

Mr BICKERSTAFF - Absolutely. In particular on the Tasman Bridge, gantries are already there. We would like to reuse those. They are still in good condition and we want to make sure we get the best value, if we can spend more money on signs and information rather than on replacing existing infrastructure.

CHAIR - You seem to be saying that land acquisition is not likely to be required to be able to put these signs in place?

Mr BICKERSTAFF - That is correct.

Ms BUTLER - I found the information you provided to us earlier this morning in relation to the sight distances with trucks going underneath the bridge quite interesting, with the signage alerting them to whether the truck is too high to go under that infrastructure.

Mr BICKERSTAFF - Sure. That was talking about over-height detection. For the protection of some of the structures on the bridge where traffic has to pass underneath another part of the road, we want to be able to alert any over-height vehicles that do make their way onto the bridge, that they are over-height and to guide them to take an alternate route that doesn't mean they clash with the bridge.

CHAIR - Would that include, for instance, as you are going under where the lower Domain Highway commences, so you are coming down the bridge and you do not go left at the lower Domain, you are going underneath; there are two separate heights there? The inside left lane has one height and the right-hand lane has another - would you expect those signs to be sophisticated enough to say use the right-hand lane, for instance?

Mr BICKERSTAFF - We will have to wait to see what comes through from the tenders. Certainly, we want to protect the lower height - that is critical. If we protect that, we are also doing the higher height.

CHAIR - I wondered whether it might give directions to use an alternate lane as opposed to taking an alternate route?

Mr BICKERSTAFF - Yes, we will have to wait.

CHAIR - You are not sure at this point.

Mr BICKERSTAFF - No, not at this early stage.

CHAIR - Moving over to the page that has project cost et cetera on it - any questions?

Mrs PETRUSMA - Chair, where it says 'Provide access for the TasPorts Control Room to remotely access signs to enable closure for shipping', will TasPorts be able to have access to put a message up, like 'Bridge closure for seven minutes' so that people who can see the ships going underneath it know they only have to wait three minutes, two minutes, whatever, so they know it is not forever?

Mr BICKERSTAFF - We will certainly have that potential to do that, and we will work with TasPorts to make sure we can have an appropriate message for people.

Mrs PETRUSMA - Yes. If you are coming from the Eastern Shore, people say 'Oh the bridge is closed for the next 10 minutes', so they know that it is not forever and they know it is not a serious accident or anything. It will help keep people a bit more patient.

Mr BICKERSTAFF - Absolutely.

CHAIR - With respect to the software, the tender security might be an issue. I am not suggesting that you outline precisely what sort of security is involved, but has the security of the software itself been considered in relation to hackability and all of those sorts of things?

Mr BICKERSTAFF - Yes.

Mrs PETRUSMA - With project costs, we have the P50 and P90, and in your presentation you mentioned that $23 million was allocated. We have $21.62 million and $20 million. Is the $21.62 million the best-case scenario but there is access up to the full $23 million if required? What is the difference between the two?

Ms KONG - Yes. At the time we submitted the documents, we have not got additional funding from the Australian Government and the state Government. Yes, we will have access to the full $23 million funding.

Ms BUTLER - Can you explain, for the record, the term 'escalation' and the costs associated with escalation, and what that is referring to?

Ms KONG - I will have to get back to you because that is an economist's term and I am not able to answer that for now.

CHAIR - Does anyone else know the answer to that question?

Mr BICKERSTAFF - I am afraid I do not. No, I don't sorry.

CHAIR - One would expect that it is simply a cost escalation through inflation as opposed to a contingency, which is extra things that have to be done, and that is funded.

Ms BUTLER - It is unusual to have it appear on financial sheets so that is why I am asking. I am sure it has a very good explanation.

CHAIR - If it is possible, can we get an answer to that before this hearing is over? We need to consider this project.

Mrs PETRUSMA - I have just done a quick Google, and cost escalation is 'changes in the cost or price of specific goods or services in a given economy over a period'. It is 'calculated by the examining the changes in price index measures for a good or service'. It is a forecast using economic metrics.

CHAIR - With all due respect to Google, it has to come from the witnesses. Is it possible for someone to make a phone call and clarify why there is the contingency and the escalation in those figures? We would appreciate that before the end of the hearing if we can.

Ms KONG - There will not be a short answer because a lot of formulas are sitting behind working out this escalation cost from the bell curve and probability and all those things.

CHAIR - An explanation as to what the difference is between the contingency and the escalation, obviously contingency is one thing, but escalation is another. We just want to know why there are two line items there and what they refer to. If you can't find out straightaway, that is fine, we will have to wait for a response to come back if there is a concern from the committee. If anyone needs to seek leave to go and find that out, that is fine.

Any further questions on that page? Moving over, anything on the budget profile? Questions on the project benefits?

Mrs PETRUSMA - The first dot point under OTIS talks about conveying messages to road users. How many words or sentences can be written on the board do we think? Will it be somebody who makes that decision as to what they type up, or is it going to be automated messages, or can somebody individually type an important message depending on the circumstances at the time?

Mr BICKERSTAFF - Each of the signs will have capacity to display at least three lines of text and each line will have at least 18 characters. The messages will be a mixture of preset

messages that we have determined, and the operator in the traffic maintenance centre will have the ability to develop their own message depending on the situation as well.

Mr ELLIS - I noted the section about offsetting the use of mobile phones. Is that essentially to provide people with the information in their road environment so they can access that safely rather than going on their phone while they are driving to figure out what the traffic is like?

Mr BICKERSTAFF - Absolutely.

CHAIR - Under the lane use management system on that page, the second last dot point -

> Mitigated safety risks for those workers positioned on the roadway being struck by vehicles, decreasing the likelihood of a fatal or serious injury to workers

Have there actually ever been any adverse events to date in the 30 years it has been operating that you are aware of?

Mr BICKERSTAFF - I am not aware of any significant injury incidents.

Ms BUTLER - Would the signage be able to alert if there were emergency vehicles coming through such as fire trucks or ambulances and so forth? Is there a mechanism for that? I know the Brooker Highway can get really congested.

Mr BICKERSTAFF - Yes. We are able to tailor the messaging that we put on those boards. What we can say in order to provide information, and how we can say it, will depend on the situation. It might be something like, 'Tow truck or fire truck approaching'. It may be something we can do, depending on the situation.

Ms BUTLER - Other countries and other locations use that signage for those kinds of messages and it works quite well, doesn't it?

Mr BICKERSTAFF - I am not sure. In theory it sounds like a really good idea. It's something we will explore when we have these signs and are using them.

Mrs PETRUSMA - In New Zealand, I saw they had signs like 'Traffic accident ahead, 40 kilometres per hour' sort of thing, so people knew the reason why the traffic is travelling along really slowly.

Ms BUTLER - Or 'Make way for emergency vehicles', or something like that.

Mrs PETRUSMA - Yes.

Ms KONG - The signs will definitely have that ability, and as Tim said, will be subject to business rules. We'll have preset messages and work out what kind of scenarios could happen.

CHAIR - Presumably, if you're travelling from Kingston up to town, and you get towards Mount Nelson and there's been an accident on the downhill side going into Hobart, they could simply say, 'Turn left to Proctors Road to avoid …'

Mr BICKERSTAFF - Yes, those are the sort of situations we can direct people to go a certain way, or even, despite the queue they might be in, that it's actually going to be quicker to stay on the Southern Outlet, for instance - so providing that information to them, rather than leaving it for people to make their own judgment.

CHAIR - To wonder?

Mr BICKERSTAFF - Yes.

CHAIR - It might give an estimated delay time, perhaps?

Mr BICKERSTAFF - Yes.

Ms BUTLER - Do you also do public safety-style messaging, such as making sure people don't drink when they drive, or 'Is your seat belt fastened?' Is that kind of messaging also available?

Mr BICKERSTAFF - Absolutely. We can show standard messages on these signs, yes.

CHAIR - It is an interesting thing, isn't it? I suppose the more non-traffic-related messages there are, the more people get a little bit immune to reading them.

Mr BICKERSTAFF - That's right. There's a balance between what we show, how many different messages we show, the wording we use. We need to make sure we don't create confusion, so we want to be quite clear in what we're saying on those signs.

CHAIR - Not ambiguous.

Mr BICKERSTAFF - Yes.

CHAIR - Any further questions on Finance and Procurement?

Mr ELLIS - The single design and construct contract approach - is that because there's a limited number of firms around the world that have a speciality in this kind of thing, so it's better for them to do start to finish?

Mr BICKERSTAFF - That's right, yes.

Mrs PETRUSMA - You still expect our local contractors to benefit, even though you might just have one head contractor? Do you expect local electricians and other businesses to benefit from the contract?

Mr BICKERSTAFF - Yes. There's a lot of different elements to this project that will require a number of different subcontractors and a lot of local knowledge and local involvement.

CHAIR - Does the tender documentation indicate that Tasmanian firms are to be used if possible, or don't they go that far?

Ms KONG - As a requirement?

CHAIR - Yes, in the specifications of the tender.

Ms KONG - Yes, it is one of the evaluation criteria that will be scored against local SMEs.

CHAIR - Okay, thank you.

Mrs PETRUSMA - Are you still expecting the submission closing date to be the end of March or mid-March?

Ms KONG - Mid-March.

CHAIR - Okay. Do we have any response yet to that question?

Mr BOOTH - Yes, we do. In response, the project's escalation is, as you described, to take into account the anticipated future costs of providing that service across the life of the project

CHAIR - Anticipated future costs?

Mr BOOTH - Those numbers are provided to us by the federal government and they are applied across all projects funded by the Australian Government. They have an index based on anticipated inflation and building cost increases.

CHAIR - A federal requirement, and the contingency is as normal?

Mr BOOTH - As per normal.

CHAIR - We appreciate you getting that, because it means we do not have to wait for an answer to come through.

Any other questions on section 6.2? I had one about short and succinct messages, but that has been answered. Section 7, Stakeholder Engagement?

Mrs PETRUSMA - Chair, looking at the list provided, are organisations like the RACT and Metro involved at all, and other emergency services like Tasmania Ambulance and Tasmania Fire Service, as well as Tasmania Police? I am interested in stakeholder engagement.

Ms KONG - At that point we submitted the submission, it has not been listed among our key stakeholders, but we can take that into consideration.

Mrs PETRUSMA - The RACT is very interested - whether it is ferries or other congestion measures - and Metro, our major transport provider.

CHAIR - It raises a question about public input. I notice it is considered a low risk in Appendix A. Given the fact that you are expecting the public to respond to this, what sort of interaction are you going to undertake with members of the public to gauge their acceptance or otherwise of it?

After all, while it may be low risk in relation to the technical project, it may not be low risk in relation to whether they accept it or not, and you might have a big outcry. I am not suggesting there will be, but I am asking whether you have considered that. Why is the public considered a low risk?

Ms KONG - It is the Government's commitment to have this project delivered. At this point, we have decided that the members of the public will be informed on the approach. We will work closely with our preferred contractor as design and construction are progressing, and develop our stakeholder engagement plan. That is a live document that we will update progressively.

CHAIR - Would you expect that, for instance, it might involve a website where information is put up for public consumption, and members of the public are invited to comment? Is that the sort of thing that might occur?

Ms KONG - That is one of our standard approaches, but we will be working in conjunction with the contractor. At this stage, it is our standard approach, but it will be up to the contractor to propose that to us, and then we will work together.

CHAIR - That will be part of your assessment?

Ms KONG - Yes.

CHAIR - Any questions under section 7.2, Record of Stakeholder Consultation?

You are working with each of the individual councils, The submission says under section 7.2, Type of Consultation -

> Individual online meeting with stakeholders - City of Hobart, City of Clarence, Glenorchy City Council, Kingborough Council, Tasmania Police, TasPorts

Would you expect that each of those councils would be communicating with their communities to provide feedback into this or not?

Ms KONG - I cannot speculate on that but we would definitely keep them informed and then it is up to the individual council as to how it wants to communicate to members of the public.

CHAIR - Okay.

Ms BUTLER - Would there potentially be some of those sign sites that may be really close to residential properties, causing a visual issue if they were on during night-time?

Mr BICKERSTAFF - Some of them may be relatively close to residential properties. The brightness of the signs is adjustable based on the ambient light, so they become less bright at night.

CHAIR - Just like your iPhone?

Mr BICKERSTAFF - Yes. We would hope that any of those sorts of visual impacts to non-road users would be minimal, but that is something the contractors will work through as they design these sites and seek the relevant approvals for them.

Ms BUTLER - I could see that potentially being maybe an issue with the community consultation side of things.

CHAIR - They say under 7.3 -

> It is not likely that the project will directly impact private landowners or require property acquisition.

The issue of light is something else, I suppose. Looking at where they are placed, I do not think it might be.

Ms BUTLER - They are built-up areas pretty much too, aren't they? By the looks of it.

CHAIR - I don't think it is likely to be a concern, nevertheless it's a good point. Compliance, any questions under compliance? Are there any issues under section 8.1 posed by acts that are mentioned?

Mr ELLIS - Would it be fair to say that because a lot of it is existing infrastructure that there are not too many compliance issues in terms of heritage or environment, noise and those kinds of things?

Mr BICKERSTAFF - We are anticipating that to be the case, yes.

CHAIR - Nothing under those acts needs to be met that you see as a possible concern?

Mr BICKERSTAFF - No.

CHAIR - Section 8.3 says

> All work under the Contract shall comply with the following requirements:

Then you have three dot points listed there about avoiding, minimising and offsetting removal of native vegetation during construction, avoiding injury to fauna or damage to protected vegetation or habitat. It seems to have covered that area significantly.

Section 8.4 as we note, even today, is about Aboriginal and historic heritage. You are not expecting any concern there at all? Established highways, no new greenfields?

Mr BICKERSTAFF - Most of the sites are within the road reserve and are already disturbed locations so we are not anticipating those sorts of acts.

CHAIR - You say -

> The Contractor will prepare an Unanticipated Discovery Plan to ensure appropriate response in the event that an item, site or object of Aboriginal Cultural Heritage is discovered that could not have otherwise been anticipated.

Are they directed as to whom to work with?

Ms KONG - Yes it will be under all the guidelines of the Aboriginal Heritage website. It is all standard.

CHAIR - Okay. Section 8.5 -

> It is expected that this project will be exempt from the need for planning permits. This will be confirmed by the Contractor prior to works commencing.

I am aware a number of local government areas have signage rules. You don't think that is likely to be an issue?

Ms KONG - We have had an online meeting with them, as listed in that document. None of them has raised any concerns at the time of the meeting so we are not expecting we will need a DA - but we will still have to go through the process and check.

CHAIR - Of course. Thank you.

Any other questions? That leaves the appendix - any questions that have not already been asked with respect to the appendix to do with the Stakeholder and Community Engagement Plan? That is where I picked up on the members of the public being a low interest and low influence with level of engagement inform stakeholder or classification other . It seems they are going to receive information as opposed to having the opportunity to be consulted. That is why I asked the earlier question. I do not want to put words into your mouth, but it might be up to the councils to consult with the people. Is that what you are saying?

Ms KONG - At this time, the plan is not to consult with members of the public because we are not expecting the public to have input into the technical side where we are now.

In relation to the disruption during traffic, it will be mostly nightwork - things have to get built but hopefully a short-term pain because everyone wants to have this congestion issue tackled.

CHAIR - So you are saying it will provide them with benefits not detriments? Is that what you are saying? You would hope.

Ms KONG - Yes.

CHAIR - Fair enough.

Mrs PETRUSMA - With regard to point (9), which is to 'complete work after hours'.

CHAIR - What page are you on?

Mrs PETRUSMA - The same page - page 17, point 9 - risk number 9. You expect that a lot of the work, especially for the VMS would be after-hours installation and it says - 'Liaison with TasPorts regarding shipping times and schedules'.

What sort of liaison happens now with TasPorts? Do you suggest the ships go through at times of the day when traffic is lighter? Is that what occurs now?

Mr BICKERSTAFF - We have an agreement with TasPorts that it does not send ships under the bridge at peak traffic times. There is a window during the day and after-hours they use. If we need to schedule works on the bridge. we need to make sure they are not sending a boat through at that time; they have told us they have some flexibility in the timing of some of those shipping movements.

CHAIR - Are there any further questions on the appendix?

Ms BUTLER - In Appendix A under the Stakeholder Risk and Opportunities Classification Tool at point 3, Complaints about drone usage for traffic survey. Are we doing this at the moment or can you explain what that means?

Mr BICKERSTAFF - At that time we anticipate we might need to do a traffic survey using drones to get an aerial view of merging and weaving behaviour, but we have not done that survey.

Ms KONG - That has now been removed from the scope.

Ms BUTLER - The one underneath - Complaints about privacy concerns where data goes. We touched on that briefly when you said most of the camera footage is not actually recorded.

Mr BICKERSTAFF - The camera is not recording.

Ms BUTLER - So that eliminates the privacy concerns?

Mr BICKERSTAFF - Yes.

Ms BUTLER - Okay, thank you.

CHAIR - There is no different footage data being captured than there would presently be able at the moment?

Mr BICKERSTAFF - Correct.

CHAIR - It is just in a different number of places?

Mr BICKERSTAFF - Yes.

CHAIR - Any further questions? No?

Our hearing is coming to an end except I have some significant questions that we ask at each of these hearings. I would like to move through those, and have you answer them.

Do the proposed works meet an identified need or needs, or solve a recognised problem?

Mr BICKERSTAFF - Yes.

CHAIR - Are the proposed works the best solution to meet identified needs, or solve a recognised problem within the allocated budget?

Mr BICKERSTAFF - Yes.

CHAIR - Are the proposed works fit for purpose?

Mr BICKERSTAFF - Yes.

CHAIR - Do the proposed works provide value for money?

Mr BICKERSTAFF - Yes.

CHAIR - Are the proposed works a good use of public funds?

Mr BICKERSTAFF - Yes.

CHAIR - Thank you.

I remind you again about parliamentary privilege. When you leave the hearing and are questioned by the media, or by anyone else, as to anything you may have or may not have said at the hearing, you are not covered by parliamentary privilege once you leave here.

Thank you for coming along and providing the submission. It is good to get the fullest information possible when we are making our decisions on these things.

THE WITNESSES WITHDREW.