PUBLIC

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET IN COMMITTEE ROOM 1, AT PARLIAMENT HOUSE ON THURSDAY, 19 AUGUST 2021

NEW BRIDGEWATER BRIDGE

BEN MOLONEY, PROJECT DIRECTOR, **MIA POTTER**, PROJECT MANAGER, **LAURA MIDDLETON**, PROJECT MANAGER and **KEVIN BOURNE**, DEPUTY PROJECT DIRECTOR, DEPARTMENT of STATE GROWTH WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR (Mr VALENTINE) - I have a statement to read and it is important that you understand what I am about to read. I will ask you for a 'yes' from each of you at the end.

Thank you for appearing. It is very important that we hear your evidence today. Before we begin giving your evidence, I want to inform you of some important aspects of committee proceedings.

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

It applies to ensure that parliament receives the very best information when conducting its inquiries. It is important to be aware that this protection is not accorded to you if statements that may be defamatory are repeated or referred to by you outside the confines of the parliamentary proceedings.

It is a public hearing and members of the public and journalists may be present or online and this means your evidence may be reported.

Do you understand?

Ms POTTER - Yes.

Mr BOURNE - Yes.

Mr MOLONEY - Yes.

Ms MIDDLETON - Yes.

CHAIR - Thank you very much. Would you like to make an opening statement?

Mr MOLONEY - Today we are seeking consideration of the new Bridgewater Bridge project which is supported by an informal $576 million commitment from the Australian and Tasmanian governments which is part of the Hobart City Deal. The existing Bridgewater Bridge was completed in 1946 and is the fourth bridge to be built at this crossing point.

In 2016 its replacement within five to ten years was identified as a priority on Infrastructure Australia's Infrastructure Priority List. I am sure everyone in this room has driven over the Bridgewater Bridge many times and most are likely to have been held up in traffic, particularly during those peak travel times.

Despite connecting the National Land Transport Network at either end the existing bridge and causeway provide a single traffic lane in each direction with a speed limit of 60 kilometres per hour. The bridge's lifting span is unreliable, the structure is expensive to maintain and the bridge and causeway do not meet contemporary general and geometric design requirements. Essentially there is insufficient lane and shoulder widths, there is unsafe and insufficient space for cyclists and pedestrians. In addition to traffic congestion and safety issues, the restrictive height and weight limits are impacting on the ability of freight operators and producers to transport their goods efficiently across the state.

It is clear from these key points that there is a need for the replacement of this important link between the Brooker and Midland highways. The primary objective of our project is to deliver a new crossing of the River Derwent between Granton and Bridgewater that provides an efficient, high standard connection for the Brooker and Midland highways that reliably meets the standards required of a national land transport network.

The secondary objective is to provide safe and efficient connection to the Lyell Highway and for local traffic movements.

A comprehensive options evaluation process has been undertaken supported by, and to inform, extensive site investigations. This information has been used to inform stakeholder consultation, design development and the planning approval process. To allow input and expert advice from the construction industry, the Tasmanian Government chose to use an early contractor involvement procurement process to deliver the project and the project team has been working closely with two short-listed tenderers over the past eight months as they have developed their designs and tenders. The evaluation of tenders has commenced and the project is on track to engage the preferred tenderer by the end of this year. While a final design is still being determined through the competitive ECI process the new bridge will include two lanes of traffic in each direction, a minimum 80 kilometres an hour speed limit, a shared path for cyclists and pedestrians, a navigation clearance consistent with the Bowen Bridge. The design will not preclude the future use of the existing rail corridor.

Stakeholder engagement has been a critical part of this project to date and will continue to be right through construction. We have been open and transparent with our stakeholders including residents and landowners directly impacted by the project. We have been forthcoming in the information we have provided to the public at every stage.

All feedback that we have received from the community consultation engagement has helped inform our competitive design process. This is also the first project to utilise Tasmania's new major projects assessment pathway which provides a transparent process with significant opportunities for consultation and engagement with the community, regulators, state agencies, councils, directly affected landowners and adjacent property owners.

The major projects process is a robust process that covers a broad range of impacts and at this stage we expect public exhibition prior to the end of this year and to be receiving planning approval early in 2022. Once planning approval has been secured, major construction

will commence and the project is on schedule to be using the new bridge, sorry is on schedule for traffic to be using the new bridge by (inaudible) 2024.

The project represents the next stage in the evolution of a crossing between Granton and Bridgewater and will meet Tasmania's current and long-term transport needs.

In conclusion, the project is needed; it is a good use of taxpayer's money. The detailed investigations undertaken by the state informing both the competitive contractors, early contractor involvement procurement process and the concurrent major-project planning processes will ensure that the solution will be selected and delivered to meet the identified needs in the most cost-effective and responsible way.

The preferred tenderers' developed design and tendered lump-sum price will be presented to the Australian and Tasmanian governments for confirmation of funding and approval of award by the end of this year.

Thank you for this opportunity to present the project to the Parliamentary Standing Committee on Public Works. Before the hearing progresses it is important for me to note that matters relating to the commercial-in-confidence tenders for the design and construction of the project cannot be discussed at this public hearing.

CHAIR - Thank you very much for that. Now, can I point out that there is a need to make sure that we speak right into the microphone for the purposes of *Hansard*. It's important that they're able to hear exactly what is being said and to have the recording progress sweetly so if we can just keep that in mind that would be very much appreciated.

Now, as we get under way, normally what we do is we go through page by page of the submission to make sure that we're not missing anything but we do have a process where I allow members to ask an overview question and there are a couple of overview questions certainly that I have, and I'll commence the process and then members can indicate whether they wish to raise anything.

The first thing is to clarify that what we are dealing with here is a four-lane bridge not two. The reference design I believe may have been a two-lane bridge in the first instance but what we have before us in the submission is definitely a four-lane bridge. Can you confirm that?

Mr MOLONEY - The objective of the project is to deliver a four-lane bridge. Our reference design proposed constructing a two-lane new bridge adjacent to the existing causeway and crossing. Having completed that, traffic would then be transferred onto that two-lane new bridge and then a second structure would be built on the alignment of the existing causeway providing the further two lanes. So the reference design upon completion would still provide four lanes. Two lanes in each direction and would also include the pedestrian path.

CHAIR - Okay. I just wanted to get that absolutely clear in people's minds. The other point is in terms of it coming to the committee now as opposed to once federal funding had been agreed. Quite clearly, we have a series of questions that we ask at the end of each of our hearings about meeting identified needs and solving recognised problems, value for money, good use of public funds et cetera.

Without the federal government having ticked off on it, one might question what is it that is their concern and why are we hearing this now when we don't have that complete understanding as to whether the funding is going to be provided and it indeed will progress in the form that we have before us? I don't know whether there is any comment you can make in regard to that?

Mr MOLONEY - In terms of the formal commitment of funds, we go through a process. It's common for all major projects where projects are required to submit project proposal reports to the Australian Government for approval for formal commitment of funds. For less complicated projects often you can submit one report fairly early in the process and receive confirmation of funding, but projects of this scale and complexity quite often you need to submit multiple reports.

We have submitted and obtained approval from the Australian Government for our scoping and development phase which brings us through to the end of this year and we will be submitting our delivery phase project proposal report before the end of the year to secure the money for the delivery phase.

One of the aspects that came out of the review by Infrastructure Australia when they examined this project a number of years ago was they recommended obtaining greater certainty around the cost of the project. By undertaking the early contractor involvement process we are able to provide both the state of Tasmania and also Australia with greater certainty by being able to present a fully costed developed design by a capable contractor who is able to commit to delivering that project within the timeframes that we've specified.

CHAIR - The basic facility that's being dealt with today is unlikely to change in itself. It is going to be a four-lane bridge, it is going to be in the location. It is going to smaller, perhaps, tweaks to design that we are dealing with that may be dealt with after we deal with this.

Mr MOLONEY - That is correct in the sense that we have documented in the report to the Parliamentary Standing Committee the key objectives and functional requirements that we will be delivering and that includes two traffic lanes in both directions, a total of four lanes, a pedestrian path, a minimum speed limit of 80 kilometres per hour and safe and efficient interchanges at either end of the bridge.

CHAIR - Thank you for that. Does any other member have an overview question?

Ms RATTRAY - In regard to that informal funding as you referred to, what if the Australian Government says no? If they say no, they don't approve the concept plans and the designs and the funding costings that have been put forward, can they halt the project?

Mr MOLONEY - It's probably best for me to say my understanding is that both the Australian and Tasmanian Governments are fully committed to the project. They have indicated in principle agreement for the funding of the project at $576 million. We are putting together our final project proposal report for consideration. I can't speculate on what would be the case; however, we are working very closely with the Australian Government, we have representatives of the Australian Government on our steering committee and assisting to assure the project proposal with what we present to the Australian Government can be given appropriate consideration.

Ms RATTRAY - That feedback goes back to Infrastructure Australia. Is that correct?

Mr MOLONEY - The project proposal we have brought will be submitted to the Australian Government for consideration and it is up to them to work out who they refer it to if they require further information in that space. In the report we have sought to identify what the key concerns raised by Infrastructure Australia were, and have identified how we have addressed those issues. For instance, some of the issues raised were around certainty of cost and I mentioned before by going through this process we are able to address that. Other concerns related to whether there was ongoing risk around the geotechnical conditions and the project has undertaken a vast body of work to gain a greater understanding of the geotechnical conditions, that is basically how far down to bedrock, how would we construct it.

We have also worked with our contractors who are tendering on the job to identify what their needs were to provide an accurate cost tender for the project and we have supplemented further investigations to ensure that they had that necessary information. We believe we have appropriately addressed the concerns raised by Infrastructure Australia in our submission.

Ms BUTLER - For the record, if Infrastructure Australia come back to you as the team who are responsible for this project and state the design can't be four lanes, it can be two lanes and one, or one and one both sides. Would that therefore put a stop to the whole project if it can't be four lanes, we are not going to do it?

Mr MOLONEY - I think that is speculation and to clarify we will be submitting our project proposal to the Australian Government. They would give consideration to that and provide a response. If that response does not confirm the funding that would be a matter between the Tasmanian Government and the Australian Government. As to where to from there, I couldn't speculate on that.

Ms BUTLER - There still is a possibility we may end up with a single-lane Bridgewater Bridge on either side?

Mr MOLONEY - We are presenting today a project to build four lanes between Bridgewater and Granton and we have done a vast body of work around that. We have done no work, I can safely say, in providing a two-lane bridge in that location. Our scope, which is as defined under the Parliamentary Standing Committee report, is that we are seeking to provide a crossing that will provide two lanes in each direction, a total of four lanes plus the pedestrian path, and that is the basis in which we will be putting what I think to be a very high quality project proposal before the Australian Government which I am confident will receive due consideration by the Australian Government for funding, noting that they are funding 80 per cent of the project and the state of Tasmania is funding the other 20 per cent.

Ms BUTLER - A supplementary to my first question. We as a Public Works Committee today are signing off on a project which is a four-lane Bridgewater Bridge with pedestrian access and cycling access. That's what we are signing-off on as a Public Works Committee?

Mr MOLONEY - That is the project we're seeking your consideration on, yes. A four-lane bridge with a pedestrian path.

Ms BUTLER - Thank you.

Mr ELLIS - Through you Chair, broadly speaking would it be fair to say that the Bridgewater Bridge is now essentially the missing link in Tasmania's transport corridors, particularly the linking in major population centres and industry?

Mr MOLONEY - Certainly. I guess the Tasmanian Government with financial support from the Australian Government has been upgrading the Midland Highway, as you'd be aware, between Hobart and Launceston. There's been a range of bridge strengthening projects that have been undertaken over many years. By the time we're into construction and completion of this bridge - the traffic on it by the end of 2024 - this will be the weakest link in the network between Hobart and Launceston. So, yes, it is that missing link if you look at the rest of the highway. In terms of capacity it's the size and weight limits, but also it is the link between the Brooker and Midland highways. In that section they're both four-lane highways on either side and then we have a two-lane section right in the middle, which is the congestion point. It carries a large volume of traffic in the order of 22 000 vehicles per day. So, the four lanes are justified and are being pursued and that's why we're presenting that project to the committee today.

CHAIR - Another aspect that I think needs to be dealt with now, in terms of overview, is that it is noted that the submission states that rail is outside the scope of this project. There will be a lot of people who are very interested to see the opportunity for rail to remain, it being a public transport option that many would see as being needed in the future because of the growth of the population and in traffic.

Can you just explain what processes were undertaken to decide that it would not be part of this project? Are you able to comment on that? Or is that asking you to comment too politically? I need to understand why it's not being incorporated in your overview. In your opening statement you said that the rail corridor was being preserved, or something to that effect. Can you just cover that so that members of the public who may be listening understand what the circumstance is with regard to rail?

Mr MOLONEY - Thank you, Chair. So, as you mentioned, including rail on the new bridge is outside the scope of the project and it's not possible within the funding we have available. Providing for rail is not as simple as attaching additional structure onto the side of the new bridge for railway tracks. Trains require an alignment with shallower slopes and wider curves and different load capacities than roads built for cars and trucks. Because of that it's not uncommon to see rail bridges constructed on a separate structure alongside road bridges in a general area.

The reference design for the new bridge doesn't preclude the future use of the existing rail corridor, nor will our final selected developed design. Rail on the existing bridge has been non-operational since the Brighton transporter hub was open in 2014. So, it's important to note, the current rail on the existing bridge is non-operational.

While a bridge with a lifting span would be unsuitable for a national highway, which should provide continuous traffic flow, it may be one of the options considered for a rail bridge if it is required in the future to span the distance between the end of the existing causeway and Bridgewater.

CHAIR - So, that distance is 300 metres?

Mr MOLONEY - Approximately 300 metres, yes.

CHAIR - If rail were to be brought in as an option at a later stage, it would mean the construction of a significant 'rail bridge', for that distance of 300 metres with some means of opening it up for river traffic as and when required, or indeed closing it down for rail to make sure rail can get across as and when required?

Mr MOLONEY - That's correct. It's probably important to note in terms of the existing provision for rail on the existing bridge given that it has been decommissioned, in the event that rail was to be reintroduced, then clearly consideration at that time would need to be examining the structural suitability and capability of the existing infrastructure: whether a bridge constructed back in the 1940s, the needs then, can meet safe contemporary standards now, particularly given the aged nature of our existing structure would be a key consideration for engineers at that time. As I outlined in the report, the bridge is approaching the end of its functioning life. It is showing quite significant signs of wear and tear after being in operation for over 80 years.

CHAIR - That is the bridge per se, as opposed to only rail?

Mr MOLONEY - That is the bridge which is holding the rail infrastructure up, which holds the bridges up, yes.

We are envisaging that potential costs for maintaining the existing bridge over the next 50 years could be in the order of somewhere between $50 and $100 million.

CHAIR - That is the lift span and everything included in that?

Mr MOLONEY - That is correct. If, for instance, you were to retain the existing bridge solely for rail, you would still be having to maintain the infrastructure capable of lifting all the other aspects which are quite challenging.

CHAIR - Thank you for that. Members don't have any other overview questions?

Ms RATTRAY - No. I was going to ask about the ECI procurement process but that is in section 5 so I will leave it until we get there, thank you.

CHAIR - Let us move over to project location.

I have a question that is probably of interest to members of the public. Where the bridge goes over land to the south of the current causeway, there is currently a community jetty and boat ramp. Can you please give us an understanding of what happens to that structure that members of the public may currently use? I understand it is not used that often but you might wish to cover what the intention will be with regard to that level of amenity and the likelihood of this construction impinging on that.

Mr MOLONEY - The construction of the new bridge is a major civil activity. A large amount of work needs to be undertaken, and needs to be undertaken in a safe way. We anticipate that the successful contractor who builds this bridge will need to utilise the area immediately downstream of the existing bridge, both on the northern and southern sides; that is, both on the Granton and the Bridgewater sides.

On the Bridgewater side where the current boat ramp is located, it is anticipated that we will need to provide a specific facility that makes safe access to the water for the contractors, so they are able to construct the bridge safely. During that period there are likely to be restrictions on navigation through the area by recreational or other craft. Those matters are being documented in our Major Projects Impact Statement that will be submitted to the Tasmanian Government shortly and assessed by the regulators prior to public exhibition and comment.

We would anticipate that the successful contractor is likely to demolish the existing ramp and provide a purpose-built facility for its construction. Upon completion, we will be committing in our Major Projects Impact Statement where we are seeking approval, that we would reinstate a boat ramp in that same location of equivalent or superior quality.

Having said that, we have also identified that given the contractor is likely to build some infrastructure there, a new wharf or something similar, we recognise that how that foreshore is utilised by the community may change over time. By taking the at-grade highway and elevating it to bridge height, means it will open that foreshore up to the public a lot more. I guess it's something that we anticipate discussion with the Brighton Council and the local community through Brighton Council as to whether or not a boat ramp in that location is the highest and best use for that. Or whether there is a preference from the community - rather than having the boat ramp replaced, perhaps whatever infrastructure is put by the contractor for their construction works may be retained because it may be a benefit to the community and there might be other initiatives that can be implemented.

At this stage, we need to get to the point where we have selected our preferred tenderer with the preferred design and then we are able to seek public input and engage more openly with the community about what the opportunities are for the foreshore. A project of this scale presents huge opportunities for communities such as Bridgewater and we're keen to liaise with the local community to get the best outcome.

CHAIR - Thank you for that. The other question in terms of project location. There have been suggestions that to satisfy this traffic demand across the Derwent, perhaps there may have been an opportunity to have traffic move down the eastern side and use the Bowen Bridge - because of the capacity that the Bowen Bridge has - or the extra capacity that is under-utilised.

Is there any comment on that? Why was it chosen to upgrade this bridge as opposed to possibly exploring other avenues for crossings?

Mr MOLONEY - I can't go into much detail in terms of the history in leading up to the decision. I can say our transport network relies on multiple crossings across the Derwent. This is one of three major crossings and I think if the proposal is that we don't have a crossing at this location and channel all the traffic through the other two bridges I believe that would put a major strain on the infrastructure on those other roads.

CHAIR - It's just it's been raised and I wanted to touch on that.

Mr MOLONEY - In terms of retaining the bridge as just a two-lane bridge then certainly our traffic modelling indicates increasing congestion over time. We are building for the future.

We are building for the future capacity of this particular location to support the continued operation of the Brooker Highway feeding onto the Midland Highway and to accommodate the forecast traffic we would expect over the coming decades.

Ms BUTLER - For the record, what changes do you foresee with the removal of the old bridge there may be to tidal changes around that area with the flow of the water?

Mr MOLONEY - In terms of the influence on tidal movements and the like, we have undertaken a range of flood modelling and water movement modelling and we're presenting those findings as part of our major projects impact statement to the Tasmanian Government. That document is in its final stages of preparation and will be submitted shortly.

That goes into much more detail so it is certainly a key consideration when we consider the potential impacts of our project. Obviously, introducing a new structure to the area means temporarily there would be two structures within the area where water is flowing through and the intention would be to remove the existing bridge within a reasonably foreseeable time frame.

Ms BUTLER - Okay. Can you quickly run through the perceived sediment shifts with the change and the construction and the potential removal of the old bridge and what impacts that may have? Some people were doing some significant studies there for quite some time, I think it was earlier this year. Are you able to share any of those findings with us?

Mr MALONEY - At this stage we see all of the matters relating to potential sediment and water movements to be manageable or of minimal impact. In terms of sediments during construction, we acknowledge it's important our construction techniques take on board or recognise the potential for contaminants in the sediments and minimise any disruption of those. That has been a key matter we have worked through with both our ECI tenderers to ensure the methodologies being adopted will meet the environmental objectives that will be applied to the project.

That is certainly part of the information being provided as part of the approval process. We are anticipating we will get a thorough review by the relevant regulators, including the Environmental Protection Authority. Through that the permit, if and when issued, would clearly stipulate the relevant conditions we will need to meet during construction. Due to the nature of the complexity of what needs to be managed, typically the permit conditions will be at a higher level and potentially will require further review of further documentation post issuing the permit. It is not uncommon for a project of this nature to receive a permit to proceed to construct subject to appropriate management plans being submitted by the responsible contractor to undertake works in a responsible way. For instance, the submission of an environmental management plan by the successful contractor to a regulator such as the Environment Protection Authority for further review and sign-off before they are permitted to commence construction.

Ms BUTLER - Do you know from that contractor if there was much mercury found when they were doing that investigative work previously this year?

Mr MOLONEY - In this case I might hand across to Mia who is in charge of our planning approvals process to comment on some of the nature of the material that is being found in the sediments.

Ms POTTER - In regard to contamination sediments, there definitely are contamination sediments in this area. As to how much mercury in particular, I would have to take that question on notice but there certainly is zinc, lead and arsenic. There are different things in there. Historically, it has always been known the Derwent has those sorts of pollutants sitting there. As Ben is saying, there have been a lot of surveys and investigations done. It has been very thorough and has included hydrodynamic modelling of how that would move if the sediments are disturbed, as well as their location.

It is definitely something covered comprehensively in the major project impact statement as well as how you would mitigate those impacts and movements and the different techniques you can use.

Ms BUTLER - You will be able to provide some of that information to the committee?

Ms POTTER - Yes, I do not see why not. It is baseline studies of what is there.

Mr MOLONEY - We would probably need more specifics as to what you are looking for in particular.

Ms BUTLER - It would be the contaminants actually in the sediment.

Mr MOLONEY - Okay, we are happy to take that on notice and provide what information we can. Please note, we are about to commence what is a very comprehensive planning approval process through the major projects process. That is a very comprehensive assessment combining all the information on a broad range of topics from environmental to other social impacts that brings in things such as noise management.

It is a comprehensive process which will be coordinated by an independent panel appointed by the Tasmanian Planning Commission. After our major projects impact statement is assessed initially by the relevant regulators it then goes for public exhibition where the panel seeks public comment and input into that process before the regulators then do a final assessment and issue the permit. It is a very comprehensive process and we are seeking approval through that.

CHAIR - It's a non-appealable process though, isn't it? If you put in a submission that does not necessarily mean you get an opportunity to appeal it to a higher level.

Mr MOLONEY - I am probably not the best person to comment on the actual process. My understanding is the regulators provide information to the independent panel that makes the decision.

Ms POTTER - Yes, the process does not have an appeal process like there is under the normal DA process in LUPAA so it can't be appealed on merit. There is the opportunity for the public to put in representations to the public hearing process so it has all those steps earlier for public comment. It also has additional steps early in the process with the public being able to put in comments on the assessment criteria and things like that. It does have an appeal process for process so if someone believes that the process has been incorrectly that can -

CHAIR - On a point of law.

Ms POTTER - Yes.

CHAIR - I wanted to make sure that the members of the public listening understood that otherwise they might have the wrong impression.

Ms BUTLER - We, as a public works committee today, are hearing evidence but will not hear that same evidence before we are asked to sign off on these funds. Is that correct? To make sure that is on the record we will not have the same information the planning process will have.

Right now, we can only go on the fact the information will be provided at some stage but we do not know what that is.

Mr MOLONEY - That is correct. I guess I am referring to the fact there is a process yet to be followed that will enable the community to have more opportunities to consider those sorts of matters. What is presented for consideration by the Committee is the material we are presenting in our submission today.

CHAIR - Do we have questions about the site's environmental values?

Ms RATTRAY - I have a question. It talks about the river component of the project lies within the River Derwent Marine Conservation Area. Does the fact it is in a conservation area present more challenges for this project?

Mr MOLONEY - Generally being in a marine environment presents broader challenges from an environmental perspective. From an approval perspective, by utilising the major projects approval process, it means we can draw in participation. Our project spans three local government areas and we have noted it also includes a marine park. Because the marine park exists, we have a separate approval we need to secure. I will hand across to Mia on that. She is our approvals expert.

Ms POTTER - The marine conservation area being present means we need to go through the Reserve Activities Assessment Process with Parks and Wildlife as well. That process is not captured within the major projects process pathway so we have to do it separately. That being said, a lot of the same information we have already collated for the major projects process overlaps with what we need for the reserve activities assessment. There are some slightly different matters but it means we need to go through those two approvals processes.

CHAIR - Can you outline any threatened vegetation that might be involved in this construction area? What is happening to mitigate that? Is there an issue in relation to any threatened species.

Ms POTTER - Yes, absolutely. The project land has three threatened species within it captured under the Tasmanian Threatened Species Act legislation. That is the doublejointed speargrass, which is a type of grass that grows in the very northern area of the site. There is a patch of it close to the East Derwent Highway. And then we have the woolly New Holland daisy. There are a few scattered locations of that within the project site as well. That is a species that often grows along roadsides, so we see it in lots of road projects coming up and it is in a few locations in both the north and south. We also have the large fruit sea tassel which

is a seagrass that grows in the River Derwent. That one is a marine species. It is quite broadly distributed within the wetland community, so there is a lot of that species. It grows a lot in the broader area too.

With regard to the impacts on these species, there is likely to be an impact on the woolly New Holland daisy and the speargrass. There will definitely be an impact on the seagrass because of the bridge going through there. The detail of those impacts and exactly how much take there will be of those species will depend on the final design.

Ms RATTRAY - Will the final design take into consideration the least impact in those areas? Is the least impact something that will be considered?

Mr MOLONEY - What we have sought to do is provide information about the areas of value. We have encouraged our contractors to come up with the best balance of a value for money outcome with minimal impact on the environment and other aspects. It is a fine balancing act with a lot of these things. We have encouraged our contractors to consider the most appropriate solution, not only value for money but also minimising impacts.

CHAIR - So your submission to the major projects process will identify any action that needs to be taken under the Environment Protection and Biodiversity Conservation Act?

Ms POTTER - The Environment Protection and Biodiversity Conservation Act is not captured at the moment in the major project process. So, we don't need to go through the EPBC Act for the matters we have in this site. Significant work has been done in regards to surveys and investigations to see what is in the area. We do have the threatened vegetation community, the sub-tropical and temperate coastal saltmarsh, which is an EPBC-listed community, but it's only listed as vulnerable and our impacts aren't significant on that community. There's also the Australian grayling which is a listed fish species, but again our impacts aren't significant.

CHAIR - We know the Bridgewater area has a large population of swan and other water fowl. Can you comment on any major impacts on them that might be something members of the public who are listening would be interested in?

Ms POTTER - You're absolutely right there are water birds and fowl that use the area and again a lot of survey work has been done and lot of that has targeted bird species in the area and engagement has also been done with Bird Life and the Derwent Estuary Program.

There are areas of potential habitat within the project land, so the Australian bittern is the migratory species that is listed and does have habitat in the project land but it also has extensive habitat outside of the project land in the local area. So, again the assessments have shown the impacts aren't significant when you look at the scale of the habitat it has outside of where the project will be.

Ms RATTRAY - In other words they'll relocate.

Ms POTTER - Yes.

CHAIR - I wanted to ask so that members of the public are clear we have it in here.

Moving on to the site's heritage values. I guess I can ask the question here with regard to the current lift span. I know there are two major heritage components. One is the causeway itself up to where it stops at the abutment where the steel bridging takes over and moves towards the Bridgewater side.

Can you explain what the circumstances are with regard to the lift span? Is it going to be demolished? Is it going to be relocated? There are people who would be interested in knowing that. The Committee is certainly interested in hearing what you have to say about it.

Mr MOLONEY - The project is seeking for approval for demolition and removal of the existing bridge as part of the project. That is an aspect that will be included in our major projects impact statement, which is being submitted to the Tasmanian Government.

There are multiple reasons for it. Certainly, from a crossing point of view it's important to note this is actually the fourth bridge constructed across that crossing. So, if each project had left the bridge prior behind we would have a litany of bridges impeding both navigation and water flows. So, it is quite a responsible task to remove non-used infrastructure at the end of a project.

To leave it in place as an operating bridge we would anticipate maintenance costs in the order of $50 million to $100 million dollars over the next fifty years. Those costs might be somewhat less if you were to simply raise the lifting span and lock it in place and then have some lump of steel effectively locked in place over the river forever more. However, there would still be ongoing maintenance costs and there would also be ongoing challenges in terms of potential, eventual settlement and those sorts of the things.

In terms of the actual navigation channel itself, we're seeking to provide a navigation channel compatible with the declared navigation channel at the Bowen Bridge, which is 45 metres wide. The existing opening of the lifting span is approximately 31 metres. So, we wouldn't be able to achieve the width of navigation channel that is currently afforded at the Bowen Bridge if the existing bridge was to remain in place.

In addition to that, we need to do further investigations and studies as to whether or not having the two bridges co-located over a longer period of time, which has a greater potential for extreme events, would represent a risk as well.

CHAIR - And so, Heritage Tasmania, interactions with them?

Mr MOLONEY - We have liaised with Heritage Tasmania to date and that's a key aspect of our major projects impacts statements and they are included as one of the regulators who would be receiving a copy of our major projects impacts statement. They will undertake their initial assessment. They will provide that assessment to the panel prior to public exhibition of both the initial assessment and the project's major project impact statement.

CHAIR - And the causeway itself, which is a heritage component, how is that being handled in terms of Heritage Tasmania and the heritage values associated with that?

Mr MOLONEY - We are not intending removing the existing heritage causeway. It was built by convicts quite some time ago. We recognise its historic value and we are expecting to have relatively minor impacts on that, so in terms of our impacts there, we are seeking to

minimise our impacts, we are not looking to remove the existing causeway and in terms of the history of the crossing we are seeking to undertake works to make sure we recognise the heritage of that crossing and through a range of aspects in terms of mitigating our impacts.

CHAIR - What is likely to remain of that causeway? Is it the sandstone abutments to the eastern end of the causeway, if I can put it that way, and those on the Bridgewater side of that channel? There are quite a number of abutments and things in place and there is the turnstile and the like. Can you just talk us through what is likely to remain?

Mr MOLONEY - We would anticipate all of the things you have just listed would remain, and we would not have an impact on any of the abutments of prior bridges nor on the turnstile as well, yes, they would remain unimpacted by our projects.

CHAIR - Even though the turnstile could arguably be almost a component of the channel I suppose? You were talking about the Bowen Bridge and the width. That's not going to present any navigational hazard or anything?

Mr MOLONEY - We have made it clear to both our ECI tenderers that in the designs they are submitting we require them to achieve a navigable channel of 45 metres with recognition that turnstile will remain in place.

CHAIR - ECI for the members of the public?

Mr MOLONEY - Early Contractor Involvement. They are two companies we have engaged to work through that competitive design process to provide lump sum prices for their developed designs.

CHAIR - Thank you Ben.

Ms RATTRAY - Do you envisage once the bridge component is taken away from the causeway that will actually cause some erosion on that section?

Mr MOLONEY - I would not envisage that will be the case, no.

Ms RATTRAY - Interesting.

Ms BUTLER - Will there be an allocation of funding to ensure the causeway heritage values are protected? What kind of costs are you looking at for the maintenance of that and is that factored into this project?

Mr MOLONEY - In terms of the long-term maintenance of the causeway itself?

Ms BUTLER - Yes, as a comparison when you were talking about the steel component of the bridge and you have done an estimate of how much it will cost to maintain that, is there a subsequent estimate for maintaining the causeway, the actual sandstone component of the heritage value of that?

Mr MOLONEY - I guess in that space at this stage we, the project, haven't prepared cost estimates. I can commit we won't be impacting on those. I would anticipate the ongoing maintenance cost would be comparable to what the state would be required to do regardless of

our project. As part of our seeking and gaining approval we will be submitting our impact statement which covers off on what we will be seeking to do in terms of recognising and interpreting the heritage of the area, and there will be certain commitments we make, and there will also be certain commitments we are obligated to do as part of that permitting process. Ultimately, I guess the causeway is an asset that belongs to the people of Tasmania and there will be a commitment I imagine on behalf of those Tasmanian people to continue to protect and preserve those elements.

Ms BUTLER - There is certainly a lot of history associated with it, definitely.

CHAIR - I was just going to say with regard to the causeway and the part it might play in the new development, according to the diagrams here it is likely or envisaged to hold two lanes travelling north. Is that right? And some of the issues you were explaining on our site visit, just with regard to the stability of that causeway and maybe a little bit of history if you have it as to how that causeway was formed and what sort of issues there might be that could occur and how you're intending to mitigate that?

Mr MALONEY - Certainly, as mentioned before, the causeway was built by convicts a long time ago and, unfortunately, we don't have the privilege of having very accurate records of how it was built at the time. We do know they faced many challenges in building the existing causeway. Very large quantities of rock were poured into the river in order to try to create a stable foundation in that location.

Ms RATTRAY - It worked?

Mr MALONEY - It did, bearing in mind the mudflats there are in locations somewhere between 20 and 30 metres deep and they are relatively unstable. We understand large volumes of rock kept disappearing into the mud. Different activities were undertaken. We understand they tried to layer, in various locations, mats of tea tree logs in order to create some kind of foundation to stop the rocks just disappearing into the mud. That was a vast project undertaken back in those days.

We've seen since that time there is continuing settlement in terms of the existing causeway. The report referred to this Parliamentary Standing Committee notes we've done a level of analysis in terms of the risk of seismic events and those sorts of things. Those are all the geotechnical challenges we acknowledge are risks associated with the existing causeway, and what information we have and were able to supplement with further geotechnical investigations provided to each of our two early contractor involvement contractors who have been preparing their designs and tenders for the project.

We have provided the evaluations and analysis the state prepared in terms of its options analysis. Of note, and we've included within the report the Parliamentary Standing Committee, in June of last year we did present two options to the community. There was the option of a four-lane bridge adjacent to the existing causeway and then the second option of building the two-lane bridge, moving traffic across and building the second two-lane bridge.

The eventual reference design presented to the community was that other option - the two lanes plus two lanes on the existing causeway. That was driven predominantly because we envisaged that had the higher probability of being able to be delivered within budget; however, we provided both options and all the information we had to both of our early

contractor involvement contractors. These are contractors who know how to build big projects in complex locations. They understand the complexities of these types of geotechnical conditions and we used this project to draw upon their experience and knowledge they were able to put forward the best value-for-money solutions with their tenders.

As I mentioned before I can't go into detail as to the information provided through that tender process, but we have left the window open to them to come up with the best way to get four lanes across the river and provide the most efficient interchanges on either side.

Ms RATTRAY - And not have the rail corridor compromised.

Mr MALONEY - That's correct. A key criteria is to ensure that the existing rail corridor is preserved.

Ms RATTRAY - Not compromised, I think. It's one thing to have it preserved but if it's compromised and you can't use it, it won't matter where it sits.

Mr MALONEY - We are certainly not going to compromise it. We are going to ensure we are not impeding it horizontally or indeed vertically because at one point the rail - the existing rail corridor - will need to go underneath that bridge and we've made sure we've maintained adequate vertical height as well as horizontal distance.

CHAIR - That's interesting. Supplementary to that and observation - and you might wish to comment - so if you are preserving the corridor in the event of rail becoming something that happens into the future, are you talking about going under the bridge? And yet you are talking about the possibility of having two lanes on the causeway. The line at the moment does go over the road and one would think with those two lanes it is envisaged to be on the causeway, that would be at current road level as opposed to elevated. You were suggesting the train would go underneath that. Can you explain that?

Mr MOLONEY - Yes. Even under both scenarios of either brand new four-lane bridge on a new alignment or under the scenario of a two-lane bridge on a new alignment plus two lanes on the existing causeway, in both instances the abutment on the Granton side would cover the full four lanes at a height that is elevated above the rail line.

CHAIR - Okay.

Mr MOLONEY - Both options would more or less have your starting point at Granton with all four lanes high enough to be elevated for trains to go underneath in the scenario of what we refer to as 'two plus two'. It would then drop down, having passed over the rail line, back down onto the causeway.

Ms RATTRAY - It is difficult to see that in the drawings. Thank you.

CHAIR - Any other questions on this page? No?

Strategic context and related projects, 1.4. Any questions or queries there that have not already been covered?

Mr TUCKER - With related projects and we have had a submission come in to us on a proposal about a road going down the northern side of the river there, through Tea Tree Road. Have we done an analysis of the traffic and freight movements that go down across this bridge, across the Brooker and then turn and go back across the Tasman Bridge and also turn into the industrial area there where the Bowen Bridge comes across?

Looking at the traffic, whether we need to build the significant infrastructure that we are building or whether we should be looking at other options there with the traffic movement?

Mr MOLONEY - I cannot comment on the broader network matters. They are something that the Department of State Growth would be better at responding to. What I can say is that we have considered the traffic impacts and needs in terms of the East Derwent Highway roundabout. Our project is not impeding efficient traffic flows through the East Derwent Highway roundabout. That links in East Derwent Highway which would take you on your way across towards the Bowen Bridge.

I can also comment that we are implementing an appropriate interchange arrangement on the Granton side to make sure the connections to the Lyell Highway are as efficient as possible as well. With regard to the crossing from Granton to Bridgewater, we are providing for capacity that will meet Tasmania's needs for decades into the future, in terms of the four lanes.

We are ensuring that we are addressing the current traffic congestion issue that exists because we have a two-lane section of highway linking the four-lane Brooker Highway and the four-lane Midlands Highway. We are addressing that in a very efficient way that will meet the needs decades into the future and we have given careful consideration to the intersections at either end to make sure they are also operating efficiently.

Mr TUCKER - I agree with what you are saying there but you have not answered the question with regard to that traffic, those 22 000 vehicle movements you mentioned going across the Bridgewater Bridge at the moment.

Do those traffic movements need to go across there or can they go an alternative route down through that northern side to take that traffic movement off the Brooker Highway?

The submission was turning traffic off at Brighton to go down Tea Tree Road and both roads are inadequate at the moment. What I am looking at, is there a possibility, because I drove through there this morning with the other member at the end of the table, and it is a very flat area through there to go all the way through to Cambridge. It triggered in my mind, have we considered these options and looked at that traffic and what that traffic is doing, especially the heavy traffic, with this option?

Mr MOLONEY - I cannot comment on the broader networks. I am responsible for putting forward this project to deliver a replacement Bridgewater bridge. I do not think, is there anything that we feel comfortable adding at this stage, I think that is it -

Mr BOURNE - As part of the project, we have looked at the numbers. We have done traffic surveys of the vehicles moving through the area and where they are coming from and going to, an origin destination survey we call it. There is a reasonable amount of traffic coming from the north and going out to the Derwent Valley on the Lyell Highway. An alternative route such as has been suggested would then see a proportion of that traffic having to come back

over the Bowen Bridge, back along the Brooker Highway to get to the Lyell Highway. I think that was the point that Ben was making. Having a crossing at this point as part of the existing whole of the network is considered more efficient rather than trying to funnel traffic through a different route.

Mr TUCKER - I hear what you are saying about the Derwent Valley traffic. I am not denying that traffic and the same with the traffic that does need to travel down the Brooker. I am interested in the traffic that is heading down into that south-east corner and across to Cambridge in a growing area of Hobart that is only going to continue to grow, in my opinion. I am interested in that traffic and how much of that 22 000 is that traffic heading down there in to the south east compared to what is heading up the Derwent Valley, what has to head down the Brooker and would not change directions in the first place and whether we need to, how do you say, be building a four-lane section or a four-lane bridge? That is what we are doing. Is that needed or are we better to redirect funds to another road, highway or another highway down that section through the west. That is what I am interested in. That is a question I am proposing.

Mr BOURNE - I think Ben said that we are looking at the project so the wider network considerations of planning alternates to this project are probably beyond our scope. Those things have been studied, the benefits put forward in terms of the justifying the costs of the project to the Infrastructure Australia submission and the Australian Government's project proposal report that Ben referred to earlier, have considered those alternative options and the benefits versus the costs of those to some extent. We cannot elaborate too much on, has there been an extensive whole of the South East region master planning and the outcomes of those. This has been part of a number of strategic projects.

Mr TUCKER - I suppose I am going back to my council days when we were planning what were we doing with roads and that sort of thing you would look at where the traffic is going.

CHAIR - Origin destination surveys.

Mr TUCKER - Thank you ex-mayor of Hobart.

Ms RATTRAY - Former lord mayor.

Mr BOURNE - As I referred to earlier, those origin destination surveys have been done for the local area so we know where traffic is coming from and going to through this particular region but not wider as you are asking for.

CHAIR - It may be something we would have to follow up with the department if we wish to have that information available to us but we do have this project before us.

Ms RATTRAY - Just as a passenger in the vehicle taking that drive this morning, it did seem like a very reasonable new route to be able to take and alleviate some of those heavy vehicles going through the middle of Hobart and stop that congestion we see.

CHAIR - As I say, we would have to talk to the department about any planning that has happened in that regard. Any further questions on related projects? I think the last dot point: 'continued use of the existing bridge will increase reliance on the East Derwent Highway which

will cause a further dislocation of the suburbs bordering the East Derwent Highway'. I think on our site visit we asked that question. You would consider that to be just too impacting to go down the eastern side?

Mr MOLONEY - It would heavily impacting on the communities there, recognising that we have the Midlands Highway and the Brooker Highway at high standards on either side and we have this missing link in the middle. We believe replacing the bridge is justified and is certainly justified, from our perspective, in terms of four lanes and that is what has been presented.

Ms BUTLER - I have a quick question. It may be more appropriate to ask it later on. Regarding contingency plans that you have formed to mitigate the additional traffic that will go down the East Derwent Highway as a consequence of works on the bridge whilst that is underway. We will probably cover that later on but it is a good opportunity to talk us through that.

Mr MOLONEY - Unfortunately, a project of this scale cannot be undertaken without some form of traffic management to complete the works. However, a key aspect for both our ECI tenderers has been the development of detailed traffic management plans. Both contractors have worked very hard to identify and undertake the works as much as possible off network with little or no disruption to the travelling public.

However, there will be points throughout the life of the project that we would need to implement changes in the traffic arrangements. Those traffic management plans would be in accordance with the department's standards in minimising disruption on traffic and there would be processes and controls in place to monitor the impact of traffic management and to adjust to make sure that we can minimise any disruptions.

I can only commit that we are undertaking all of those activities to seek to minimise the disruption. I cannot say that there will not be some disruption. It is anticipated there will be some additional movements on alternative routes to avoid that traffic management.

Ms BUTLER - At the moment, the East Derwent Highway takes the heavy vehicles and the larger vehicles doesn't it? They cannot access the Bridgewater Bridge as it is, they have to use the Bowen Bridge.

Mr MOLONEY - Yes, but we are talking about a small proportion of oversized vehicles, as you would have seen today from our site visit. A large number of heavy vehicles continue to use the existing bridge and that is one of the maintenance issues for our existing bridge because the vehicles that it was designed to carry back in the 1930s when it was designed were quite different to the vehicles we have today.

Ms BUTLER - The East Derwent Highway and the Boyer Road would be the two alternative routes for traffic during the construction phase. Traffic would not be able to access it at all. Do you think the East Derwent Highway would be able to cater for that?

Mr MOLONEY - We are not envisaging a scenario where the Brooker Highway does not have a continued connection with the Midland Highway. We are not envisaging any situation where we are closing for a significant period of time.

Ms BUTLER - Reroute at the Bowen Bridge and take people up or down the East Derwent to be able to get out onto the Midlands.

Mr MOLONEY - Not for an extended period of time. The members of the committee would be aware that with a lifting span it means that occasionally when we lift it up it gets stuck. Periods of hours of interruption do already occur. I am not ruling out the possibility that there may need to be intermittent interruptions on traffic but we are not envisaging a scenario where we are not allowing continued flow of traffic between the Brooker and Midlands Highway throughout the life of our project.

That has been the important work that we have done with each of our ECI tenderers to obtain traffic management plans that ensure as much work as possible is done off network without disruption to the traffic. When interim traffic management is put in place, different routes, that there are minimum detours and minimum disruption.

Mr ELLIS - I might ask about useful life. When coming towards the end of its useful life, particularly for the lifting span, I remember reading that in 2006 the lifting span got stuck and essentially closed the bridge for a number of weeks which impacted commuters right around the area. Being a steel moving structure how much longer do we envisage that this thing is going to be operational for?

Mr MOLONEY - It is hard to put a number on it as it depends on what works you are willing to do in the interim. If you have enough money to spend you could make it last forever. Can it be adjusted to meet our current load needs? No. Can it be adjusted efficiently to meet height restrictions? No. What we can do is maintain its current condition.

Those costs aren't insignificant. I mentioned before we're probably looking at something like $50 million to $100 million over the next fifty years.

Just an example of that, the state government recently awarded a contract to undertake some urgent works, worth in excess of a million dollars to ensure the structural integrity of the bridge while awaiting the completion of this project and the proposed removal of the existing bridge. That's an example of works that were necessary because the bridge is approaching the end of its functional life. You can always reinforce something but it does come at a cost and at disruption.

One of the key aspects and one of the real challenges in terms of maintaining the existing bridge is that ultimately you need to undertake works that do require shutting down the highway to gain access. That is very disruptive and very challenging, particularly if it's part of your national network with 22 000 vehicles travelling over it every day and that was part of the driver behind the need for a new bridge. In order to continue to operate the existing bridge it would require substantial works and it would be highly disruptive to the network in the future.

Mr ELLIS - At a similar time we're talking about different users of that channel, because it was getting too expensive to lift the bridge 15 years ago. There was talk about keeping the bridge as it was and closing that area to boating traffic and noting quite a heavy impact on river users as well. Would that be a fair summary? If we were to leave it in place would that have a big impact on that boating community and our river freight?

Mr MOLONEY - What it would do is essentially limit any movement of vessels upstream of the bridge that were at mean tide and had a height of more than 2.2 metres. Our intention is to provide a navigation clearance comparable to the declared navigation channel of the Bowen Bridge, which at this location represents 16.2 metres height clearance. Whereas, if the existing bridge was to remain in place without the lifting span being open, as I mentioned before, any vessel that at mean tide required clearance of more than 2.2 metres wouldn't be able to go up river.

Mr ELLIS - So essentially it can't stay up, it can't stay down, then it's got to go?

Mr MOLONEY - That's the summary of the conclusion.

CHAIR - Oh, it's an interesting way to put it, honourable member. Moving over, project scope, no questions there? Table 1 summary at the end, no? Section 2.1.1, restriction of growth due to the existing bridge geometry and load rating. I guess we've covered most of that comment. I've got dotted throughout here with regard to capacities and freight, heavy vehicles. Obviously noting that rail is a very efficient way of carrying heavy loads with reduced maintenance load on the bitumen side of it. You haven't got any comment in relation to that I suppose?

The life of roads, because we're getting increased heavy traffic. The need to put the bridge in place to cater for, or have heavier loads going over there because there's no longer a span in place that restricts the load limits. The impact that's likely to have on road maintenance going forward. It's not insignificant I expect? I'm not talking about just on the bridge. I'm talking about further south towards Hobart.

Mr MOLONEY - It's not an area that's within the scope of my current role. I'd make an observation that a significant investment was made by the Tasmanian and Australian governments a decade ago in the creation of the Brighton Transport Hub and that changed fundamentally how freight movements happened in the south of the state. My understanding is that a large body of work was undertaken to improve the efficiency of the transport network. It was concluded at that time that the most efficient network was to have rail transport from and to the Brighton Transport Hub and then for a road network to then support other movements, and our project is consistent with that in that it improves the efficiency and effectiveness of the transport network that links in with the Brighton Transport Hub so that people can get their product efficiently to the rail system and then it can be transported from there.

CHAIR - My comment is in relation to the importance of keeping the rail corridor open in the event that the population grows to the extent where they may wish to recommence freight rail to further south depending on the increases in product being shipped, and let's face it Kingborough has grown rapidly and further to the south, and you have significant interest in Hobart as a city to live in by mainlanders. They are coming here. It may well be that the freight load increases to the point where they might see it as something that they could better see being transported by rail than by road which of course increases the maintenance load on the pavements. I am interested in whether any work was done in deciding to cut the rail off, whether the maintenance load on tarmac was ever considered?

Mr MALONEY - It is important to note the decision wasn't made to cut rail off. The rail line that exists there is non-operational. It has been non-operational since the Australian

and Tasmanian governments invested a very large amount of money to create the new Brighton Transport Hub.

In terms of long-term freight needs, as mentioned before we recognise the importance of preserving the rail corridor and ensure that we are not impeding future investment by Tasmania and possibly by and with the support of the Australian Government to make future improvements enhancements to the network. At this moment in time our objective and our task is to deliver an improvement to Tasmania's road network to fix a missing link really that exists between the Brooker Highway and the Midland Highway and we're presenting that project for consideration.

CHAIR - Thank you.

Ms BUTLER - On the rail question - because it is certainly one of the main issues that has been raised with myself and I gather other members of the committee as well -

Ms RATTRAY - Certainly through the submissions.

Ms BUTLER - Certainly in the submissions, but it has been a very consistent flow of communication from the community constituents over many years. Why wasn't rail considered as part of the scope of this project.

Mr MALONEY - There is no operational rail that operates across this section of the river. I guess we've touched-on, previously in the meeting, that one of our real challenges for the project is management of the delivery of the best value-for-money scope, so the inclusion of provision for infrastructure that has been decommissioned is as I said outside of scope of the project.

I would envisage that if today it was decided it was needed to provide for freight or passenger rail, that if that need was identified, one of the first options under consideration is whether or not it would be superior to build two separate structures because the requirements for rail having much shallower slopes and much wider curves would drive-up the cost of a road bridge. I would anticipate that one of the options that would be considered would be to build it on two separate structures, recognising that the outcome of that may well be that you would build it with two structures.

We are ensuring that the corridor exists, so that at a future date if rail is needed there is nothing preventing Tasmania at that time to build the second structure. What we are saying right now is we are working very hard to deliver a value for money project for Tasmania to provide for the road network. If there is a future need for rail we're not preventing that from being undertaken and that would then be justified on its own business case. The business case for the project we're representing today is to improve the road network to address what is a missing link between the Brooker Highway and the Midland Highway.

That is a need that exists today. Anyone who has driven down that section of the highway at 5 to 5.30 in the afternoon and has experienced the congestion there, knows the challenge. Anyone who has driven in a large truck - an over-mass truck that cannot get across the bridge because of the height constraints or the weight constraints and has to go on other networks, disrupting those communities - knows that this bridge is required. The needs we are trying to meet are the needs of today.

Ms BUTLER - As a supplementary question, and this may be more of a statement, but to me, to deny a capital city a rail access to the rest of the state does not seem very forward-thinking and 50 to 60 years ahead. We are building this road network to deal with an estimated population growth. To me, this not being in the scope of the project, is not conducive to building a network for the future, it is minimising. That is more of a statement.

CHAIR - It probably is more of a statement, but nevertheless, it has been made.

Mr TUCKER - Before we move on, I want to put this on record. The bridge will be built at an 85.5 tonne capacity or a 91 tonne capacity? If you could explain to me, why we have got that variance in the tonne mass limits.

Mr MOLONEY - I will defer to Kevin who is my expert in this space.

Mr BOURNE - I do not have the exact answer to that question but in terms of vehicle masses, there is not only the mass, it is also the configuration of the axles, how much weight you have got on each axle and therefore for a given bridge you cannot only consider the mass, you have to consider the configuration and what that load does to the bridge. That is the reason why a range has been stated there, that it would depend on what configuration the 85 to the 91 tonne is spread out over several axles.

Mr TUCKER - You are talking about the length of the bridge and the number of axles that will be across it, gives that variance? Is that correct?

Mr BOURNE - Yes.

Mr TUCKER - That answers what I was asking.

Mr ELLIS - With the rail-bridge conversation, I probably have more experience in the north west. The Bass Highway cuts across 10 to 12 different waterways. Is there even a single point where the rail bridge is the same as the road bridge or are they all separated?

Mr MOLONEY - I could not comment, but I certainly have driven that section of the highway and noticed that a large proportion are completely separate structures. I cannot, in my mind, think of a location where they are on the same structure, but then again, I have not driven that for the last couple of years.

Mr ELLIS - Essentially, a road network operates very differently to the rail network, in terms of where you are putting it and -

Mr MOLONEY - In many locations it does, yes. As I mentioned at the commencement of the hearing, it is very common to see rail bridges being built on separate structures to road bridges because of their different needs.

As a bit of an anecdotal comment, the Parliamentary Standing on Public Works that considered the construction of the existing bridge, debated this very point back in the 1930s. If you would like to refer back to the minutes of that meeting, the committee at that time recommended against the investment of a combined road and rail bridge and they actually

recommended deferral of investment on the rail infrastructure because they thought the existing rail bridge had at least another 15 years' life in it.

They recommended constructing the current bridge without rail on it and it was only following further investigation and resubmission, that the government at the time was able to secure approval for a construction of a combined bridge with both rail and road.

CHAIR - There you go, there is a precedent that has been set.

Ms RATTRAY - Very frugal, that committee back then. Pleased to see you have done your homework, Ben.

CHAIR - Further questions on 2.1.1 which is to do with the restriction of growth due to the existing bridge geometry and load ratings. Anything else on that? No. I note that is says that the existing travel time across the causeway and bridge is estimated at a maximum of 7.6 minutes p.m. peak north bound. In 2041 conditions without a new bridge this is expected to increase 27.4 minutes.

Ms RATTRAY - A 370 per cent increase, Chair.

CHAIR - It is an interesting thought. Decreased level of service due to population growth - any comments there? I think we have covered most of that with our rail conversation. Increased freight efficiency, 2.1.3. Now, 2.2 terms of options -

Mr ELLIS - Chair, just back on the 2.1.3, I noticed one of the effects of upgrading the Bridgewater bridge would actually because of higher productivity vehicles you would actually take trucks off the road, which is sort of quite an interesting consequence.

CHAIR - Where is this?

Mr ELLIS - 2.1.3.

Mr MOLONEY - It is a benefit or an improvement that our traffic engineers have identified that currently a limiting feature are those load constraints. With the ability to accommodate larger vehicles it does mean that we have the opportunity to reduce the number of vehicles on the network. Hence reduce congestion and also help improve efficiencies. We saw that as one of the significant benefits of the project in the longer term. The network will need to adapt over time. It is not something that will happen at day one but it is something that we foresee will happen over a period of time.

CHAIR - PBS2B, what is that?

Mr MOLONEY - I will hand over to Kevin who knows all the transport acronyms.

Mr BOURNE - PBS is performance based standard, if I have that right. It is really a transport industry measure for types of trucks. They fit within a window of specifications of widths, heights, axle spacing, loads, et cetera. It is not a fixed standard. It is a window of -

CHAIR - Combination of things, an envelope almost.

Ms BUTLER - On the increased freight efficiency section, would I be able to jump ahead to the map, new Bridgewater bridge reference design. It is not numbered but with Granton, the Lyell Highway on the right-hand side -

CHAIR - Is it the first, second or third map?

Ms BUTLER - It is the second map after the appendix. Could you talk through for the record - if anybody is listening they are not going to be able to see this document - about the roundabout facilities? So Blacksnake Lane Road and from the Granton side for traffic wanting to come on the Lyell Highway from New Norfolk to travel north, how heavy vehicles would navigate those roundabouts. Also if you could give us an indication of how many stops they may potentially have to take if they are undertaking that path. It is quite confusing to the eye and it may be better if you could step it through for the record. If that makes sense.

Mr MOLONEY - To describe it for any audience that may be online, what we are referring to is the interchange arrangements on the Granton side, so that is on the southern side of the Bridgewater bridge. This is a matter that came up in quite a bit of consultation with the public, in particular the community towards New Norfolk who utilise the Lyell Highway, and that is the fact that what we have is an approach where the traffic that needs to go to and from the Lyell Highway moves through to a roundabout in either direction. If you're travelling from Hobart out towards New Norfolk, travelling along the Brooker Highway onto the Lyell Highway, you would take an off ramp to the left-hand side, navigate through a single roundabout and then you'd be on to Lyell Highway, recognising that the other traffic on the other aspects of that roundabout would have relatively low flows and so the times at which you'd be interrupted you effectively would have priority in most cases.

The other direction, so coming from New Norfolk along the Lyell Highway, again you would travel underneath the bridge, navigate through a roundabout and then go onto an on ramp onto the Brooker Highway. Again, more often than not, you would have the dominant and right of way through that movement.

Ms RATTRAY - Just one roundabout?

Mr MALONEY - Just one roundabout, so in each direction -

Ms RATTRAY - Just the one on the bottom. The bottom one?

Mr VALENTINE - The one closest to the river.

Mr MALONEY - To head into Hobart?

Ms RATTRAY - To head to Hobart, yes.

Mr MALONEY - To head from the Lyell Highway to head north on the Brooker Highway, the movement would be to travel along the Lyell Highway under the existing bridge through one roundabout, underneath the Brooker Highway and then on to an on ramp onto the bridge.

Ms BUTLER - So those trucks are only going back towards Hobart underneath the highway. They go through Granton; that's where they go through a roundabout. Then for them

to get back up to the north they can do that from the Granton side, or do they have to go back across the highway and cross from the other side?

Mr MOLONEY - I guess they have to cross the highway. Probably an important note is that we have taken on board the feedback that we've obtained from the community about these intersections. We have provided that information to both of our ECI tenderers throughout the process. The consultation happened in October and November of last year prior to the commencement of our early contractor involvement contractors, and we have fed that information into that design process.

Whilst I am reluctant to make comment about that ongoing tender process, I think I can say and I think it's actually written in the report to the parliamentary standing committee that we have encouraged our contractors to consider more efficient designs in this location, to provide more prioritisation and optimisation of traffic going to and from the Lyell Highway. We've been pleased by the quality of the responses being provided by both our ECI tenderers.

We will go through a process that will select our preferred develop design through that tender process and we're looking forward to presenting those designs to the Tasmanian community. We're hopeful that some of the concerns that have been raised will be addressed in the enhanced design that comes out of that process.

Ms BUTLER - Just for the record, if you are travelling in a truck from New Norfolk, Boyer, and you're heading north across the Bridgewater bridge, you have to travel down the Lyell Highway and you have to go through two roundabout sections. So you have to head back to Granton, go around that Granton roundabout, and then go over or under the highway, and then go through another roundabout section over on Black Snake Road, and then make your way back again towards the north, the Bridgewater bridge. How many stops do you think that would be for a truck driver, potentially? They could have up to eight stops there, could they not? I can't see how that would be very efficient.

CHAIR - Two stops. They get to the first roundabout that's a stop, and the second roundabout is a stop.

Mr MOLONEY - I also draw to your attention that the vehicles already need to navigate a roundabout. So you are quite right. Instead of one roundabout that that particular movement would require it would need to go through two roundabouts.

What I would like to draw to the committee's attention is that 22 000 vehicles today go through a roundabout to get onto a single lane bridge across the highway. As a result of our project, 22 000 vehicles will no longer need to go through the existing roundabout and will have a more efficient journey. I also note that we are seeking to improve the efficiency of the interchanges on the Granton side. We are hopeful that with the final design that is yet to be selected and presented to the community then some of the concerns in this space will be addressed.

Ms BUTLER - Thank you.

Mr ELLIS - Could you also take the Boyer Road if you were going from Boyer to the Midland Highway?

Mr MOLONEY - Certainly, if you are travelling from New Norfolk, Boyer Road would be another alterative. It is approximately two kilometres further from New Norfolk but that would be another avenue if you were heading north. No, actually it would not be two kilometres, I was thinking of having to get back to the town hall it would be but it would probably equivalent, if not shorter, to use the Boyer Road.

Mr TUCKER - Back to Ms Butler's point, when I look at that roundabout with the traffic flow and where the traffic will be coming along Old Main Road and also Black Snake Road, there would be very low traffic volumes coming off those roads. Most of this traffic will be coming from New Norfolk so it would be mostly just flow straight through those roundabouts. Am I correct looking at that? That is the way I read it. It would be more difficult coming off Old Main Road and Black Snake Road because of the traffic coming from the New Norfolk area. That would be the way I read it. Am I correct in reading it that way, or am I wrong?

Mr MOLONEY - I think it is a correct interpretation. Those roundabouts have been specifically configured to ensure that the Lyell Highway traffic receives as minimal impediments as possible. They have been designed to be quite efficient, people look at the drawing and see a roundabout and make certain assumptions about how often they would be disrupted. Certainly, the dominant flow is the Lyell Highway. In terms of numbers on the Lyell Highway, it is in excess of 10 000 vehicles per day. There are 22 000 vehicles across the bridge and across the channel, and then about 10 000 on the Lyell Highway. So coming off the Brooker Highway is in excess of 30 000 vehicles per day. Currently those 30 000-plus vehicles are being channelled down to one lane and fed through the roundabout down at the end of the existing crossing.

Our project will be grade separating the 10 000 vehicles away off the highway earlier and providing an efficient movement for them through to the Lyell Highway. The whole purpose of the project is to improve the efficiency in that space.

Mr TUCKER - That's the way I read it as well.

CHAIR - If they come from the Boyer Road there is just a little bit of a left, right and then they are onto the main highway going north anyway. It could see heavier traffic going on the Boyer Road as a result of a more direct route, but that remains to be seen what you end up with in terms of your design.

Mr MOLONEY - With the final design we will be able to comment more on that.

CHAIR - Black Snake Inn is surrounded by road on this design. Can you comment on any impediments for that property gaining access to roads compared to what it has now? Is it going to have reduced amenity, or increased amenity?

Mr MOLONEY - We would certainly be ensuring that access to that property is maintained both throughout the life of the construction and subsequent.

CHAIR - To go to Hobart they will have to cross one major lane to get onto the route they are going to travel. Are the speeds of the vehicles at that point going to be slow enough to not be an issue in terms of safety?

Mr MOLONEY - I think that it is best that once the preferred developed design is put forward that we could describe how best to align the access to that property. That will align with that developed design. The reality is that we would envisage that the final design may be different from this so any comment I make would be just on this reference.

CHAIR - I'm not sure what you can say on the record in regard to that property, acquisition or otherwise. What is envisaged there?

Mr MOLONEY - We would be able to say that the owner of that particular property has recently advertised the property for sale. The state government recognising its location and proximity to the project and its potential benefits to the state to acquire the property, we have expressed an interest in purchasing the property. We're having ongoing discussions with the landowner about that potentially being agreeable to both the State and to the landowner to get an outcome that's acceptable and desirable to both parties.

CHAIR - Okay, thank you. Any further questions in relation to 3. - 2.1.1, 2.1.2 - sorry, I think we're on 2.1.3. I've gone backwards.

Ms RATTRAY - Please don't do that today.

CHAIR - Options evaluation - no, we won't go backwards.

Any other options evaluation questions? The functional requirements over the page on page 18 included the following outcomes: the crossing will be a bridge; the design should cater for pedestrian/cycle crossing. Do we know how many cyclists use the bridge at the moment? That might balloon out with better options. Basically, tourists making their way to Hobart may well be coming across the Bridgewater Bridge now. Do you have any figures, in terms of the number of cyclists that use that road, and how their lot might be improved?

Mr MOLONEY - Before passing to one of my other members - I'm looking around to see if somebody has any stats. I personally I think that any existing usage would not be represented of usage we would anticipate in the longer term -

CHAIR - I could agree with that.

Mr MOLONEY - Mainly because you effectively take your life into your own hands if you try to cross that crossing at the moment. Whilst there is a very narrow pedestrian crossing on the bridge section of the crossing, the remainder is on network. So, you're effectively having to share the road with the Midland Highway traffic. All who would like to be perhaps doing at least, if not more, than the 60-kilometre speed limit that exists on that section, it is very narrow.

Ms RATTRAY - Not my good self.

Mr MOLONEY - No - on the few occasions I've walked across the bridge, yes, it's a lot safer to be trudging through the grasses and the like to not be on the side of the road with that high-speed large traffic. My comment would be that I don't think we've spent a lot of time trying to identify existing usage because we believe that it wouldn't be representative of who will be using it in the longer term.

We recognise that there are plans by all the local councils in the area to improve the cycle networks that exist. We will ensure that there is the three-metre wide pedestrian and cycle pathway across the bridge, provide the network within our project area, and have ongoing discussions with those councils about how integration may happen in the longer term.

CHAIR - I suppose for me, when I look at the current structures that are envisaged, I'm not quite sure how cyclists and pedestrians when they're on the bridge, yes, they have a three-metre shared pathway, some might say the number of people using it, is it quite reasonable to expect that that might be enough, as opposed to separated pedestrian to cyclists? I will be interested in any comment you have to make on that.

What happens when you're going from say the north to the southern shore, where does the cyclists go then? Are they funnelled into a traffic situation that is going to be dangerous, or is it onto the Old Main Road? How is that being handled? Have you considered pedestrian and cyclist safety at either end of the bridge?

Mr MOLONEY - Either end of the bridge. For instance, on the Granton side, our pathways will extend through to the link with Old Main Road and also have appropriate links across to existing paths on the Granton side in terms of where there are paths on the Granton Hall side. That would be the connection there. In terms of on the northern side, again we would extend our pathways through the area that we're undertaking, or undertaking works to part of the project. However, there would need to be further discussions about the connection of that to other existing networks on that Brighton side.

Ms RATTRAY - So you're saying that the northern side doesn't link up for pedestrian or cycle pathway?

Mr MOLONEY - I think I'm saying that we will provide for the cycling and pathways that are within our project area. There are existing movements that people are utilising existing local roads and things like that to get around existing pathways. In the longer term there are opportunities to improve the connection of either of those networks.

We have invited our early contractor involvement, contractors who have been tendering, to make provision for future provision of that and provide costs for provision of some of those pathways. Whether that is delivered within the scope of this project, basically we need to see the prices, see what is affordable and probably have further discussions with council about how we might deliver those.

Traditionally, a lot of the cycle ways and pathways in local government areas are driven more from the local councils. At this stage, a bit similar to rail, we are trying to manage our scope within a very tight budget, working towards that and trying to make sure that we do not prevent the future provision of those types of facilities, and we are ensuring that we are providing a very high standard within the area that we are undertaking works.

Ms RATTRAY - Will those conversations be part of the community consultation process?

Ms MIDDLETON - Yes, and they are conversations that we are having with councils already as well.

CHAIR - Okay, so they are right on board?

Ms MIDDLETON - We have been working closely with Brighton Council in particular about that northern side.

CHAIR - Okay, and on the southern side, the Glenorchy Council?

Ms MIDDLETON - Glenorchy, yes. Same thing.

CHAIR - Thank you.

Ms BUTLER - This is under the Hobart City Deal, is it not? That is a partnership with those councils as well, isn't it?

Ms MIDDLETON - With Glenorchy, not with Brighton.

Ms BUTLER - Okay, right, thank you. I have a supplementary question on the pedestrian and cycling, for the record, to ensure they will be compliant with disability access guidelines.

Mr MOLONEY - Correct, yes.

CHAIR - Mobility scooters might be used on this bridge. It is possible. I am not sure where they would be going; they might be going over to have a coffee on the other side, from the Bridgewater side to the Granton side. Will it take into account when you are building this infrastructure, that you have as smooth a transition as possible from pavements to pavements?

Mr MOLONEY - Yes, in the form that it will be DDA compliant, so that would address grades and other requirements. It should certainly accommodate mobility scooters.

Mr ELLIS - With the cycling and pedestrian pathway, we expect then that Bridgewater bridge to have increased amenity for people in Bridgewater, generally speaking?

Mr MOLONEY - Yes. I mentioned before to the committee, a project of this scale and its influence in area, can be hugely beneficial if you have forward plans for some of those opportunities.

Once we have selected the developed design and we can understand exactly how the interchange arrangements are likely to work, then there will be a range of opportunities for improvements. We will see increased access to a number of these areas. We are looking forward to the opportunity to work with each of the local councils and the local communities to see where opportunities and synergies can exist, where we can work together to get better outcomes in that space.

Everyday more and more of us are using bikes and other forms of transport rather than only getting into a car, so it is a very important aspect of this project. As mentioned before, in cases where we do not have the financial capacity to implement the infrastructure, we have always sought to make sure that we were not compromising it being able to be implemented into the future.

CHAIR - I am going to suggest that we take a five-minute break. We have been here almost two hours. We will recommence at 3.30 p.m.

The Committee suspended from 3.23 p.m. to 3.30 p.m.

CHAIR - We're dealing with cycling on page 18. Any further comments or questions with regard to page 18?

I notice under function requirements there's a dot point '…minimise impact to environment and community'. I'm expecting that this bridge will take a higher speed traffic and therefore it might be that there is higher noise as a result of the higher speed. Is that something that you've considered? I think you talk about mitigation in some part in this submission.

Can you just let us know what sort of things you might have in mind to reduce noise impact? It's just on this. I think the honourable member to my left was looking at bringing it up. I've just probably stolen her thunder but it's under the last dot point.

Ms BUTLER - Supplementary to your question, there is some significant new housing developments around Bridgewater nearby where a new section of the highway will be coming through along Gunn Street. I wanted you to give us an idea of what kind of noise mitigation there would be for residents in that area - not only during the construction but with the new section of the bridge being a little closer to their homes.

Mr MOLONEY - Noise mitigation also shadowing and other matters such as light spill and those sorts of things are all very key considerations when we prepare a major projects impact statement and then implement appropriate measures, be it sound walls or other forms of mitigation.

Ms POTTER - Following on from what Ben said there've been noise impact assessments done based on the reference design. That does pick up that there are some locations that would experience more noise than they're currently do but there're also mitigation techniques that are proposed for that. They are things like noise walls or a type of asphalt that you use on the road. That said, they're based on the reference design so there would need to be further work done based on the final design which could have differences as to how close the road is to people before we drill down into the detail of what you would provide and how it would work.

Certainly, there's work being done on it. As Ben says it gets assessed through the major projects process which is a public process.

Ms BUTLER - At the moment with the current wear and tear of the bridge the steel plates are quite loose and they do create quite significant sound, especially going up the hill in Bridgewater. Residents can tell whether they're a bit loose on the road because there's an increasing in the sound that it makes as the trucks go over. I think the community will be quite relieved for that noise to not be there anymore.

CHAIR - We were there this morning on site. I noticed the noise that the traffic was making going across. It could reduce the noise as you were just saying, but in the event that mitigation is required you were saying a sound wall?

Ms POTTER - In the noise impact assessment that's been done the sort of recommended techniques in that report done by consultants refers to noise walls and considering the use of different asphalt types because they have different noise levels.

CHAIR - What about on the western side of the bridge around Black Snake Lane? We've talked about Black Snake Inn but there are other properties there. Are there any ideas as to how noise may be mitigated over there. Do you have anything in mind for that?

Ms POTTER - I would probably have to look back at the report for the details but I believe that there are noise walls shown for the reference design noise impacts on both sides for certain locations. It has been looked into for the whole area.

CHAIR - What about earth berms and things like that? If noise is significant enough at 'the landing sites' where it actually meets terra ferma, are they something that you might consider? As we were coming from the East Derwent Highway roundabout back towards the bridge on the left on the open space there, I noticed that there is a hill built basically to deflect sound up rather than straight out to houses. Is that something that might be considered if needed?

Ms POTTER - It is not something that has come up as a recommendation in our existing noise impact assessment. I guess the further work that is done on the final design would look at different mitigation techniques required to meet the acceptable levels.

Mr MOLONEY - There are guidelines that the state Government and our contractor will be working to, to make sure that we seek the minimise the impact as far as reasonably practicable. There is a range of strategies. Usually the strategies that are adopted are unique to that location so where you have a large area then berms and things like that become more practical; if you have a fairly constrained area that is where the extra investment in things such as sound walls becomes more effective. Where you have only a small number of residents and a large length there may be other methods to minimise the impact.

The guidelines provide a framework for us to operate within to seek to minimise as far as practical work.

CHAIR - And as part of the contingency cost that is involved, some of that might be able to be employed after the bridge is open and traffic flowing and problems occur. Is that what is envisaged? Is that how you would approach this? It is very difficult to know what the noise level is going to be like until it is in operation.

Mr MOLONEY - Typically we try to pre-emptively predict the problems and address them before they happen. There are circumstances where you cannot always get things 100 per cent right. So, in some cases you may discover an unforeseen impact and rectify that at a later date.

Certainly, all the work we are doing at the moment is to undertake high quality modelling and that modelling needs to be replicated with the final developed design by the preferred tenderer and identifying a range of strategies when there are individual stakeholders or others who may be impacted by noise. Quite often there is an exercise in liaising with that impacted party to identify a solution that is suitable to both the project and that party. It is hard to

pre-empt without having selected a preferred design and then identifying the stakeholders and working with them in that space, but wherever possible our intention is to address the issues before they become a problem rather than fixing up after the fact.

CHAIR - Review of functional requirements.

Ms RATTRAY - I would like some detail about the barriers to foreign objects on bridge sections. It talks about those in this area of the report. Obviously, the barriers would work the same as for suicide prevention. Would they be the same sort of barriers used for those circumstances?

Mr MOLONEY - Typically where a barrier was necessary for suicide prevention or for objects, then you would be looking at a single barrier meeting both those requirements. In terms of need, each of our contractors are given a specified requirement on where we need some protection in some form or another. I guess it is just the nature of works these days. We have to recognise some people do not obey the law in terms of throwing objects. We need to protect the travelling public from that kind of misbehaviour you could say. Our provisions for barriers are to prevent thrown objects in locations where they are passing over sections where traffic would be travelling below and provision of barriers to limit suicide in areas where it may well occur on the bridge.

Ms RATTRAY - Sadly it is a requirement.

CHAIR - Some of those devices that you are envisaging or bits of the infrastructure are well designed into the structure, not just a square wall or whatever.

Mr MOLONEY - That is correct. The key consideration is the aesthetics. Part of what we will be presenting in the major projects impacts statement is that we need to be conscious of the fact that this is a piece of public infrastructure. It is visible, so the consideration of what it looks like as well as its functional performance is important to us.

CHAIR - Rationale for dual traffic lanes and revised design speed. I think we have dealt with a fair bit of that.

Ms BUTLER - Looking at where the Lyell Highway, where we were this morning at Granton, where the hall is. Do you anticipate that there may be a speed reduction there because of the entrance and exits from that Granton car park area? There is a road that comes on to that there; it is not marked here. Do you anticipate that there may be a slowdown section there and we won't be able to stay at 100 kilometres per hour or is that already going to be a reduced speed?

Mr MOLONEY - We would envisage that the speed limits through that area would reflect of the final design through there. I can confidently say it is unlikely to be 100 kilometres per hour through there. Whether it is 80 kilometres per hour or 60 kilometres per hour for a section would depend on our traffic safety assessment and what is the optimum movement through there. We would like free-flowing traffic to be efficient. It may be appropriate that the speed would be in the order of 60 kilometres per hour but it will depend on the final design.

CHAIR - It is two lanes going north and one lane going south there.

Ms RATTRAY - It was a busy area there this morning. There are always lots of vehicles.

Mr MOLONEY - If we are talking about where the roundabout is, 22 000 vehicles will be on the bridge and separate from that area but there will still be in excess of 10 000 per day going past there. We would ensure that those intersections are safe. There are also independent assessments that are undertaken on traffic safety. Kevin, you have probably used the right terminology more than I for our traffic safety assessments on the final design.

Mr BOURNE - As you have said the final design would have a road safety audit review of it as part of the design process. The outcomes and the recommendations from that would be incorporated into the design and the speed limit would be set accordingly.

CHAIR - Rationale for air draft and navigation. I think we dealt with that in the air draft being as same as the navigation span of the Bowen Bridge, bearing in mind that the western end of the Bowen Bridge is 18.9 metres; it is not intended to be that, it is intended to be the centre of the navigation span, isn't it?

Mr MOLONEY - That is correct.

Ms BUTLER - A question under option 4; the non-bridge options. Would you be able to run us through why a tunnel was not considered? I know that the Sydney Harbour tunnel was a prefabricated and laid tunnel and that was seen as the most cost effective in that situation. Why wasn't a tunnel considered for this?

Mr MOLONEY - I believe that tunnel options were considered at an earlier phase in the project when it was examined some time ago and was ruled out predominantly on cost. The bridge option was a more cost-effective solution.

Mr BOURNE - That is correct. Where it might differ from other places is the extensive soft sediments. Even a tunnel has to be supported from below. The substructure, the piling below the ground would still be extensive in that location to support a tunnel.

Ms BUTLER – I have a lot of constituents ask that question, why can't they have a tunnel?

Mr ELLIS – With a soft riverbed, when we say it's a tunnel, we wouldn't be tunnelling through anything, would we? We'd be putting in a very large concrete tube.

Mr MOLONEY – It would need to be founded on something solid. The solid rock is 20 to 30 metres below water level. We're talking about quite a sizeable structure being built underwater as opposed to driving piles and supporting a bridge on it. Hence, the bridge is a much more cost-effective solution to gain a structure. I think Kevin was mentioning that even if you did put a tunnel, you'd either have to pile and provide a foundation depending on how deep, or follow the natural terrain and start cutting into rock. It was a consideration very early in the piece but was ruled out on the basis of cost. When you look around the state of Tasmania you won't see too many underwater channels and they're fairly limited even on the mainland to locations where alternatives such as what we have got aren't viable.

Mr ELLIS – So that width of river-span, to get down to 20 or 30 metres, even initially, you'd have to have a v-shape going from the surface to the bottom and back up, or a very long tunnel that stretches across the length of the Derwent, right?

Mr MOLONEY – That's correct. At the moment, we're coming from an elevated position above sea level going up to provide navigation clearance at 16.2 metres and going back down. Compare that to going down from an elevated position 30 metres and coming back up.

Mr BOURNE – We're not sure if 30 metres would be the right number. It would probably be deeper than that. Then you have to think about drainage from that low point and things like that. There are a lot of issues that would need to be considered.

Ms RATTRAY – We couldn't find the rock, in other words. Good question, though, Jen.

Ms BUTLER – Thank you.

Mr ELLIS – A comment, Chair. I want to point out how much I appreciated the diagram of the way you came to this decision, as spatial thinkers, we all appreciated that.

CHAIR – It gave us an understanding. We have talked about pedestrian and cycling linkages, project budget and geotechnical assessment of the existing causeway. Any further questions?

Ms RATTRAY – Table 3 on page 27 was quite useful as well, the ticks and the crosses as to how you worked out options 1, 2, 3 and 4. Thank you.

CHAIR – You have covered the options quite well. We have talked about most of that, I think.

Ms RATTRAY – I am a bit concerned that for options 1, 2 and 3, the project budget is cross, cross, cross. I am hoping that will change.

CHAIR – We were provided with a revised page 28, which basically tumbles the photographs around so that the bottom photograph becomes the top.

Ms RATTRAY – On page 29, this is where, Chair, we talk about options 1 and 2 and then this talks about the project budget. We've got a tick for option 1 and a cross for option 2. Can we have some words around that?

Mr MOLONEY - It is significant going through the options analysis and narrowing it down to the short list of those two options, further work was undertaken by the project to seek out opportunities to bring the project within budget.

A lot more work was done relating to construction methodologies, opportunities for cost reduction by utilising the existing corridor and through that process, we were able to identify (a) option 1 that was considered capable of being achieved within the project budget. In the report it explains that context under project costs, table 7 on page 36, it refers to our cost estimates.

Our P50, which is 50 per cent probability of being achieved, the estimate was narrowly within our budget of $276 million, whereas our P90 was over. We had a greater than even chance of being able to leave the project within budget and on that basis, we had sufficient confidence to then proceed to market and work with our contractors to come up with a value for money solution. That is the basis of it.

I am not going to talk down the challenges that our project faces in being able to deliver this scope within budget but that is what we are engaged to do and that is what we are working through. Our intention is to provide both the Australian and Tasmanian governments with the confidence by securing lump sum prices from contractors, based on developed designs that reflect our needs and presenting that for consideration.

CHAIR - The option numbers are actually different here, aren't they? They are option numbers out of a previous Commonwealth submission?

Mr MOLONEY - The option numbers in 3.3 are different. In the rest of the document our options were consistent, other than those images being the wrong way around and I apologise for that.

CHAIR - No, that is okay. It is only that I read where option 1 and option 2 were different and referred to separately in another document. It is actually option 2 that we are dealing with, not option 1, is that right? Can someone enlighten me there?

Mr MOLONEY - On page 38, which is referring to the assessment undertaken by Infrastructure Australia, that is referring to a different option, so you are quite right, Chair, there was reference to an option 1 and that option 1 more referred to our option 2.

CHAIR - That is it.

Mr MOLONEY - It is the evolution of time.

Ms RATTRAY - Chair, are we able to talk about the ECI process here or do you want me to wait until a little further over?

CHAIR - You can talk about the ECI process here.

Ms RATTRAY - An ECI process - and we cannot talk about it as we would like to - but to get an understanding because that is not something that I have been familiar with before and others may have been. Is each company, and they have been short listed to two that have taken on this work, for the unsuccessful tenderer if you like, they would not be able to do this type of assessment for no pay? That comes at a significant cost.

Mr MOLONEY - It does. We have engaged both ECI contractors to perform works or services through an early contractor involvement agreement with both parties.

Ms RATTRAY - You took some advice from Queensland for this process?

Mr MOLONEY - We have adopted methodology that is used broadly across Australia and we have drawn upon contractual documentation drawn from other jurisdictions, including Queensland.

The steps we went through was first of all an open request for proposals. Basically, we opened it up to all contractors who were pre-qualified across Australia for building bridges of this scale and complexity. We invited them to provide proposals which was basically, what team do you have? What expertise do you have in delivering this type of bridge? It also considered, how would your company go about delivering social and economic benefits if you were successful to deliver this project in Tasmania?

CHAIR - And using local people as well?

Mr MOLONEY - That certainly is a critical aspect for driving economic benefit for Tasmania through a major project such as this. We are utilising Tasmania's buy-local policy as part of our selection criteria for this project. We went through that process and we were able to then short-list down to two contractors and you're quite right, this is a major commitment of financial and personnel resources that each of those two companies are making. So that was why it was important first of all, to cast the net wide, invite submissions from all those who are interested and then narrow it down to two.

There are scenarios where you can go for more, but that means it's more -

Ms RATTRAY - More money.

Mr MOLONEY - More money by each party, or you can go less and not have competition, in which case you have to rely upon the goodwill and other forms of commercial incentive. In this case, we did quite a bit of research in selecting a competitive model where each contractor had sort of a 50/50 chance of winning, would be encouragement if we also provided economic or financial reimbursement of a quantity of their costs. Each contractor is compensated for a portion of the costs to an upper limit. It probably was when we set the limit of - correct me if I'm wrong, $2.8 million each. It's probably about two-thirds of what they're likely to be investing, somewhere between half and three-quarters of what they're likely to have invested -

Ms RATTRAY - That's a big risk.

Mr MOLONEY - For the companies and it's also an investment from the state, but when you think about it in the overall context of half a billion-dollar project, to get the best value out of that process and get the best ideas, our investment of $2.8 million for each design is considered to be an appropriate investment. Once we've gone through that process and we've selected our preferred tenderer and preferred design we also own the intellectual property of the unsuccessful bid and there may be aspects of that that might be useful for consideration by the successful contractor as well.

CHAIR - You're keeping two tenderers in the mix.

Ms RATTRAY - You own them.

Mr MOLONEY - Yes and certainly that competition is what drives value for money from the state's perspective. In terms of assessment, 65 per cent of the assessment criteria is based on value for money and that's not just the price at the tender box. It considers the whole-of-life costs, including what we consider to be the maintenance costs and all the other challenges that may exist with that particular bid, 25 per cent relates to social and economic benefit here in Tasmania and how the contractor intends delivering the project for those benefits. Then the remaining 10 per cent relates to more of their team and the capabilities. It does sound like a low number, 10 per cent, but you have to bear in mind that we've already gone through a short-listing process that identified these two companies as being the two best in the nation that are interested in building it. So, they basically pre-qualified in the quality of their teams. Hence that was given a smaller proportion of rating at the end.

We go through that process. We then assess each of the two. We've worked with those two contractors over the last eight months, providing them positive guidance. Quite often through that process a contractor might come up with some ideas, 'We could do it this way. Is that something likely to be acceptable to the state of Tasmania?' We've been able to provide guidance to them, ideally to end up in a position where, at tender time, we receive tenders for designs that are attractive to the state in meeting our needs and represent value for money by drawing upon their expertise.

CHAIR - Just for the record, there aren't any Tasmanian companies tendering?

Mr MOLONEY - Because of the scale and complexity of the projects the short-listed contractors are national companies. As part of their procurement plan and their plans for implementing it, they have worked quite closely with a range of partners here in Tasmania. For instance, each of their design teams involve local participation through local consultancies and we would envisage their approach to subcontracting will certainly utilise quite heavily the Tasmanian industry and that's encouraged and is part of our assessment under that buy local.

CHAIR - It's interesting that we've built some fairly big infrastructure projects in the past. When you think of the Hydro dams and all of those sorts of things but there's definitely no company that can tackle this particular type of project?

Mr MOLONEY - There's no Tasmanian company that's pre-qualified for these bridges. There -

CHAIR - You've got a limited number of companies you can deal with in that regard?

Mr MOLONEY - Well half billion-dollar bridges, yes. It's been thirty or forty years since we've built one of this scale. So, the Bowen Bridge was the last time a bridge of this scale was constructed.

CHAIR - Okay.

Ms RATTRAY - I think that is really useful information to have on the public record, Chair, so thank you.

CHAIR - Thank you for raising it. Anything else on page 29, 30, 31? We have dealt with public and active transport. Key issues raised during the consultation process is described in appendix B. Reference design engagement report. Key teams highlighted during the

consultation process included as local connectivity. You have talked us through some of that. Speed limit, environmental and heritage. We have heard about the noise side of it. We have dealt with the heritage, public and active transport.

Ms RATTRAY - We've talked about the love of rail.

CHAIR - We have talked about the love of rail and it is, for whatever reason, not part of this but anyway that is not for you to necessarily answer the reason why it has been excluded but you have given us some understanding there, a little bit. Navigation heights we have talked about, heavy vehicles and rail. Okay. How it worked up to the reference design? I think we have covered that. Evolution of the reference design road interchanges, page 32, no further questions there? 2.3: scope of works, general description of works. Any questions on this?

Ms BUTLER - With the removal of the existing Bridgewater Bridge, could you just quickly run through what is most likely to happen to the existing Bridgewater Bridge and, from the information booklet, it is my understanding that once the actual construction is finished, then the removal of the existing bridge will happen. Could you run through what that process is, just for the record?

Mr MOLONEY - As in the demolition process as to how we demolish it?

Ms BUTLER - Yes.

Mr MOLONEY - I might handball to Kevin on that because there was quite a bit of work done in this space to make sure that it is done in a way that protects the environment and that sort of thing. Kevin, is it something that you can speak briefly on?

Mr BOURNE - Briefly, our design consultant would be able to outline any more detail because it is not part of what we are tendering at the moment so we have not concentrated very much on it, but broadly speaking there is the lift span in between two towers and then a span from either side back to the causeway and the northern bank. The first part would be, I believe, to remove the lifting span and the counterweights that support them and then they would remove the towers and gradually move the pieces back in towards the shore and cut them up and remove them, dispose of them.

Ms BUTLER - Would that steel, do you think, be recycled because there is a lot of steel on that bridge? Is that how it works?

Mr BOURNE - There is a lot of steel but we understand there is some paint and things like that, coatings on it, that may make it not suitable for re-use without more effort that it is worth, so I'm not sure.

Ms BUTLER - Yes, and just a statement for the record as well, there are a lot of people who live around the Bridgewater Bridge, whose families or fathers or grandfathers used to work on that Bridgewater Bridge and helped build it and aspects of it and did maintenance on it, and so it is quite important to that community.

CHAIR - Community ownership.

Ms BUTLER - There is a real ownership and a know-how because there were some very skilled tradespeople that worked on that bridge for a long time. It was quite a craft.

CHAIR - For the record then, obviously it is a Heritage Tasmania issue or something that they will address during the major projects stage; is that right?

Mr MOLONEY - That is correct. We will be able to provide more information about the demolition method and that sort of thing as part of our major projects impact statement. Heritage Tasmania will be part of the evaluation and set criteria that need to be met so there will be further work-through -

CHAIR - What happens if they say you should not cut it up and it needs to be kept?

Mr MOLONEY - There are two scenarios there. If we have a developed design that relies upon removal of the bridge then clearly that will be more problematic. If we have a design that doesn't rely upon the removal of the bridge but the removal of the bridge is considered appropriate from a state management of its assets point of view, then that's a different category of challenge.

Ms RATTRAY - I think they're referred to as people who would be at loggerheads over it, Chair.

CHAIR - Is that right? I imagine there will be people that may well want to see it retained but that that's something for the major projects process I guess.

Anything further on this, 32? Capital works removal page 34. Outside of scope rail infrastructure. You cover that again there. I think we've pretty well covered that. The project costs, project funding. Any further questions on that? $576 million. It is the largest infrastructure project -

Mr MALONEY - Single-transport infrastructure.

CHAIR - Single transport infrastructure. Probably one of the most expensive either way. I know that a lot of the things that were built back in the 1940s and 1950s may well have been larger projects but as expensive as that? I don't know. I reckon this would come pretty close. $576 million. Not a small amount of money.

Ms RATTRAY - It got me down the highway, Chair.

CHAIR - Is that right? Oh well, there you go. It's amazing.

I am going to deal with the cost. The Australian Government contribution is $444.3 million and the State Government contribution is $110.9 million, for the record.

So you have past expenditure financial year 2020-21 and financial 2021-22 split up there on that table. You were explaining what the negative figure of minus $4.5 million is with regard to the State Government's contribution and that reflects reimbursement of the Tasmanian Government funding with Australian Government funding to maintain the agreed 80/20 funding split to the project for the record.

Reference design cost estimates 576. Over the page table 7. Anyone have any further comments on that? Contingency significantly different with the P90 as opposed to the P50. I guess that reflects the conservatism of the P90 estimates. Is that correct? You have $46 million contingency or $46.412 million as opposed to $79.7 million in contingencies there.

Mr MALONEY - Each cost estimate deals with a range of possibilities. The concept being we need an estimate where a P50 effectively has a 50/50 chance of happening so on the balance of probabilities that's where a project would anticipate it would land, whereas a P90 assumes that in the - not the worst case scenario because that would be P99.9 or 100 per cent - but in a P90 it means that you have a 90 per cent probability of bringing the project within that budget, so it has to encompass a range of possibilities up to the point of only just a 10 per cent probability that there will be something that comes in the cost more than that.

That's why there is that difference of contingency and please note that is at a point prior to going to tender so these are estimates based on our professional quantity surveyors' estimates on costs. Once we have received tenders we then undertake a further review because you have more cost certainty because you have a little less market risk where you are then assessing is more for instance is how we would manage some commercial risk that exists in the nature of how that's been contracted and any uncertainty around revision of scope or refinement.

The quantity of contingencies as you increase in certainty of outcome quite often mean they come down but these are complex projects. I am not going to understate the fact that we are dealing with complex geotechnical conditions. We will need to continue to plan for making sure that we meet all the environmental obligations and that we deliver the project in a challenging market. There was always a need for appropriate contingencies and we will be doing that assessment and presenting that risk-based cost estimation to the Australian and Tasmanian governments.

CHAIR - For members of the public who may be listening, that P50, P90, that is what is called the Monte Carlo method?

Mr MOLONEY - That is correct. It looks at a range of potential outcomes in terms of probability because each event that may happen may be interrelated or may not. So, it goes through an assessment of what are potential events that may happen? What is their probability and if they do happen, what would be their financial impact? That considers both inherent risks, so risks that exist and you need to manage them. What you are trying to manage is whether it has a cost impact of $10 or $12, as an example, and then you have contingent risks which may or may not happen and, in the event that they do happen, what is there impact?

It is a complex process but it is very important for these complex projects so we following the appropriate methods which are utilised throughout the country for projects as complex as this. That is one of the aspects that will be thoroughly assessed by the Australian Government when they are considering the bormal (?) commitment of their funds.

Ms RATTRAY - What about the escalation price? That is not quite as much difference in the escalation price on that table. Can I have some explanation?

Mr MOLONEY - In terms of escalation it is predominantly - I could be wrong but I am assuming that we have applied a fixed rate of escalation to the project cost estimate.

Mr BOURNE - It is not a fixed rate but it is a percentage in each year for the predicted cash flow so with the P90 the cash flow is obviously higher because of the contingency that is added as well and therefore those same percentages of escalation each year lead to a slightly higher escalation amount over time.

Mr MOLONEY - When we have assessed and awarded a design and construct contract unless there are specific items that may be subject to rise and fall is the terminology we use, generally it is a fixed price. The only things that are subject escalation might be things that are not captured in that element if we are doing a separate procurement. For instance, if the design and construct contract did not include the demolition of the existing bridge then cost escalation on the eventual procurement of the demolition of the bridge would need to include escalation.

Certainly, in cost escalation the current construction market is a consideration there is quite a bit of movement there and that has been a key consideration for our contractors. There may be elements that we need to consider about in managing buyer rise and fall agreements.

Ms RATTRAY - Just as an example, in the building industry people are having to build with steel because they cannot get timber so that will put the price of steel up. It is going to escalate.

Mr MOLONEY - I think if you look at the available statistics you will see that steel prices have risen considerably. It is certainly a key consideration not just for our project but for projects around the country. Steel price is one of the things that is certainly getting quite a bit of attention at the moment, availability and price.

Ms RATTRAY - Everything is market driven.

Ms BUTLER - Wouldn't it be good if it could be recycled?

CHAIR - Okay, further questions down to the business case submitted to Infrastructure Australia. We have got some responses back from them. In table 8, any observations within that table that members want to draw attention to?

Ms RATTRAY - The risk of a seismic event, it is a bit of a worry, but I think we will be okay.

CHAIR - Do we know whether there have been any seismic events in that area?

Ms RATTRAY - One in 200-year event.

CHAIR - That is what it is termed as but I am just wondering how recently, whether we have any information. UTAS might have information on that. Have you got any idea as to how often that, I know how often but -

Mr BOURNE - This would be a very technical area and we would rely on our consultants but a seismic event could be a very small seismic event.

CHAIR - A tremor.

MR BOURNE - Yes, a tremor that would demonstrate the response to that event of the causeway in its unstable form. Obviously, the larger the event the more damage it might do to our infrastructure so it is a bit hard to summarise, have there been any seismic events? Of what level have there been and that sort of thing.

CHAIR - I noticed Infrastructure Australia has said that the risk of a seismic event impacting on the causeway and existing bridge in the base case has not been quantified in the central case of the economic valuation. The department says in response, 'consideration of a seismic event risk noted in option of valuation acceptance or otherwise the risk will be dependent on the options put forward by the ECI tenderers'. You have to wait for those tenderers to come back to you after they have done their work.

The thing is, it has not been neglected. It is something that is going to be delivered through your ECI tendering process. Is that correct?

Mr MOLONEY - Yes, that is correct.

CHAIR - Anything further there?

Ms RATTRAY - No. I suggest that Infrastructure Australia has been over-cautious and you would expect that with using Australian taxpayers' funds.

CHAIR - I guess. It is important knowing what Infrastructure Australia feel about these things because that is determining whether or not the funding happens, so it is important feedback to get.

Mr BOURNE - It is important also to remember that this was in 2019. These comments were in 2019 and we have done a lot of work since then and this is a result of that work that has been done, in part to address the issues that Infrastructure Australia originally raised.

CHAIR - What hurdles are there to jump through for Infrastructure Australia? It is the production of one report isn't it, back to them? Is that the way it goes with regard to funding approval?

Mr MOLONEY - In terms of funding approval, our project proposal will report to the Australian Government. How they seek to assess it is a matter for the Australian Government in determining the funding of the project.

From our side, our responsibility is to present that project proposal report. It will be able to backup the quality and the information in that report, based on the further information we have undertaken, in particular say, addressing the geotechnical concerns that they had because of the wealth of information we have now obtained in terms of the site conditions.

We are able to provide greater certainty about costs because we will have fixed prices from our contractors for a preferred design. In response to each of the issues raised, we have sought to address it in that table. We are confident in the quality of the project proposal we will be putting forward to the Australian Government for consideration.

Mr TUCKER - Chair, can I excuse myself? I have to go and have my jab.

CHAIR - Thank you. Anything further on that page?

I have one more and that is the fourth cell down on page 38. Infrastructure Australia feedback, the proponent's analysis of option 1 indicated a net present value of minus $47.9 million with a benefit cost ratio of 0.67 using 7 per cent real discount rate.

I am not an economist but I am interested to know what that discount rate is all about. Can someone describe that?

Mr MOLONEY - The discount rate that is applicable to the cost-benefit ratio is set by the Australian Government. In terms of us presenting our business cases, they define the percentages that are supposed to apply. Basically, the percentage there is intended to define the value of money to the investor or the person who has the purse strings and is looking to provide funding to the project.

It certainly has been argued, and I personally would argue, that 7 per cent is quite a large value to be placing on money in the current environment where interest rates are so low, also recognising that the rate is applied without the addition of escalation.

If you think of construction costs at the moment typically are at about 4 per cent if not more coming through. If you had a real discount rate of 7 per cent, you are going to add 4 per cent, you are talking about a value of money of 11 per cent per annum in an environment where you can secure money for much cheaper than that and you would be very ambitious to think you can guarantee that quantum. It is a fairly high benchmark, but quite often funding agencies like to set a fairly high benchmark to make sure that the projects that are put forward can meet that benchmark.

We're providing updated cost benefit analysis based on - certainly on that percentage, but also referring to, I think, our cost benefit analysis includes comparison at 4 per cent discount rate. Since the time that body of work has been undertaken we've undertaken further reviews of the economic benefits of our project as well so that'll be part of a total package that we'll be putting back to the Australian Government which will be a revised review of costs and benefits.

CHAIR - That's the delivery phase project proposal report?

Mr MOLONEY - That's correct.

CHAIR - That'll be the final report you have to provide to them?

Mr MOLONEY - That's our intention, yes. There are milestones that we do. They first of all commit the money. Then to give us the money we then need to provide reports to show we are making progress. There are our milestone reports we'll be doing, but that's the report that we would be submitting to secure formal commitment of funds.

CHAIR - So the money's been committed but the final delivery of that depends on these sorts of reports?

Mr MOLONEY - Subsequent milestone reports.

CHAIR - Okay. Project benefits - anyone have any questions there that we haven't already covered?

Ms RATTRAY - We've been through most of it haven't we?

CHAIR - I think we have. Obviously there's benefits that come later. Local involvement in construction, we've heard about that. Socio-economic impact, we've dealt with some of that too. Any further questions on 4.3 page 40? Page 41, 42 Procurement Summary?

Ms RATTRAY - I have a question, Chair. In regard to the tenders that are due to be submitted in August 2021. Does that need to be altered? That timeframe?

Mr MOLONEY - No, tenders closed yesterday. I can confirm that we've received two tenders and we're certainly looking through those with great interest at the moment. The evaluation of those formal tenders has commenced with the intention of getting to a point of ideally announcing the successful tenderer and award an agreement before the end of this year.

CHAIR - Procurement strategy evaluation 5.2. You had a workshop. Who was present at the workshop? Who goes to those things?

Mr BOURNE - There was myself, General Manager of state roads at the time, Shane Gregory and there was also a number of experts or specialists from around the country. From memory there were two from Western Australia, one from Sydney. People that have held senior roles with the likes of RMS in New South Wales and Vic Roads for example.

CHAIR - Further questions on that?

Mr ELLIS - I might just ask on public-private partnerships. There's a cross there. Dismissed because Tasmania is not a state that does tolls basically? Would that be clear …..

Mr MOLONEY - That would be fair saying it's - to place a toll road on our national highway I think would be courageous, I guess if I could use the Yes, Minister, or Yes Prime Minister terms.

Mr BOURNE - It's also about having viable alternative routes. Other places where there's toll roads there's a viable alternative route and therefore you're paying for a shorter time to go from the same A to B.

CHAIR - Just send them via Orford or something. Further questions. Page 44. Note that you 're following the Treasurer's instructions which is good, or have to, don't you? Page 45. Do you have any heads up from the Commonwealth that there aren't likely to be any showstoppers once you've delivered on the things that they've noted in their table. Is there anything likely to be a showstopper that stops this going ahead?

Mr MOLONEY - Nothing's been raised with us that we aren't seeking to resolve through the project that we're doing or putting forward so we have worked with the Australian Government each step along the way.

We have presented to the Australian Government draft versions of each of our project proposal reports and we are continuing to work with officers within the Australian Government

to make sure there are no surprises when we do present our final project proposal report to them. It has been a very collaborative approach to make sure we can meet their expectations when we submit our report, recognising that Tasmania does not deliver projects to this scale very often. We have been grateful for the assistance the Australian Government has given us in making sure that we undertake our activities in a way that will meet their requirements and then giving us a heads up on any issues but at this stage there are no deal breakers or no major impediments that we are aware of.

CHAIR - Okay. No other questions. Risk and sustainability? Page 46 and the table? Any questions there? It seems pretty self-explanatory, a lot of that. Page 48? Are there likely to be any further acquisition issues?

Mr MOLONEY - A significant number of acquisitions were undertaken much earlier in the phase when a previous design existed for the project; however, because as it has evolved, as we have seen evolution of the design we identified a couple of other properties that may need to be acquired. As mentioned earlier in the hearing, we are in discussions with the landowner of 650 Main Road, which is the Black Snake Inn and that same property owner also owns an adjacent property, 652, and there is a further property, 640 Main Road, which, because of the nature of the intersections that have been proposed, it may require compulsory acquisition. We have liaised closely with the landowners there and discussed the process that would be followed if it was necessary to go through a compulsory acquisition process. We are maintaining close contact with them and ensuring that their rights are protected and delivered under the Land Acquisition Act.

CHAIR - It is the Valuer-General that sets the prices generally when it comes to those sorts of things so it is not like the Government themselves, or State Growth, are saying we are going to give you X. It is properly done.

Mr MOLONEY - Yes, and in the case of compulsory acquisition, it is common for the State to pay the legal fees and representation of the landowner so that they can get legal advice as to what their rights are under the Act. It is common for the State Government to also pay for an independent valuer on behalf of the landowner so that that valuer can put forward a case to consider in comparison to the Valuer-General's evaluation of property value and there is also a range of other protections or remuneration that the State would offer to a landowner through a compulsory acquisition process to recognise that they should not be out of pocket from expenses in terms of relocation to a new equivalent home. There are a range of guide notes available on the internet produced by the Government in that space. It can provide advice. We are seeking to work to ensure that the particular landowner that is being impacted are informed of their rights and to make sure that they are able to ensure that their rights are protected under the Act.

CHAIR - Any other observations? 6.2 talks about project disbenefits. It is pretty well covered there. Talked about increased air emissions, I suppose if we are gradually moving towards electric vehicles, that might get less and/or hydrogen vehicles.

Mr MOLONEY - We can confirm that that is the advice that we are receiving.

Ms POTTER - I can expand on that. We have had some preliminary air modelling done and we got results back recently from that and that showed between 10 and 90 per cent decrease in levels so it does not look like it is an increase at all. That is partially associated with the

change in vehicle fleet and that it is expected to move to more electric vehicles but also the fact that you do not have as many roundabouts in the main part of the design so people are travelling at a consistent speed.

CHAIR - Any other questions? 6.3, Compliance with Sustainability Strategies? Note, it says here, 'Future use of the existing rail corridor is not precluded'.

Ms RATTRAY - That's been confirmed today, or compromised, Chair?

CHAIR - Correct.

Mr MOLONEY - It won't be precluded or compromised.

CHAIR - Thank you. 'Where the revised road network may require buses to reverse direction before continuing on the original route, suitable turning areas must be provided within the project works.' Is that likely to occur?

Mr MOLONEY - In terms of relocation of bus stops, typically you don't like bus stops directly on a high-speed environment such as a highway. In terms of going backwards, I think the only example would be if vehicles, bus routes that were heading south, say from Brighton that deviated off would need to utilise the East Derwent Highway roundabout to then head south. Sorry that's probably not a very good explanation, but if a bus was to be driving along the Midland Highway towards Hobart and needed to stop for passengers at Bridgewater and used the exit ramp there. They'd go through, pick up people and then would need to return back through the East Derwent Highway roundabout.

We mentioned before, it's the nature of providing an efficient highway environment for the 22 000 vehicles using that section per day, it does have an impact on the accessibility of immediately localised traffic movements. It's a necessary consequence of providing a safer environment for that higher speed traffic through there. The higher volume, higher speed traffic.

CHAIR - A final question from me on rail. You say the corridor is not going to be impacted in the sense of it's not going to be compromised. Has any consideration been given with regard to connectivity of future railway stations and the like? If you're using up most of the area for all of these clover leaves and things, if I can put it that way. Has any consideration been given to - in the event of rail becoming again, a mode? Connectivity to a proposed railway station and pedestrian access and the like. Has that been given any consideration in this?

Mr MOLONEY - I think on the Bridgewater side there is a strategy by Brighton Council which nominates a location for a train station in Bridgewater, which is on the opposite side of Old Main Road, away from the project area if I'm correct.

Mr MOLONEY - We would certainly not be prohibiting, precluding or compromising that objective being achieved.

CHAIR - Thank you. I think it's important we're future-focused. It may well be that we have jet-packs by then, but anyway.

Ms RATTRAY - What, from Bridport?

CHAIR - Who knows.

Ms BUTLER - I've got a quick question about that.

CHAIR - Yes?

Ms BUTLER - There is a McDonalds in Bridgewater. That's a really busy space and I'm just thinking, how does the public access it from the other side of Bridgewater? They'd have to walk around and under, would they? At the moment they've got that overpass.

Mr MOLONEY - That's correct. I guess pedestrian traffic between the more residential-side of Bridgewater across to, perhaps you could call it the commercial side where McDonalds is, yes, would be underneath the bridge across that way.

CHAIR - So it would be safer in fact?

Mr MOLONEY - Yes, it certainly doesn't involve the need to go up, across and then back down, because horizontal movement is always a lot easier than vertical movement.

CHAIR - If you've got limited mobility it's much preferable.

Ms BUTLER - What about through traffic for people accessing the McDonalds from the highway, because I know a lot of people do? I actually don't like McDonalds, because I don't like the taste of it.

Ms RATTRAY - When it's late at night and it's the only thing you're going to get, it's not that bad.

Mr MOLONEY - We have met with the franchisee of that particular McDonalds and my recollection of the conversation is that quite often most - if you're talking about patrons, or customers of McDonalds - they're on the highway. Typically, a larger proportion, or almost the majority of the proportion of people, are travellers who are going north. You are pulling in off the highway travelling north - and we do have an off ramp for that - you grab yourself some food because you might be driving to Launceston and you need a top-up before you go.

My understanding is that the majority of the highway traffic who purchase from McDonalds is that it is more the northbound traffic whereas the southbound traffic by the time you have got there and you're heading to Hobart you do not pull over and spend half an hour getting a top-up of food when you are only 10 minutes from home or something like that.

Typically, if you have driven on the highway from the north and you have made it to Bridgewater if you are heading south you are continuing to go. Our understanding is a large proportion of the clientele from the highway is northbound and we have accommodated that by having the off ramp and the on ramp to provide that efficient movement.

Ms RATTRAY - Do not forget you have Pie Face as well now.

CHAIR - Stakeholder engagement, page7.

Ms RATTRAY - I have a question. This project is such a significant project. What sort of continuing stakeholder engagement is there going to be for the project if everything lines up as it proceeds?

Ms MIDDLETON - Once we have a contractor on board they will be responsible as part of their tenders they submit a stakeholder engagement communications plan.

Ms RATTRAY - You will just be overseeing it?

Ms MIDDLETON - Yes.

CHAIR - How do you guarantee the quality of that consultation?

Ms MIDDLETON - We will be working quite closely with them and they will be held to account with that plan.

Mr MOLONEY - It is probably worth noting there are a couple of aspects of stakeholder management. Typically, on our road projects one of the important forms of communication is making sure the public know about traffic changes and those sorts of things and that is 100 per cent within the remit of our contractor. We ensure that they deliver that to a high standard so that if there are any concerns about their performance -

Ms RATTRAY - So you can go another way if you need to.

Mr MOLONEY - That form of consultation which is perhaps more around communications of change and also working with impacted stakeholders. For instance, a further review on mitigation such as noise and things like that. There is a component or a body of work that sits with our contractor. That being said, as I mentioned earlier I think there are a lot of opportunities from a state government perspective to be looking at a range of initiatives that we can work with the community to implement improvements that may have synergies with our projects.

We will not be relinquishing that aspect. That will be something that we will continue to drive as a project team on behalf of the state of Tasmania to make sure the best outcome for our communities. There are the things that fit within the responsibility of the contractor which are more about the delivery of the works. Then there are the other side benefits that we will be looking to work with the community on and until we have a developed design it is hard for us to operate in that space.

CHAIR - You will be catering for those people that are not computer literate so they get an opportunity to be consulted?

Mr MOLONEY - Laura, if you wanted to touch on the example of the October -

Ms MIDDLETON - Yes, as we mentioned, a few months back last year we did a quite extensive community consultation on our reference design and we were quite cautious coming out of COVID that everything was able to be delivered online but, given the demographic of the Granton and Bridgewater communities, we wanted to make sure that everything was available in hard copy and face to face as well. We will continue to do that, noting that not everyone has internet access.

Ms BUTLER - There are also literacy issues as well.

Ms MIDDLETON - Absolutely.

Mr MOLONEY - We held a number of sessions at the local hall.

Ms MIDDLETON - The Bridgewater Hall, we have had face-to-face sessions, we had online sessions and an online map where people could comment that way. People wrote letters to us and all of that was responded to as well. That is something we will definitely maintain. We have a project phone number that people can call as well.

CHAIR - And you are following the IAP2?

Ms MIDDLETON - We do, yes.

CHAIR - Participation spectrum.

Mr MOLONEY - Just as an example of the work we are doing. As recently as Tuesday we participated in a community forum held and coordinated by the Derwent Valley Council in the Granton Hall and met a number of the Granton residents and talked through the projects. It is an ongoing consultation and we take on board the information from each of those sessions.

CHAIR - I noticed under the IAP2 circumstance model that empowerment is the last one, but that does not get a guernsey. Is that because of the constraints on the project? There is no way that you can really cater for people's ultimate wishes? Why is empowerment being missed out there in that consultation model? It's just that it says - at the top of page 53, "The stakeholder engagement objective's project focus is on the informed consult, involve and collaborate sections of the spectrum." And I simply had written, "So, empowerment misses out."

Ms MIDDLETON - I think the empowerment - if you had a huge bucket of money and no plans, you'd go out to a community and say, "Let's start, what can we do for you?"

CHAIR - What can we do for you?

Ms MIDDLETON - We're a little more constrained than that unfortunately.

CHAIR - It's a matter of budgetary constraint. Okay.

Mr BOURNE - Also regulatory constraint. I mean, there's design guidelines that need to be met and so on. You can't give everything over to the public to make ultimate decision on, which is what the empower says.

CHAIR - Okay. Thank you. Any further comment on that? Page 54, 55. Some of the issues raised during consultation? Nothing that hasn't been generally satisfied, presumably. Any matters that you feel couldn't be met? Any concerns that really couldn't be met, apart from maybe the rail issue?

Ms MIDDLETON - Rail is probably the major concern. Obviously, we had a broad range of comments from a broad range of people and someone suggested why not do a six lane bridge and build for the future that way? Why not just do three lanes? There have been all sorts of different comments like that. But rail's probably the main one that we heard, and I feel we were able to respond to most of those. As Ben mentioned, all of the feedback that we received through that consultation has been passed on to the tenderers and the network through that, so they've taken it on board.

CHAIR - Yes. And things like park and ride facilities are outside the scope of the -

Ms MIDDLETON - They are but they're conversations that we're having with councils as well.

CHAIR - You continue to have that conversation with council. Okay. Any other questions on that, 7.3? Properties purchased, we've been through that. Development impacts and approvals. Major project approval, we don't know the outcome of that at this point in time but there's no other comments on that process? No. And additional approvals. Reserve activity assessment. The project must also secure a reserve activity assessment from Tas Parks and Wildlife Services. Are there likely to be any issues with that?

Ms POTTER - No. We're not anticipating any issues. We've done lots of consultation with Parks and Wildlife and along the way as our project has developed, and it's a lot of the same site surveys and investigations that are informing the major project work that are informing the reserve activities assessment. So, we have mitigation in the same methods and things like that to meet their requirements.

CHAIR - Okay. And I notice on page 60 you list the acts, relevant legislation. There's a very old act there, 195, the Highways Act 195. I presume that's 1895, is it?

Ms POTTER - That should be 1975.

CHAIR - It's 1975.

Ms POTTER - I believe.

CHAIR - Sorry.

Ms POTTER - Certainly not 195.

CHAIR - I thought I should point that out, just in case you're using this somewhere else. Just to let you know that this committee does read its papers.

Mr MOLONEY - Taken from the Roman Highway Act. St Paul was playing halfback for Jerusalem or whatever.

CHAIR - Okay. Written on stone. Okay. 8.4, environment terrestrial and marine. We've been through a fair bit of that with the three species that we were dealing with. Fauna, we've dealt with the aquatic birds earlier. I think we've been through most of this. Aboriginal heritage, I'll touch on that on page 63, unless anyone else has any other questions on the previous pages?

Ms BUTLER - I've got a question on aboriginal heritage.

CHAIR - You go.

Ms BUTLER - I was just going to ask for the record to be able to walk us through the approval process with aboriginal heritage because it looks like you've got a few different sites, and what is the process from here and how do you make sure we do not have another situation like what happened with the Brighton Bypass with the middens?

Ms POTTER - The Aboriginal Heritage Act is captured as part of the Major Projects process, along with a lot of other acts. That process has kicked-off so the development assessment panel that is governed through the Tasmanian Planning Commission effectively, has already been engaging with all the participating regulators. That includes DPIPWE and their responsibilities for Aboriginal heritage and AHT. Through that process they are able to put in their input through the assessment criteria to make sure it captures their requirements and then they assess it as well.

The assessment criteria are a bit like creating your own planning scheme for a project. They have input into what the criteria are as well as having input into how it is being assessed. That advice from the different participating regulators which includes AHT goes back to the panel to make the final decision. It is captured through that process. That is how the approvals process will work.

CHAIR - You are not likely to have another Brighton Bypass issue? You may not be aware of that but there was a particular issue at the Brighton Bypass.

Mr MOLONEY - Certainly none of the sites that we have identified are of significant equivalent to the Jordan levee matter.

CHAIR - Thank you. Page 65 is a summary and we have dealt with all of that. Unless members have another question, there are a couple of things I need to do but because we have other witnesses, I am going to ask that you take a seat at the back and I will deal with the fundamental questions after we hear from our other two witnesses.

There may be questions that we might want to ask you as a result of listening to our other witnesses, so if you would not mind taking a seat.

PUBLIC

Mr **IAN ADDISON** WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

CHAIR - Thank you Mr Addison and thank you for having the patience to wait while we do our inquiry. It is very important that we get the fullest information possible and I am sure you are aware of that and thank you for putting in a submission. To have a member of the public put in a submission is important when there are concerns and questions out there.

I need to make you aware that in giving your evidence today, this is a committee hearing and it is a proceeding in parliament which 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 the parliament receives the very best information when conducting its inquiries and it's 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 the parliamentary proceedings.

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

Mr ADDISON - Thank you. I should firstly mention I am here under a bit of personal duress due to my physical health status over the last seven weeks or so. My submission was written under a bit of duress and my tenants here also.

The reason I mention that is purely to demonstrate my commitment to being involved in this process and to demonstrate how important the outcome of this project is as I see it. I could even go further to demonstrate by commitment by saying that I forewent my game of croquet today. If you understood how much I look forward to and enjoy my game of croquet then you'd really understand the commitment that I've made to be here today.

CHAIR - We appreciate your commitment. Having played croquet on the odd occasion I can understand.

Mr ADDISON - I have tried to look at this project in a holistic way over a few dimensions: one being looking at it over an extended period of time, like about a 300-year time frame. I'll explain that shortly. And, also, in terms of this project being part of a wider network rather than just a project in itself would be the two main ways that I've tried to look at it in a holistic way. I've tried to look at it as an integrated transport plan. I see that its fallen short in the respect of rail. Rail has come up quite a few times today. I have a lot of support for the project within the restrictions of funding and within the restrictions of what modes are being addressed but I see it as a little bit twentieth century that such a significant mode is being intentionally left out of consideration.

The long-term consideration - 300 years. Based on other bridge projects, I guess this is probably seen a hundred-year project but there's every chance it would be still going in 150 years and possibly more, being well maintained. The rail corridor across the river already has 145-year history so that equates to an approximate 300-year time span that we're talking about bridges across the river at this place.

CHAIR - Collectively.

Mr ADDISON - Collectively. So, we are at a mid-point in time where the decisions that are to be made will have quite a significant impact on the next 150 years or so.

Rail has had a chequered career over the 200 years or so of rail transport and now 150 years in Tasmania. Its level of importance has gone to and fro as the generations have gone by. I think its simplistic just to say well the current rail corridor in Hobart is out of service and therefore that's it. In a sense that's what this project is doing. I see it as a bit of a hollow commitment to say that the project won't interfere with the rail corridor. I am just trying to think of the words.

Ms RATTRAY - Won't compromise.

Mr ADDISON - I see it as significantly compromising the rail corridor in that you're removing the most-difficult- to-replace section and the link to the rest of the state.

The other holistic part of it is that I look at the rail network as the 600-plus kilometres of the state network - that's the active network. There are another couple of hundred of inactive sections. I think all transport networks have to be looked at holistically like that in the way that they interconnect. I know the representatives here, the four of you, have got significant amounts of rail in your electorates.

For example, the Lyons people, you've got probably close to 350 kilometres of rail in that section alone. In Braddon, there's probably close to 200 kilometres. You've got the west coast line. You've got the coastal line. So, they're major sections of rail. We should also think of rail not just as being a freight carrier, but for its potential for carrying passengers. We shouldn't miss what's happening in other parts of the world where passenger rail has come back into vogue again. People are realising it's a very important part of the overall transport network. Maybe it's not quite as important as the network of roads but it does add greatly to the transport options people have, especially given the safety aspects of rail transport.

It's been disappointing that there's been no apparent real appraisal as to whether or not to include rail in the project other than perhaps for cost-cutting reasons. I know that the road project, as in a road/bridge project, has morphed considerably over the last eight or nine years or so, going from an $800 million project plus. Then there was a review in 2016 by Infrastructure Tasmania which were looking to get a much lower cost. Unfortunately, at the same time a review of the passenger rail proposals for Hobart were being done simultaneously by that organisation. An arbitrary limitation of the northern limit of the Hobart passenger rail idea was set at Granton simply because the bridge would be too much of a factor. So, linking across the river was going to be too expensive, too inconvenient or whatever. So, there was an arbitrary limit set on the corridor that would be protected to be as far as Granton. At that time the proposal was still very much for two completely independent bridges that had nothing to do with the existing bridge, or the existing causeway. In fact, it was recommended that the existing causeway would be left well alone by that study.

I've attended a few public outreach programs, whether they were conducted by, say, the department, or by parliamentary committees. Most recently I was here for a Legislative Council committee meeting in 2012 and 2013.

In 2012 both of you were part of the committee that looked at integrated passenger transport options for Greater Hobart. The in-depth nature and the breadth of that investigation was very interesting. It extended for probably well over a year. There was quite a bit of travel elsewhere, to Wellington and to Brisbane, to investigate various things. Some of the recommendations that came in the final report included concerns about the approach and the strategy of the then Department of Infrastructure, Energy and Resources.

The report was generally very supportive of the passenger rail concept. It recommended serious consideration of extension to Brighton

Ms RATTRAY - And a ferry service?

Mr ADDISON - All those sorts of things. It was very wideranging. Specifically, on the passenger rail though, it recommended that the rail corridor across the River Derwent be maintained. It also supported the retention of the current gauge for the railways in the state which is considered a narrow gauge of three foot six inches or 1067 millimetres. It recommended that the passenger rail service adopt that rather than the standard gauge that was being suggested at the time by the department.

I felt it was worth mentioning that today and bringing it up because that report brought up so many very valuable recommendations, including about ferries. The fact that it recommended the connection to the rest of the state rail network was one of the very important recommendations.

A lot of things that have been said today about rail are absolutely true. There are different requirements. My question is whether it is that different that you cannot integrate it into a highway bridge. In my submission, I tried to give some examples around the world of numerous bridges of varying ages that are both road and rail. The ones that I have personally had the pleasure to traverse and also to notice how mature in age some of the bridges are, a lot of them are much older than our current Bridgewater Bridge.

I also have a little bit of a philosophy that trashing existing pieces of infrastructure, you really need to have very good reasons for doing it and if it is about maintenance, then that is a relatively minor excuse. For example, the Sydney Harbour Bridge is undergoing continuous maintenance. It is being maintained all the time and I am sure that would cost a significant amount per year.

If you talk about the maintenance of something say of $50 million to $100 million over 50 years, you are talking about one or two million per year. How does that compare with say, putting a completely new bridge which has to be a lift bridge or a swing bridge, how would the two costs compare? Unfortunately, there has not really been any work that I have been able to find where the department or some consultants have really looked at the rail aspect and what it would seriously involve to either maintain the current bridge or to do a completely standalone rail bridge replacement, or indeed what it would cost to integrate rail into the northbound lanes of the new highway.

I put some recommendations to the new Bridgewater Bridge committee or the project team under Ben's direction and my background in maths and physics and half an engineering degree gave me enough background information where I could at least see the basics potentially of how it could be done.

My thought was, when compared to putting a four-lane highway across a one-kilometre river, the additional cost for at least allowing for a future rail bridge by building in some extended supports that might be involved, by modifying the gradients on the northbound carriageway, that would also suit rail, I firmly believe that is feasible. In the scale of the overall project, which is really a massive engineering undertaking, that it is a relatively minor challenge to be able to integrate at least preparations for inclusion at a later time.

I really enjoyed listening to the questions coming from the committee today. All five of you asked some really pertinent questions about wider network issues, which we should. About whether or not the current bridge could continue, I was interested to hear that Ben said the current bridge could continue forever if you were to prepared to spend enough on keeping it going. Of course, there are limitations to that. That has its limits of course but it really just comes down to how much you value the rail corridor and what you're prepared to invest to ensure its reasonable continuation.

There are plenty of downsides about the commitment to leaving the rail corridor alone. An analogy I jotted down here was that when we prepare buildings that have employees working in them or have the public coming to them, we now pay a lot more attention to the kind of access that we provide for employees and for the customers or the public. No longer do we have an access that only caters for the very able-bodied. We now cater for a wide range of abilities and we now spend more on putting in what we might call 'disabled access' for want of a better expression.

That involves - if you're just looking at the cost of providing access to the building - perhaps it's stairs, perhaps a ramp, perhaps even a lift inside instead of just stairs. With just the access side of things you're probably looking at a big increase in cost but if you then look at the overall picture for the whole building, that increase is really only a marginal extra cost over the total project cost and what it does is it increases the value of your building in terms of your employees and the range of employees that can easily utilise the building and of course for the customers or the public who need to come to the building. I see this as a very similar thing that the additional costs for covering for rail are like that marginal extra cost compared with the total project which is a really significant engineering project.

It was interesting that the Brighton Bypass was mentioned because that's another project that I took a lot of interest in and I tried to promote the idea of improving the future rail corridor across the Jordan Valley. I came to a committee like this and there was a lot of really good comments from the committee. In fact a couple of people even spoke to me privately and said that makes a lot of sense but in the end because it was presented as a highway project and not multi-modal project, the committee were obliged to say 'fair enough'.

What was interesting later on when there were issues about Aboriginal heritage that came up - and rightly an extra investment was made to the bridge in a way that respected Aboriginal values in the area - there was a significant extra investment in the project but beforehand when I was suggesting that a small increase in the investment on, say, earthworks for example, well no, that fitted outside that scope of the project.

That annoyed me at the time. I was disappointed with the result, but that disappointment really pales compared with this project because that one didn't interfere with the rail corridor. That would continue on.

In this case it interferes significantly with the rail corridor. It completely cuts it. That is a major disappointment for me.

CHAIR - We are going to have to cut to questions because of time. Thank you for giving us that level of overview.

Ms RATTRAY - It is an extensive submission.

CHAIR - It is an extensive submission. We are confined to dealing with the project that is before us. There are policy decisions that are made. We needed to get on the record how the department got to this point. That's important for us. Does any honourable member have questions of Mr Addison in relation to his submission?

Mr ELLIS - Mr Addison, regarding building another fit-for-purpose rail bridge, would it be fair to categorise that as a concern that it may not stack up on its own?

Mr ADDISON - That would be the main reason. I think it would really affect the business case and would be a much bigger investment than retaining a well-maintained current bridge, or even incorporating preparations for a link on the new bridge.

CHAIR - Given the angles that we're dealing with and the fact that rail needs a much more gentle access, it would mean a very much longer bridge which would mean a much higher cost, as it was explained to us. Do you see that as the problem?

Mr ADDISON - On the new northbound lanes. Part of the southern section which is going to be built over the causeway will be mostly an earthworks thing.

CHAIR - But you still have to go up and it still has to be at a height to allow trains to go underneath it.

Mr ADDISON - No, the trains would come around beside because they run almost side by side on the causeway.

CHAIR - Not with the elevation that's needed.

Mr ADDISON - No, but the rail could start back where the overpass is at Granton. It could start climbing there in the future and could then come alongside the road bridge and then be part of the road bridge across to the other side and then continue.

CHAIR - Thank you for that.

Ms RATTRAY - Your preference would be to have rail sitting adjacent to the bridge, but if that wasn't possible would you be happy if the bridge stayed intact and so therefore the rail corridor as it is stays intact as well?

Mr ADDISON - You mean the current bridge?

Ms RATTRAY - Yes.

Mr ADDISON - I'd be happy if they were prepared to maintain that bridge and have it functioning properly. I assume it has to function properly for at least the next two or three years because -

Ms RATTRAY - Three or four or five.

Mr ADDISON - However long it takes to get the other carriageway up and over, the new standalone bridge. It is going to have to continue a bit longer as it is. Ben mentioned that it's now out of service as a rail but the bridge part of it must surely still be in service to cater for the highway. I'm reluctant to see existing infrastructure tossed away.

CHAIR - You're saying the northern-bound road would have the rail alongside it not on the current alignment?

Mr ADDISON - I believe there'd be potential for it to build into the earthworks and to extend the supports. I believe that the south-bound lanes will have slightly extended supports for a bikeway and pedestrian way. I don't see why you can't have extended supports for a rail bridge which could sit on the same supports. If we are talking light to medium weight passenger trains they would compare with the heaviest road vehicles that this new bridge is going to have to take.

Ms RATTRAY - I appreciate that.

Mr ADDISON - In a lot of ways this is not about Ben and his team, who I have the greatest respect for.

CHAIR - I am sure it is not, I appreciate that.

Mr ADDISON - It is really beyond that, it is the decision maker, it's the limits on funding made well in advance and it's the limits on putting one important mode right out of the picture. I think that is the issue at hand.

CHAIR - I appreciate that. In a sense, it's a political decision that has been made and they are simply implementing that.

Mr ADDISON - I guess that's why I am talking to politicians.

CHAIR - Well, that is the case but the committee has limitations placed on it in terms of what it deals with. Thank you, we appreciate you coming.

Just to reiterate what we said at the commencement of your evidence, what you have said to us here today is protected by parliamentary privilege. Once you leave the table you need to be aware that privilege does not attach to comments you may make to anyone, including the media, even if you are just repeating what you have said to us. Do you understand that?

Mr ADDISON - Sure, I do understand. Thank you.

CHAIR - Thank you for your time and thank you for being patient.

THE WITNESS WITHDREW.

PUBLIC

Mr CHRIS MERRIDEW WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

Mr MERRIDEW - I, Chris Merridew, do solemnly promise and declare that the evidence I shall give to the committee shall be the truth, the whole truth and nothing but the truth.

CHAIR - Welcome. As you have probably heard a couple of times today, before you give evidence I want to inform you of some of the aspects of committee proceedings. The committee hearing is a proceeding in parliament. That means it receives the protection of parliamentary privilege. That is an important legal protection that allows individuals giving evidence to a parliamentary committee to speak with complete freedom without the fear of being sued or questioned in any court or place out of parliament. It applies to ensure that parliament receives the very best information when conducting its inquiries. It is important to be aware that this protection is not accorded to you if statements that may be defamatory are repeated or referred by you outside the confines of the parliamentary proceedings. It is a public hearing, members of the public and journalists may be present and this means your evidence may be reported. It is being broadcast today. Do you understand?

Mr MERRIDEW - Yes, I do.

CHAIR - Thank you very much. Members of the committee are Jen Butler, myself Rob Valentine, Tanya Rattray and Felix Ellis. Over to you for a statement, if you wish to make one.

Mr MERRIDEW - Thank you, Chair, for your invitation to make comment on the new Bridgewater bridge proposal. It has been a very impressive afternoon, especially to listen to the care and knowledge from Mr Ben Moloney. He has a passion and tremendous knowledge, so it has been an interesting afternoon.

Equally, I have had a passion for doing something about traffic around Hobart for about 15 years. At a public seminar to do with traffic issues around Hobart, I raised the issue of the Bowen Bridge and why nothing was ever being done about it. That did raise some eyebrows, saying maybe that is a good idea.

The Bridgewater Bridge design before you may not be the best solution for traffic that wishes to either to go to the north, or come from the north. As we heard this afternoon, the design is totally reliant on the Northern Outlet, which was constructed around 1997 as one of the many results of the Tasman Bridge collapse.

The Northern Outlet, with the resulting feed into the Brooker Highway, is already nearing full capacity, and with urban sprawl - including New Norfolk, with the mayor boasting on Saturday that another 1000 homes have been committed to be built in New Norfolk.

To me, with not much employment in New Norfolk, that probably means an extra 4000 vehicle movements on the Northern Outlet and the Brooker Highway to wherever they happen to be going, and I really think the committee and the designers of the bridge need to take that into consideration. The world has changed dramatically since Eric Abetz received the first $100 million for a Bridgewater Bridge option in 2004, nearly 20 years ago - or certainly by the time any concrete is poured on this.

The Northern Outlet and the Brooker Highway should not be expected to be the general corridor for the entire north. The new bridge, as we heard this afternoon, will only provide a further three kilometres at 80 kilometres per hour from the Brighton interchange to the Granton hill.

Inbound traffic is commonly now queued back to Claremont High School, in spite of the new Elwick interchange - and a very good interchange it is - and outbound traffic likewise from the Austins Ferry overpass down to the Granton roundabout. I have often wondered why there is not a slip road running across the front of the old jail to let those poor New Norfolk people get away and get out of it.

This is not in my proposal, but it was raised this afternoon, so I will address it. I have looked at a proposal for an aqueduct to be included, possibly a tunnel, and the fact that we have 30 metres of silt. Whether you are proposing a tunnel or even a bridge, you still have to put concrete piers up through that 30 metres of silt, to start doing whatever they are going to do up in the air.

There is an aqueduct in Holland, the [inaudible] aqueduct - and let's face it, even when I was at school, we were always told that Holland was built on swamps. You are building here on swamps, and I really hope that might have been considered.

I was interested to hear it raised this afternoon. Is there a way of getting the traffic from one side of the river to the other, without taking it right up into the air and putting it way back down into the air? You gently run it from the main Bridgewater roundabout on a gentle descent, so when it comes underneath where the existing uprise in bridges are - the uprising columns - it would be approximately 10 metres below river level. That is allowing seven metres for the aqueduct side and the roadway, and three metres on top for the river to flow over the top.

The river navigable height - navigable channel - is limited by the reef that runs off the Jordan River Bridge; 2.7 metres is the deepest keel you can take up the river at low tide.

Looking at something like an aqueduct, with a gradual descent from the main Bridgewater roundabout and rising somewhere before it meets the existing ground at Granton is a possibility that should have been considered. We have not done our homework on that, but I was pleased to hear it raised as a possibility: can we go under the water in some way? One should ask the Dutch; they have been doing it for several hundred years.

Back to my original submission. If we accept that 90 per cent of the traffic that will use the bridge emanates either from the north, or wishes to go to the north of Bridgewater - and I do not mean the MacDonald's at Bridgewater, I mean going further north - and not far north of MacDonald's is where the current East Derwent Highway finishes.

There is a lot of traffic that could be diverted from Bridgewater, especially from the Bridgewater interchange along the eastern shore, gaining the option of using the underutilised Bowen Bridge, opened in 1984, and/or proceeding on to Cambridge, which is fast becoming an industrial suburb, and certainly the direct approach for access to Tasmania's international freight and passenger airport from anywhere north of Bridgewater. I drove to Launceston on Monday afternoon, and I estimate that two out of every five vehicles heading south were trucks.

Ms RATTRAY - I agree with your assessment, being a regular road user heading north.

Mr MERRIDEW - Thank you. What I am proposing - and I still believe that the Department of Infrastructure and Transport and all the people who are issued with looking at the future of southern Tasmania - is a better solution would be to develop the back Tea Tree Road from its Brighton interchange off ramp, to follow relatively flat farming land to its junction with Grasstree Hill Road. It already exists. Flat farming land is important because every time you drive a truck up a hill, even though you have the new gradient rules of the federal government, it is a fairly energy-intensive business. Climbing up and over bridges and Granton Hill and the Queens Domain are all roads that you do not need to necessarily use if you are actually going to the growth of what is happening on the eastern shore.

At the end of Grasstree Hill Road at that point, traffic for the northern suburbs could access the Bowen Bridge - it has been a passion of mine, that the Bowen Bridge is underutilised - via a cut on the hill highway through Grasstree Hill, with links at the western end through Jordan Hill Road and the East Derwent Highway, which I note last week completed extensive upgrades right from Geilston Bay to Risdon Prison, basically, where there is a beautiful four-lane highway. One lane track goes left to the Bowen Bridge, and off to the right up Grasstree Hill if you are heading to Richmond.

When the Bowen Bridge was built or gazetted, an arc of corridor from the eastern end of the Bowen Bridge, coming around to the roundabout I just spoke about - the Risdon Prison roundabout, for want of a physical location - that land corridor still exists. With the proposal for the new bridge, I really believe something needs to be done to make the Bowen Bridge more accessible and a lot safer, because currently it is not a very nice road driving past Risdon Cove.

Sorry, I'll come back to that. I had cause to visit a business at the Cambridge industrial site recently and I was amazed. I turned down Runway Avenue and all the way down there were little cul-de-sacs going off. Down each of those cul-de-sacs was a laneway that went up to another 10 businesses. Cambridge is an enormous employer of people. There is another proposal being developed - the Government is aware of this - to put in a vast industrial concern - I ask you to visualise this. If you were driving out of Hobart Airport along Holyman Avenue, you haven't got near the airport roundabout yet and you look to your left, all that land that goes across to Acton Road is allocated to this enormous industrial subdivision.

With that, plus the international airport, plus all the other things that are happening on the eastern shore I really believe something needs to be brought up. If it could be brought up in conjunction with the $579 million for this bridge, it would be terribly good. I'm using this chance to wave to your committee that it needs to be looked at.

CHAIR - We have limited time.

Mr MERRIDEW - Sorry, I'll speed up.

CHAIR - Cut to the chase would be great.

Mr MERRIDEW - The approach with a fit-for-purpose highway on the eastern shore is a critical path for the effective implementation of access to the north in providing much needed traffic options for south-east Tasmania's biggest residential growth area, being the southern

beaches and Sorell municipality. The Coal River Valley is a potential residential and rural development strip.

I also was advised that Brighton is going ahead in leaps and bounds. A new high school, I think, is being approved. A lot of new housing is going in at the back of Brighton. Last Saturday, in the *Mercury*, so it must be true, there were 2600 houses announced for Howrah, or Droughty Point, which is the land at the very end of Howrah as you sail down the river.

Ms BUTLER - Howrah Heights or something.

Mr MERRIDEW - Skylands. It's going to take 20 years, but 20 years in the life of developing this Bridgwater bridge is quite a short period.

CHAIR - So you're saying that's going to generate more traffic from the north towards that?

Mr MERRIDEW - Exactly. It's an area about five times the size of Battery Point. It's going to be a significant, additional activity on the eastern shore. Some of those people will not necessarily want to come across the Tasman Bridge. They may want to go into Glenorchy. So, it is critical that access to the Bowen Bridge be brought in now. Equally they can continue through to the north quickly without getting involved in the northern outlet roadway. As you know, when you come from the Tasman Bridge and you want to go to the northern suburbs, you get involved in a tail back to Government House gardens to try to get out onto the Brooker Highway to go north. You have to really plan that there will be less traffic on that.

The demographic change since Senator Abetz got that first $100 million - the Bridgewater bridge was basically just part of the great northern outlet. The whole development of south-east Tasmania - in the New Norfolk area we heard there are 1000 houses. We have to really bring that into your thinking.

CHAIR - The difficulty is we're not here designing the -

Mr MERRIDEW - No, I know you're not.

CHAIR - The whole southern transport strategy.

Ms RATTRAY - You certainly have an ally in Mr Tucker, after his drive through this morning?

Mr MERRIDEW - Thank you. I just think with what is being planned with the $570 million, we need to also do something possibly even before that bridge is built, because building the bridge, as I understand from this afternoon's evidence, is going to be disruptive to the traffic, to the north. So if you give them more accessible ways to do it now it mightn't be a bad idea.

The new four-lane bridge intrigued me. The four-lanes are supposed to be the highway to the north coming from Launceston. There are often three-kilometre sections of one lane each way, so a two-kilometre bridge is not really out of the point, but you build for the future.

Building for the future. If we go back to Mr Brooker Highway, as a pupil of Campbell Street School, the Brooker Highway did not even exist until 1960. Someone had enormous vision to not only build it, but provide for it. There is still room for more lanes on the original section. There are enormous nature strips.

CHAIR - I have to declare an interest. It was my great uncle, Kenny Brooker.

Mr MERRIDEW - I am pleased to hear that. I often wondered who Brooker was, but I assumed he was a man of incredible vision.

CHAIR - Of course, like his great nephew.

Mr MERRIDEW - Is there someone here today with a similar vision for 50 years? The Southern Outlet opened in 1969 for a sleepy holiday township. You build it, we will come. Certainly they did, but sadly it is too narrow. We must be planning for the future.

I feel that this bridge should not be considered in isolation as the answer to future traffic. You spoke this afternoon about the 2019 statement from the Infrastructure Australia committee that queried the value for money for the development that was proposed. I have noted that. Thank you for your time.

CHAIR - Do we have any members who wish to ask questions of Mr Merridew?

Ms RATTRAY - Only a statement, Chair. It is very good information but it doesn't necessarily, as you have already pointed out, tie in with the reference that the committee has. The member for Lyons, Mr Tucker, is not here at the moment but he was very impressed when going through Tea Tree Road this morning and what that might do.

CHAIR - Over farmland?

Ms RATTRAY - Yes, and particularly as a heavy vehicle operator, he knows how to drive trucks. That is certainly food for thought. He is a member of the Government as is this good gentleman to my right.

Mr ELLIS - I might offer a comment. Chris, I thought it was great and not something I had considered, being from the north west. Being from the north west, we are often trying to figure out ways to by-pass the Hobart suburbs with trucks and the economy rolling down the highway to Hobart to help you all out.

The way to potentially increase the utilisation of the Bowen Bridge and getting to the industrial and logistics hub at Glenorchy without having to go through other parts of the northern suburbs made a lot of sense. Thank you for raising it.

Ms BUTLER - I have a question and it will only take a second for you to answer. There was, according to Dick Adams, a plan to go through the back of Bagdad, straight off the Bowen. Is that correct and what happened to that?

Mr MERRIDEW - That is why you have that funny wiggle when you come to the end of Mangalore straight and you sneak around the corner and hope the speed camera is not there, and then you join the new by-pass. The point at which you come around the second bend you

have the hydroponic farm. The road went straight on there and came out above Bagdad, where that very nasty bend is with the Armco fence. It is prone to ice, where you are 80 limited from the top of that hill all the way from Brighton to Bagdad. It came out at about that point.

Ms BUTLER - And went straight up over the hills?

Mr ELLIS - Top of Dysart Hill, basically.

Mr MERRIDEW - That was by-passing Bagdad. It may well happen. That is why they brought you round at the end of the straight.

Ms BUTLER - Thank you.

CHAIR - Thank you for taking the effort to put your opinions in. It is important to get those on the record. It may well be that the department has other things in mind to improve connections through to places such as the Cambridge industrial park. As I say, we will take on board what you have said in our deliberations.

Ms RATTRAY - You never know, the people over in the back may well have been making significant notes.

CHAIR - We are going to ask them to come back shortly.

Mr MERRIDEW - Can I just ask a question of the committee, or the gentleman at the back? I am a bit confused about the old causeway. You are now talking about building an embankment on it?

CHAIR - Two lanes. Well, one possibility, if it goes forward, is over the top of the current causeway.

Mr MERRIDEW - If you are heading towards New Norfolk and you look out to where all the black swans are, are we going to have an embankment of 10 metres? How high -

CHAIR - We can ask that question for you.

Mr MERRIDEW - In the last half hour, we have only just heard the word 'embankment'.

CHAIR - I will ask that question, thank you.

Mr MERRIDEW - With my National Trust hat on, I thought the bridge was heritage listed and had to stay at existing gantries, et cetera.

CHAIR - I think it depends on a report that is yet to come back. But I will clarify that too.

As I advised at the commencement of your evidence, what you have said to us today is protected by parliamentary privilege, and once you leave the table you need to be aware that such privilege is not attached to comments you may make to anyone, including the media, even if you are just repeating what you have said to us. Do you understand that?

Mr MERRIDEW - Yes, I do, especially the media bit.

CHAIR - Thank you.

THE WITNESS WITHDREW.

Mr BEN MOLONEY, **Ms MIA POTTER**, **Ms LAURA MIDDLETON** AND **Mr KEVIN BOURNE** WERE RECALLED AND EXAMINED.

CHAIR - You have heard all the evidence we have just received. Do you have any comments in relation to any of that evidence?

Mr MOLONEY - No specific comments, but obviously Mr Addison and Mr Merridew are well informed about a range of matters in terms of transport throughout Hobart and the like, so it is always of value to hear from people where it is a key interest for them.

When we are provided with a copy of the submissions that have been made to the committee, I will be more than happy to pass them onto my colleagues at the Department of State Growth who are involved in the planning of the networks, so they can be given appropriate consideration.

CHAIR - Thank you. One question that was asked, by Mr Addison I think, was it so different that rail cannot be integrated into a highway bridge?

Mr MOLONEY - Because we need to get that elevation above the navigation channel, and then go back down, this does mean we do have steeper grades that would not work for rail, without quite extended distances back from -

CHAIR - So, the navigation channel is the main reason there?

Mr MOLONEY - In that case yes. To achieve the objective of a 16.2 metre navigation clearance, it does mean we have to go up and down a significant hill, and that would be challenging for trains.

CHAIR - Mr Merridew had some questions about the Infrastructure Australia submission and value for money. Do you have any comment on that?

Mr MOLONEY - Infrastructure Australia did comment on the 'value for money' aspect, and that is an area where we are doing additional work to identify and re-quantify the project benefits, which look at things such as improved traffic efficiencies. Also, we have been seeking to manage costs to get the best value-for-money outcome.

With some of these analyses, the benchmarks that are set for metropolitan projects like those in Melbourne and Sydney quite often have different drivers to important projects that are of strategic merit within smaller states such as Tasmania, so broader consideration of social impacts and benefits also need to feature. That will be a key aspect that we're presenting, both in support of our major projects impact statement, but also broadly in our submission to the Australian Government.

CHAIR - Thank you. How high is the embankment in the northern direction over the old causeway?

Mr MOLONEY - I would need to take that on notice and give you a specific answer, but in terms of relative size, it's something like two metres, rather than being as high as 10 metres, which I think was mentioned in a question to the committee.

The raising of the causeway section that would be utilised for the highway is allowing for climate change - so, sea level rise, or inundation in the event of a major storm. It isn't being raised in terms of needing to accommodate lower grades or vertical elevation for the traffic; it is more that we don't want the highway to be flooded after 100 years of sea level rise and a major flood event.

It is something like two metres, but if you require a specific number I'm happy to take that on notice and provide you with that. It would relate purely to the reference design, noting that the final design may be different from the reference design.

CHAIR - It's not 15 metres? It's not likely 10 metres, it's below five.

Mr MOLONEY - It's sufficient to provide adequate clearance from expected flood level rises with allowance for sea level rise.

CHAIR - The last question was about demolition of the old structure, given that it is heritage listed. What's the process with that from here, in terms of gaining approvals? It's not possible to keep it in its present state and move it somewhere else?

Mr MOLONEY - That would be a key consideration for our major projects assessment process. That's one of the aspects of our project that we're seeking approval for. The assessment of that will be coordinated by the independent panel appointed by the Tasmanian Planning Commission, and there would be consultation both publicly, but also prior to that with the relevant regulators, including those that relate to heritage.

CHAIR - So the witnesses who gave evidence today would be able to put in a submission relating to that during that process?

Mr MOLONEY - That's correct. We anticipate that both our impact statement and the regulator's initial assessment will be available for public comment - hopefully before the end of this year through that public exhibition process.

CHAIR - Thank you. Just before we draw to a close, there are some significant questions that we ask at the end of each of our inquiries.

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

Mr MOLONEY - Yes.

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

Mr MOLONEY - Yes, I believe so.

CHAIR - Are the proposed works fit for purpose?

Mr MOLONEY - Yes.

CHAIR - Do the proposed works provide value for money?

Mr MOLONEY - Yes.

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

Mr MOLONEY - Yes.

CHAIR - Thank you. Finally, just to reiterate as I have with all the other witnesses, as we advised earlier when you commenced your evidence, what you've said to us today is protected by parliamentary privilege. Once you leave the table you need to be aware that privilege does not attach to comments you may make to anyone, including the media, even if you are just repeating what you said. Do you all understand that?

Messrs MOLONEY, POTTER, MIDDLETON AND BOURNE - Yes.

CHAIR - Thank you for your time. I know it has been a very long process. I commend you all for staying. The evidence you came forward with was very valuable for us, and we will retire to consider that going forward.

Thank you very much and thank you to *Hansard*.

THE WITNESSES WITHDREW.