2021 (No. 22)

PARLIAMENT OF TASMANIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

New Bridgewater Bridge

Presented to Her Excellency the Governor pursuant to the provisions of the Public Works Committee Act 1914.

MEMBERS OF THE COMMITTEE

Legislative Council	House of Assembly
Ms Rattray (Deputy Chair)	*Ms Butler*
Mr *Valentine (Chair)*	Mr *Ellis*
	Mr *Tucker*

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1 INTRODUCTION

To Her Excellency the Honourable Barbara Baker AC, Governor in and over the State of Tasmania and its Dependencies in the Commonwealth of Australia.

MAY IT PLEASE YOUR EXCELLENCY

The Committee has investigated the following proposal:-

New Bridgewater Bridge

and now has the honour to present the Report to Your Excellency in accordance with the Public Works Committee Act 1914 (the Act).

2 BACKGROUND

2.1 This reference recommended the Committee approve the construction of a New Bridgewater Bridge to replace the existing Bridgewater Bridge.

2.2 The Bridgewater Bridge is a critical link in Tasmania's transport network. It is a vital infrastructure link serving the national and state economies and is part of the National Land Transport Network (NLTN), and is a key link in the Burnie to Hobart freight corridor, Tasmania's highest volume freight network.

2.3 The Bridgewater Bridge provides the link between the Midland Highway, the main freight and passenger vehicle route between the north and south of the State, and the Brooker Highway, which is the main northern access route into Hobart.

2.4 Through this connection, the Bridgewater Bridge links regional producers to Tasmania's major ports and is a vital part of Tasmania's Freight Strategy. It is an important regional transport connection for greater Hobart, facilitating access between central Hobart and growing communities at Brighton, and between the Brighton Transport Hub and major industrial and freight distribution centres in Glenorchy.

2.5 However, the existing bridge has reached the end of its serviceable life, and requires significant investment and ongoing maintenance to keep it in operation.

2.6 It is also no longer fit-for-purpose, as it is unable to meet the growing demands of the freight and passenger transport network, due to a number of limitations including:

- The single lane construction of the existing bridge significantly limits the dual lane carriageways of the adjacent Midland and Brooker Highways, and coupled with the 60km/h speed limit, acts as a choke-point, restricting traffic flow and increasing traffic congestion;
- The existing bridge does not meet contemporary design or loading standards, placing limits on the heavy vehicle network, as speed and access for Oversize Overmass (OSOM) vehicles are constrained;

- The 60km/h speed limit over the bridge does not comply with service level requirements for infrastructure in the NLTN;
- The existing lift span requires traffic in both directions to be stopped for boats to pass causing increased traffic congestion and travel delays;
- The existing lift span is also unreliable and prone to malfunction at times, adding to congestion and traffic delays;
- The existing bridge does not have the capacity to meet projected traffic growth.

2.7 Given these issues, the continued operation of the Bridgewater Bridge in its current form is acting as key constraint on the efficient operation of the freight and passenger transport network. An effective replacement is needed, such that it will provide an efficient, high standard connection for the Brooker Highway and Midland Highway that reliably meets the standards required of the National Land Transport Network.

2.8 A significant amount of feasibility and planning work had been undertaken to determine the most suitable crossing arrangement at the site within the budgetary constraints of the project. This has resulted in a reference design comprising a new two-lane bridge to take southbound traffic and re-use of the existing causeway as part of the permanent works to take northbound traffic.

2.9 The reference design was put to the market via a competitive Early Contractor Involvement (ECI) model of procurement. Two construction companies experienced in projects of this type and magnitude have been engaged under the ECI process to develop their own design options to deliver the bridge and interchanges to meet the reference design in the most cost-effective way. The reference design put to the market under the ECI process requires the tenderers to deliver on the following scope of work:

- Two lanes in each direction between the Brooker Highway and Midland Highway, terminating prior to the East Derwent Highway roundabout;
- Three-metre shared path for cyclists and pedestrians, which must achieve design standards required for access by disabled persons (i.e. must be Disability Discrimination Act 1992 compliant (DDA);
- Minimum design speed of 80km/h.;
- Grade separated connectivity of the Brooker Highway and Midland Highway to the surrounding road network, particularly the Lyell Highway;
- Safe and effective routes for local traffic movements across the Brooker Highway and Midland Highway with minimal queuing or vehicle conflict points;
- Design of road levels to consider Q100 (one in one hundred year) storm events, forecast sea level rise, storm surges and measures to protect against structural damage from overtopping;
- Accommodation of marine vessel passage by a minimum air-draft clearance of 16.2 metres AHD (Australian Height Datum), consistent with the defined navigation span clearance of the Bowen Bridge; and

- Safety screens and barriers at locations along the Bridge to minimise the risk of suicide or injury from thrown objects;
- N.B. As a policy decision, the Government has specifically excluded rail from this project due to technical considerations and the impact on the project cost, but maintains the design does not preclude the future use of the existing rail corridor.

3 PROJECT COSTS

3.1 Pursuant to the Message from Her Excellency the Governor-in-Council, the estimated cost of the work is $576 million.

The following table details the p50 and p90 cost estimates for delivery of the reference design:

	P50 ($m AUD)	P90 ($m AUD)
Base Cost Estimate	$460,481,700	$460,481,700
Contingency	$46,412,472	$79,700,000
Total Project Cost Estimate	$506,894,172	$540,181,700
Escalation	$54,371,996	$58,102,350
Total Outturn Cost Estimate	$561,266,168	$598,284,050

4 EVIDENCE

4.1 The Committee commenced its inquiry on Thursday, 19 August last with an inspection of the site of the proposed works. The Committee then returned to Committee Room 1, Parliament House, whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:

- Ben Moloney, Project Director, New Bridgewater Bridge Project, Department of State Growth;
- Mia Potter, Project Manager, Approvals, New Bridgewater Bridge Project, Department of State Growth;
- Laura Middleton, Project Manager, Stakeholder Communications, New Bridgewater Bridge Project, Department of State Growth;
- Kevin Bourne, Deputy Project Director, New Bridgewater Bridge Project, Department of State Growth;
- Ian Addison, community member; and
- Chris Merridew, community member.

The following Committee Members were present:

- Hon Rob Valentine MLC (Chair);
- Hon Tania Rattray MLC (Deputy-Chair);
- Ms Jen Butler MP;
- Mr Felix Ellis MP; and
- Mr John Tucker MP.

Overview

4.2 Mr Moloney provided an overview of the proposed works:

> ***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 … … is on schedule for traffic to be using the new bridge by the end of 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.

The Need to Replace the Bridgewater Bridge

4.3 The Committee understood that the existing bridge had been in operation since 1946 and recognised that it was at the end of its design life, both from a structural and capacity point of view. The Department's submission highlighted the need for a new bridge:

….The Bridgewater Bridge provides the link between the Midland Highway, the main freight and passenger vehicle route between the north and south of the State, and the Brooker Highway, which is the main northern access route into Hobart.

It is an important regional transport connection for greater Hobart, facilitating access between central Hobart and growing communities at Brighton, and between the Brighton Transport Hub and major industrial and freight distribution centres in Glenorchy.

The current bridge and causeway provide one lane in each direction, with a 60km/hour speed limit, despite connecting to the National Land Transport Network at each end. The bridge and causeway have dimensional limitations and do not meet contemporary general and geometric design requirements. Issues include insufficient lane and shoulder widths, unsafe and insufficient space for cyclists and pedestrians, and restrictive speed, height and weight limits.[1]

4.4 Recognising the bridge was at the end of its serviceable life, the Committee sought further information from the Department's witnesses on the impacts of keeping the current bridge in service:

***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*

[1] *New Bridgewater Bridge Project*, Submission to the Parliamentary Standing Committee on Public Works, Department of State Growth, 19 August 2021, page 6.

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.*

Reference Design

4.5 The Committee sought confirmation from the Department's witnesses that the intention was to provide a four-lane bridge crossing:

***CHAIR** - …… 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** - ……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.*

***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.*

Linking Tasmania's Transport Corridors

4.6 The Committee recognised the Bridgewater Bridge as the key link in between the Brooker and Midland Highways, and the significant role it plays as a link in Tasmania's transport corridors. However, the Committee also recognised that in its current form, the Bridgewater Bridge acted as a significant bottleneck, restricting the efficient movement of traffic on the road network. The Committee sought confirmation that one of the key benefits of the proposed design would be to resolve several constraints:

> ***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.*

Improving the Travel Efficiency at the Western Shore Interchanges

4.7 The Committee noted the interchange arrangements on the Granton landfall seemed more complex than current arrangements. Noting this complexity, the Committee sought to understand how this would translate into actual traffic movements and whether this would provide for improved travel efficiency for road users:

> ***Ms BUTLER*** *- … … Could you talk through for the record… …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.

……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 developer and 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.

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.

Early Contactor Involvement (ECI) Process

4.8 The Committee had not encountered the Early Contractor Involvement (ECI) method of procurement in other projects. The Committee asked the Department's witnesses for an explanation of the ECI process and the benefits of tendering for the project in this manner:

Ms RATTRAY *- An ECI process - ……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.*

……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.*

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.*

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

Securing the Formal Commitment of Funding

4.9 The Committee understood the project only had an informal funding commitment from the Australian Government and still had to be approved by the Australian Government in order to secure the formal commitment of funds. The Committee recognised this presented a risk to the project proceeding. The Committee was also aware that Infrastructure Australia previously had concerns about the project. The Committee sought further advice from the Department's witnesses on how this risk was being managed, what concerns Infrastructure Australia and the Australian Government may have, and how these were being addressed:

CHAIR *- … … 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.

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.*

***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 back up 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.

4.10 Noting the earlier feedback from Infrastructure Australia and that the project team had been working closely with Australian Government representatives, the Committee was keen to understand if the Department's witnesses were aware of any major concerns that had not been addressed that may stop the project from proceeding:

***CHAIR** - … … 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.

Major Project Approvals Process

4.11 The Committee understood that the New Bridgewater Bridge Project would be the first project assessed under the Major Projects Assessment Process. This process is used to assess projects of a scale, impact or complexity with regional impacts, affecting multiple municipal areas, and which may require multiple, integrated permits. The Department's submission noted:

> *……The process provides for the coordinated assessment of project related impacts as relevant to land use planning, environmental impacts, Aboriginal heritage, historic cultural heritage, TasWater, threatened species and gas pipeline safety. In this way, the Major Project process replaces the need for separate approvals for the Project under local planning schemes, the Environment Management Pollution and Control Act 1994, the Historic Heritage Act 1995, the Aboriginal Heritage Act 1975, the Threatened Species Protection Act 1995 and the Nature Conservation Act 1992 and from Tas Gas and TasWater.*[2]

4.12 The Department's witnesses elaborated on the requirements of the Major Projects Assessment Process at the hearing:

> ***Mr MOLONEY –*** *……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* [a member of the public] *put in a submission that does not necessarily mean you get an opportunity to appeal it to a higher level.*
>
> ***Mr MOLONEY -*** *……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* [Land Use Planning and Appeals Act 1993] *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.*

[2] *New Bridgewater Bridge Project*, Submission to the Parliamentary Standing Committee on Public Works, Department of State Growth, 19 August 2021, page 59.

Rail Infrastructure

4.13 The Committee recognised there was significant community-wide interest in retaining rail access on the new Bridgewater Bridge. The Committee understood that a dedicated rail link was not included in the scope of the new bridge, but was aware that the design would not preclude provision of a rail link in future. There was significant discussion between the Committee and the Department's witnesses at hearing with respect to the future of a potential rail link.

4.14 The Committee sought to understand the reasoning on why a rail link had not been included in the scope of the works:

> ***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.*
>
> ***Mr MOLONEY*** *- ... ... 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.

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.

4.15 The Committee also enquired as to how rail infrastructure might be provided after the New Bridgewater Bridge was built:

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.*

Sediment Disturbance

4.16 The Committee recognised that there may be tidal changes and disturbance of potentially contaminated sediment on the river bed as a result of construction activity. The Committee sought to understand how disturbance of contaminated sediments would be managed during construction:

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 timeframe.

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.

(N.B. details of sediment studies have been subsequently provided by the Department of State growth and have been published on the Committee's webpage).

Future of the Existing Bridge Structure and Causeway

4.17 The Committee was aware it was the intention that the current bridge infrastructure be removed. However, given its heritage listing, the Committee recognised there might be some regulatory barriers to its removal. The Committee sought further details from the Department's witnesses on the need to remove the existing bridge infrastructure, and the issues that may arise if removal was not permitted:

***CHAIR** - …… 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** - ... ... 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.*

4.18 Noting the significant heritage values of the causeway the Committee was also keen to understand how these values might be protected:

***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.*

***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.*

Traffic Management and Disruption During Construction

4.19 The Committee recognises that major roadworks will impose unavoidable disruptions on the travelling public and local communities. The Committee sought to understand the nature of the disruption and how this would be managed to lessen any adverse impacts:

***Ms BUTLER** - ……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.

Access for Cyclists and Pedestrians

4.20 The Committee noted the project included a shared path for cyclists and pedestrians. The Committee sought further information on the expected usage of this path and how linkages might be established to promote access:

CHAIR *- 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 - *……any existing usage would not be represented of usage we would anticipate in the longer term - …… 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.*

……*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** - ... ... 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.*

Improving Community Access along the Foreshore

4.21 The Committee noted that the elevated design of the New Bridgewater Bridge may present significant opportunities for the local community by opening up access along the foreshore and the surrounding area. The Committee questioned the witnesses on what benefits they envisaged would flow to the local community through improved accessibility:

***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.

***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 -** ..... 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 -** ..... 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.*

***.....** 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.

Noise Impacts

4.22 The Committee was aware that the project may result in adverse impacts for the local community through an increase in noise disturbance due to construction and changed traffic movement. The Committee sought to understand what mitigation measures the Department would consider to address any adverse noise impacts:

> ***CHAIR*** *- ……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?*
>
> ***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 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 firma, 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.

Ongoing Consultation

4.23 The Committee was of the view that a project of this size and importance would require extensive and ongoing community engagement and communication. The Committee sought to understand how ongoing stakeholder engagement would be managed:

Ms RATTRAY *- ……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.

Matters Raised in Submissions to the Committee on the New Bridgewater Bridge

4.24 The Committee received four submissions from members of the public on the New Bridgewater Bridge; these being from Mr Greg Cure, Mr David Keyes, Mr Ian Addison and Mr Chris Merridew. The key issues raised were:

- Rail access should be maintained with any new bridge infrastructure; and
- Alternatives, such as a tunnel crossing or diversion of traffic via alternative routes should be considered.

4.25 In his submission Mr Cure noted that:

> *….it is imperative rail access from Bridgewater (eastern shore) to Hobart (western shore) be maintained. This is because the Brighton Municipality is likely to grow significantly in the next fifty years or so and will need a mix of public transport options.*[3]

4.26 Mr Keyes also noted in his submission his concern that the current design did not include a physical rail link:

> *……I have two principal concerns with the present proposals:*
>
> *One is the grossly excessive cost for a project which with no provision for rail, inherently fails to accomplish its aims, and*
>
> *The second is the stated lack of any provision for a rail link to the existing Launceston and Derwent valley lines or, for that matter, to the Bridgwater/ Brighton/Pontville district.*
>
> *In this respect, it would be unrealistic to assume that the existing permanent way between the Hobart waterfront and Granton will not be utilised in the not too distant future for a light rail service allowing for future passenger transport to/from the broad acres of the Bridgwater / Brighton district , currently awaiting the attentions of a developer, public or private, to relieve*

[3] Submission from Mr Greg Cure, page 1

the present shortage of affordable housing ; and for tourist rail connection to the existing Derwent valley/National park permanent way.[4]

4.27 Mr Addison covered the lack of a rail link extensively in his submission. He too was disappointed that the provision of a rail link was not included in the scope of the project, and that the existing rail infrastructure would be removed:

> *…..not only is there zero provision for rail in the new bridge design having been intentionally excluded from consideration, but the existing rail route across the river is to be cut completely by the removal of the current Bridgewater Bridge.*[5]

> *Despite a long history of a rail crossing, over the past decade or so successive new bridge proposals coming from Tasmania's transport/infrastructure bureaucracy have consistently excluded rail.*
>
> *Despite the project being reconsidered twice since 2012 and significantly revamped each time, there has been no apparent reconsideration of the 'rail' circumstance.*[6]

4.28 Mr Addison also highlighted in his submission that removal of an ongoing rail link would severely constrain any proposal for passenger light rail for Greater Hobart:

> *……I was somewhat concerned when Infrastructure Tasmania was tasked with reviewing Hobart Light Rail proposals and studies at a similar time to its review of Bridgewater Bridge replacement plans and cost estimates (both reported in early 2016). To my mind it compromised the consideration of what would be the northern extent of the potential passenger rail service. Due to ITas's* [Infrastructure Tasmania's] *apparent priority to limit new bridge funding to close to $500 million, the outer limit of rail service was set at Granton. Essentially the Infrastructure Tasmania CEO at that time was recommending the (almost certain) permanent disconnection of the Hobart (western shore) rail corridor from the remainder of the Tasmanian rail network .In my view a very superficial consideration of an ongoing rail link across the river was used to underpin this recommendation.*
>
> *……Over that period the reactivation of Hobart's rail corridor for passenger rail services has been seriously discussed in public and considered by government via various studies. A commitment to implement it was also made by the Liberal party in the lead up to the 2018 election, although since then it's returned to a 'possible' status within the murky Hobart City Deal processes.*
>
> *There is considerable public opinion that the possibilities for passenger rail should extend beyond Hobart's western shore, indeed across the main routes of the wider Tasmania rail network.*

[4] Submission from Mr David Keyes, page 1
[5] Submission from Mr Ian Addison, page 1
[6] Ibid, page 2

This is one of the reasons that I (and many others) consider that it's imperative that there should have been active reconsideration of the future of a rail crossing within the Bridge replacement strategy.[7]

4.29 At the hearing, Mr Addison expanded on the continuing need for rail infrastructure and argued that a holistic, long-term view should be taken with respect to the New Bridgewater Bridge and its role in the state's transport network:

> ***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 timeframe. 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.*
>
> *……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.*
>
> *……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.*

4.30 Mr Addison acknowledged the differing engineering requirements for a vehicle bridge and rail bridge. However, Mr Addison suggested to the Committee that the possibility of constructing infrastructure to cater for both vehicle and rail traffic had

[7] Ibid, page 5

never been seriously investigated and was in fact practicable, from both an engineering and cost perspective:

> ***Mr ADDISON*** *- ……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.*
>
> *…..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.*
>
> *……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.*
>
> ***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.*
>
> ***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*** *- ……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 ……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.*
>
> ***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.

4.31 Mr Addison also noted that removal of the current rail infrastructure would present a significant barrier to any future attempts to develop a passenger light rail system for Greater Hobart:

> ***Mr ADDISON*** *- ..... in future if you were doing a business case for a passenger rail project that needed to go across the river, I would imagine that if you had to build a completely new standalone rail bridge that had to either rotate or it had to lift, there would be your business case straight out of the water. Not only that but the timeframe and delays then would be involved in going through the whole process of preparing that would send a project five to 10 years into the future rather than something that you might be able to start in, for example, say a two to four-year timeframe.*
>
> ***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.*

4.32 The Committee understood that the inclusion of rail was not in the project scope, and having already questioned the Department's witnesses at length on the issue, was aware of the Department's explanation for this (see sections 4.13-4.15). However, the Committee asked the Department representatives to respond to Mr Addison's assertion that rail could be integrated into the New Bridgewater Bridge:

> ***CHAIR*** *- ..... 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.*

4.33 In his submission, Mr Merridew contented there were other options that may be more cost effective than the proposed New Bridgewater Bridge. Specifically, Mr Merridew favoured development of a highway on Back Tea Tree Road through to the growing industrial estate area at Cambridge, with traffic bound for the northern suburbs of Hobart diverted at the junction with Grass Tree Hill Road to make greater use of the Bowen Bridge.

> *..... The 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 Road. At that point, traffic for the northern suburbs could access the Bowen Bridge via a cut-and-fill highway through Grasstree Hill with links to Jordan Hill Road, and the East Derwent Highway which I note has been undergoing extensive upgrades.*
>
> *Cambridge industrial, Hobart International Airport, and all southern beaches including South Arm Peninsula, would enjoy freeway access through the farmland*

corridor which would commence at the Eastern Outlet. I note already a newly opened approach to Cambridge from north-east of the township has a link to the Eastern Outlet.

Basically, there would be a new highway from the Bridgewater interchange to Cambridge with an off-ramp for the new Grasstree Hill link to the Bowen Bridge whereby the bridge construction funding would be re-directed to re-directing traffic to where it wants to go and relieves the already near-capacity northern outlets. In 2019 "Infrastructure Australia raised concern that the projects huge cost would outweigh the benefits."

This approach with fit-for-purpose highways on the Eastern Shore is a critical path to the effective implementation for access to the north and providing much needed traffic options for south-east Tasmania's biggest residential growth area being the southern beaches, Sorell and Brighton municipalities, Coal River Valley, and New Norfolk. The western shore would now have three options for travel to the north. The demographics have changed since Sen. Eric Abetz obtained the first Bridgewater Bridge funding which was deemed as a critical corridor to Launceston, but now these highways with links to existing infrastructure may be better value as southern Tasmania plans and builds for its contribution to a population target of 650,000 by 2050.

With 90% of traffic removed from the existing Bridgewater Bridge its life may be extended for a simpler structure possibly floated into place. It is better value for less money as most of the interchanges already exist and mostly level accessible farm topography is quicker to construct and will open more quality residential options as Tasmania continues its population growth to 650,000.

The current Bridgewater Bridge proposal provides none of these benefits.[8]

4.34 At the hearing Mr Merridew expanded on his proposal to develop Eastern Shore highway access from Brighton through to Cambridge and to increase the utilisation of the Bowen Bridge:

> ***Mr MERRIDEW*** *- ……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 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.*

4.35 The Committee questioned the Department's witnesses on the merits of Mr Merridew's proposal to increase utilisation of the Bowen Bridge

> ***CHAIR*** *- ……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*

[8] Submission from Mr Chris Merridew, pages 1-2

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.

……*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.*

CHAIR *- ……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.*

4.36 The Committee also sought to understand what consideration had been given to other freight movement options that would divert traffic from the Bridgewater Bridge and the Brooker Highway, including Mr Merridew's suggested route via Tea Tree Road:

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… …*

***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.*

4.37 In his submission, Mr Keyes suggested that a tunnel may be a better option for crossing the river at the current site:

…. there is more than one way to cross the river while preserving a navigable waterway - an essential for possible future industrial development in the New Norfollk area, and for future tourist operations to the Derwent Valley.

I refer to the option of a short tunnel , or parallel tunnels, at the site of the present crossing. On the pre condition that provision for rail is a non negotiable requirement, this would answer the objection that the need to provide for railway grades would totally disqualify the existing bridge concept; and also eliminate the need for extensive infrastructure connecting such a bridge. For this to be a practical option, it is also necessary to accept that the existing causeway is in such a fragile state that to provide the required road and rail connection to an actual river crossing, it would probably be necessary to construct a piled (concrete?) platform over the causeway between the Western shore and the site of the river crossing itself.

The use of tunnelling would at one stroke dramatically reduce the overall cost of the whole project and resolve the engineering objections to such a dramatic rethink and eliminate the need for any airdraft concerns.

While tunnelling is a novel idea for this long lived scheme, tunnelling techniques have advanced dramatically in recent years, and the various tunnelling projects, mostly precast concrete sunk on site , successfully undertaken in Sydney in the past few years speak for the practicality of the concept, or at the very least, the imperative that it be properly investigated at the professional level before embarking on the terrifyingly expensive and unfit for purpose, bridge alternative.[9]

4.38 The Committee asked the Department representatives their view on the potential for a tunnel crossing and whether such an option had been considered:

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.*

Does the Project Meet Identified Needs and Provide Value for Money?

4.39 In assessing any proposed public work, the Committee seeks assurance that each project is a good use of public funds and is the best solution to meet identified

[9] Submission from Mr David Keyes, page 1.

needs within the funding commitment provided. The Committee questioned Mr Moloney who confirmed that the project met these criteria:

> ***CHAIR*** *- ... ... 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.*

5 DOCUMENTS TAKEN INTO EVIDENCE

5.1 The following documents were taken into evidence and considered by the Committee:

- *New Bridgewater Bridge Project*, Submission to the Parliamentary Standing Committee on Public Works, Department of State Growth, 19 August 2021;
- Submission from Greg Cure;
- Submission from David Keyes;
- Supplementary submission from David Keyes;
- Submission from Ian Addison; and
- Submission from Chris Merridew.

6 CONCLUSION AND RECOMMENDATION

6.1 While there are significant community concerns around the lack of provision for a rail connection in the reference before the Committee, it is the Government's policy position that such a connection is not within the scope of the reference, due to technical considerations and the impact these would have on the cost of the project. Further, the current rail line is non-operational, and it is the Department's position that the reference project does not preclude future use of the existing rail corridor. Therefore, given the scope of the reference, the Committee is satisfied that the need for the proposed works has been established. Once completed, the proposed works will provide a continuous, high standard, four-lane connection between the Midland Highway and Brooker Highway, by removing the bottleneck created by the current Bridgewater Bridge configuration.

6.2 The proposed works aim to provide a safer and more efficient movement of current and future traffic volumes, by reducing congestion and queueing, which will improve travel time reliability and reduce travel times.

6.3 The bridge design also aims to improve the efficiency of the freight network by allowing access for the high productivity freight vehicles employed elsewhere on the Tasmanian freight network that cannot currently use the Bridgewater Bridge due to vehicle size and mass restrictions in place.

6.4 The proposed interchanges also aim to provide safe and efficient connections with the Lyell Highway and local traffic movements, thereby reducing traffic flow restrictions.

6.5 The bridge design will also remove the need to close the bridge and stop traffic to allow vessels to travel underneath, and will eliminate the risk of travel disruption due to mechanical failure of the lift span.

6.6 Accordingly, within the constraints of the scope of the reference, the Committee recommends the New Bridgewater Bridge, at an estimated cost of $576 million, in accordance with the documentation submitted.

Parliament House
Hobart
5 October 2021

Hon Rob Valentine MLC
Chair