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PARLIAMENT OF TASMANIA

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

# Midland Highway Safety Upgrades – Mangalore to Bagdad Stage 2

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

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## MEMBERS OF THE COMMITTEE

Legislative Council

Mr Farrell  
Mr Valentine

House of Assembly

Mrs Rylah (Chair)  
Mr Llewellyn  
Mr Shelton

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## 1 INTRODUCTION

To Her Excellency Professor the Honourable Kate Warner AM, 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:-

### **Midland Highway Safety Upgrades – Mangalore to Bagdad Stage 2**

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 upgrade works to improve the safety of the Midland Highway between Mangalore and Bagdad, from the Pontville Roundabout to south of Eddington Road.
- 2.2 The Midland Highway Safety Upgrades – Mangalore to Bagdad Stage 2 project is a component of the *Midland Highway Strategic 10 Year Action Plan*, a 10-year plan with a commitment of a total of \$500 million from Australian and Tasmanian Governments to upgrade the Midland Highway.
- 2.3 The *AusRAP Star Rating Australia's National Network of Highways 2013* report found that the majority of the Midland Highway rated either only 1 or 2-star, in its 5-star safety rating scale. The key objectives of Tasmania's 10 Year Action Plan are to undertake safety improvements to provide a minimum of a 3 star AusRAP rating for the entire length of the Midland Highway, integrated with additional overtaking opportunities and a staged approach to capacity improvements.
- 2.4 The Midland Highway upgrade projects utilise the 'Safe System' approach, which has been adopted by all Australian state and territory road authorities to achieve a minimum 3 star AusRAP rating. The 'Safe System' approach recognises that people will make mistakes which result in crashes and, therefore, road infrastructure needs to be designed to take account of these errors.
- 2.5 The proposed works include the following elements:
  - A 3.0m central median turn lane to separate northbound and southbound vehicles, and separate vehicles turning right (into property entrances) from through traffic;
  - Right-hand turn lanes at all junctions;
  - Pedestrian refuges and traffic islands at regular intervals along the central median turn lane;
  - Widening of the sealed shoulders to 2.0m;

- Sealing and widening of junctions and improvements to property accesses;
- Removal of road side hazards such as steep side slopes and drains, or protection with safety barrier;
- Replacement of the existing gravel footpath and the provision of pedestrian crossing points; and
- Reduction of the speed limit to 80km/h.

2.6 The proposed works include similar measures to those employed in the Mangalore to Bagdad Stage 1 project. These measures differ from other upgrade projects on the Midland Highway, in that the alternating 2+1 overtaking lane treatment will not be employed, the speed limit will be reduced from 100km/h to 80km/h and the central median that separates northbound and southbound traffic does not contain a wire rope safety barrier, instead operating as a turning lane for vehicles to access properties and side roads. These measures have been designed to ensure the safety, and balance the needs, of road users and local residents, due to the high number of property accesses and junctions in the area compared to the majority of the Midland Highway.

### 3 PROJECT COSTS

3.1 Pursuant to the Message from Her Excellency the Governor-in-Council, the estimated cost of the work is \$27.41 million.

The following table details the p50 cost estimates for the project:

Costs	
Scoping and Development Phase	\$2,036,776
Delivery Phase (including service relocations, construction and land acquisition)	\$22,367,895
Total Cost*	\$24,404,671

\*Total cost inclusive of P50 contingency and cost escalation.

## 4 EVIDENCE

4.1 The Committee commenced its inquiry on Friday, 9 June last with an inspection of the site of the proposed works. The Committee then returned to the Mangalore Hall, Mangalore, whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Ted Ross, Project Director, Department of State Growth;
- Vanessa King, Project Manager, Department of State Growth; and
- Ross Mannering, Associate Engineer - Roads and Traffic, Pitt and Sherry.

### Overview

4.2 Mr Mannering provided an overview of the proposed works:

**Mr MANNERING** - ... .. The Mangalore to Bagdad stage 2 project is stage 2 of a project that extends from the Pontville roundabout right through to North Swan Street at the northern side of Bagdad. Stage 1 was completed earlier this year. Those works start at Eddington Road, just north of Bagdad Primary School, and extended through to Swan Street North. The works we are here to talk about today are the leftover bit, which is about 6.6 kilometres starting at the Pontville roundabout up to Eddington Road. The project is going to involve the same upgrade treatment that has been implemented through Bagdad - a single 3.5 metre lane in each direction, north- and southbound, with those two lanes being separated by a central turn median that will be 3 metres wide.

The idea there is to achieve what we are looking for in terms of minimising head-on crashes by separating the traffic, but also to provide a space where property owners and people accessing side roads can prop out of the way of the through traffic when turning right. This will be a big safety improvement for this length of the road where drivers currently have to prop in the through lane when they are performing those manoeuvres. That is quite a risky manoeuvre. The other thing that is happening with the project is we are widening the sealed shoulders from 1 metre to 2 metres. That has some benefits in giving some extra room for drivers that lose control to be able to regain control of their vehicle and stay on the road. We are also removing hazards and protecting hazards through the installation of roadside safety barriers where we need to do that as well.

The project generally involves widening the right-hand side of the road, on the eastern side. The reason for that is we have more land available on that side. We still need to acquire land from 20 owners, but there is a lot more available width on the right-hand side than there is on the left.

By widening on that side and taking the opportunity to use that space, we definitely minimise our impacts on some of the existing features of this length of the highway, on the western side, such as the heritage mile. There are a number of very significant heritage properties along the section between the Pontville roundabout up to Ballyhooly Road.

Other things happening as part of the project up at Quarrytown Road: because of the number of junctions on the highway, we're trying to reduce the number where we can. We are making some improvements to the junction connectivity near the service station, so we are going to close Quarrytown Road South and put a cul de sac in at that end. Most of the junctions along the highway will be getting an upgrade in terms of improving widths so that heavy vehicle access will be improved as well.

### Median Turn Lane

4.3 The Committee noted that a median turn lane, rather than a wire roper barrier in the median, would separate opposing traffic lanes. The same treatment was used

in the Mangalore to Bagdad Stage 1 upgrade, but differs from the treatment applied across the majority of the Midland Highway upgrade projects. The witnesses noted that consultation with property owners and feedback from the Stage 1 upgrade had been important in deciding to continue this treatment in the Stage 2 project:

**Mr MANNERING** - Generally across the length of the job, most owners are pretty happy about the treatment we are proposing along here because of the level of improved safety it provides for them. So giving them space to prop clear of the through traffic to turn in, they see as an advantage.

**Mr MANNERING** - Because this is a new treatment, the department is keeping an eye on how it is performing. That is happening as part of the project because it is different to what has been done previously.

**CHAIR** - What has been the feedback on part 1?

**Mr ROSS** - We have largely received very positive feedback from the community in regard to the work. ... .. During construction there was quite a bit of disruption, but since it's been completed, we've had positive feedback about the work.

**Mr FARRELL** - Going back to stage 1, you mentioned that people are happy with the way that has been working. It was interesting that before that work started ... ..I had a number of telephone calls from people concerned about how it was going to work, but I have not heard back from those people saying it is not working. Have you had any negative feedback about stage 1 and the turnout lanes?

**Mr ROSS** - Not that I've heard, no.

**Ms KING** - ... .. That may be why no members of the public have come today, because people who live around here have experienced the Bagdad project and have an understanding of how it works.

4.4 The Committee queried whether there was a possibility that drivers may try to use the median turn lane as an overtaking lane. The witnesses commented that this was a consideration in the design and that measures had been included to ensure this did not happen:

**Mr FARRELL** - Is there any risk with the central lane that it could be used for cars overtaking other cars?

**Mr MANNERING** - That is something we considered when developing the design. To reduce the potential for that, we have strategically positioned traffic islands in the median along its length. So at reasonably regular intervals - probably averages about every 150 to 200 metres - we've got a traffic island going in. That is to make sure people cannot use that median as an overtaking opportunity.

We've been very careful about where we've put them. Because we need the median to be used for people to decelerate into their accesses, we have tried to get those islands in just the right spot to maximise the lengths available. Because of the number of access along there, the job has been quite tricky - getting them in the right spot.

### **Speed Limit**

4.5 The Committee noted the intention to reduce the speed limit from 100km/h to 80km/h. The Committee sought further information on what impact this would have on travel time:

**Mr SHELTON** - The report at 2.2 talked about the design speed and the time it takes to get to 6.6 kilometres from one end to the other. Anybody can use a set of figures - find a set of figures - that suits their argument, and I acknowledge these figures are factual in what you did. I will calculate it in a minute. You've said the average speed is 90 kilometres. From a political point of view, if I go out there say 'It is only going to lose you 30 seconds', that is not actually the reality. If somebody is driving through here and can attain 100 kilometres right through the whole strip, it is more than 30 seconds. I do not know the calculations, but often when I come through here, you can't get through at 100 kilometres an hour. There is always traffic through here, but there are occasions when you can get through - you're coming through at night or when there is no traffic.

For a commuter, particularly someone from the Bagdad end, using this piece of road, the time loss is more than 30 seconds. Probably more like a minute. I acknowledge this was the average speed obtained when the testing was done. But if a person argued the case, I would not be arguing that you're only losing 30 seconds because you are actually losing more.

**Ms KING** - The average driver is losing 30 seconds. Some people will be driving faster; as you said, they will come through at other times, and they will lose more time. In order for the average speed to be 90 kilometres per hour, other people must be coming through at 80 already. Those people will not lose time. What everybody will gain will be safety.

**Mr SHELTON** - From a personal point of view, I do 65 000 kilometres a year and I am on the top end of the speed limit, and I have to be most of the time otherwise I cannot get around the place. I am only pointing out those 30 seconds is not actually what somebody could come back and argue a case with.

**Mr MANNERING** - Yes, there is no doubt that at 100 kilometres an hour, it should take three minutes and 36 seconds to drive from one end to the other. On average, it takes people about 30 seconds longer because of the number of influences along the length of the job in terms of access. There are people turning on and off, people taking larger machinery along the road, like heavy trucks which are slower to accelerate coming out at the Pontville roundabout - they would increase people's travel time - so is where that difference comes in.

- 4.6 The Committee questioned whether it was possible to have a 90km/h speed limit in the area given the safety treatments being employed. The witnesses noted that an 80km/h speed limit was the maximum the Department considered to be safe with the median turn lane and number of property accesses along this length of the highway:

**Mr VALENTINE** - With the median islands or structures in place, is there any reason why the speed limit through this area cannot be 90 kilometres an hour?

**Mr MANNERING** - The treatment we are proposing through here is one that you see more typically applied in an urban environment, such as Cambridge Road on the eastern shore, Sandy Bay Road or Main Road at Moonah. The section through Bagdad would be the first time in Tasmania that that treatment has been applied in an 80 kilometres an hour zone.

The speed limit needs to be 80 kilometres an hour and not any higher because there is potential for vehicles to meet in that median turn lane. Because we have property accesses on either side of the highway, in some places along the length of the project you could have two vehicles turning in opposite directions meeting in that turn lane. If the speed limit is too high, the ability of drivers to respond to an approaching vehicle is diminished, and so 80 kilometres an hour is the highest speed we are willing to accept.

### **Drainage**

- 4.7 The Department's submission noted there were some culverts under the highway that were technically assessed as deficient. However, as they were only marginally deficient and there was no known history of closure due to flooding, they would to



be retained and extended as required to suit the new highway width. The Committee questioned the witnesses further on this decision:

**CHAIR** - To turn to the issues of drainage. As in the last project, the number 1 project, it is clear we are almost in the bottom of a valley. I am concerned about the drainage; I didn't understand the difference. You are saying there are five road culverts where one in a 100 years would have overtopping. What is the difference between those that overtop, the definition of 'overtopping', and being insufficient? I gather there is a difference.

**Mr MANNERING** - No, they are really about the same. If it did not have enough capacity, it would mostly likely be overtopped. Sometimes a downhill channel might result in the water running down the side of the road before it overtopped. But yes, generally what we are saying is that if it is going to overtop or it has not enough capacity, there is not enough cross-sectional area in the culvert to get the water through it.

Along this section of the highway, there are some quite large catchments that cross the highway as the water heads from the western side across to the eastern side and down into the Bagdad Rivulet. That is what we have been doing - looking at those culverts to access their capacity and see which ones have enough and which have not. To our knowledge there is no history of flooding or this section of the Midland Highway being closed due to flooding issues.

One of the culverts has insufficient capacity, but is only just deficient, and it's probably a \$200 000 exercise to pull out and replace it with a bigger one. Given we do have not a history of the highway being closed, we do not see pulling that culvert out to replace it with one that has marginally more capacity than what's there now as a good investment of public funds.

**Ms KING** - There are some that are just on the borderline of being fractionally too small. If you do the numbers, theoretically we should upgrade it.

**CHAIR** - Do you believe that you have adequately protected the road from ingress and getting the water away from the road base so that we are not going to have water banked up for days or weeks?

**Mr MANNERING** - We believe that the drainage regime in the project is appropriate for the functionality of the road.

### **Continuing Consultation with Property Owners**

4.8 The Committee noted that the Department had consulted widely with the local community. The Committee sought further information from the witnesses about any issues that were still to be resolved, including the acquisition of land:

**Mr SHELTON** - No-one in the public gallery. Coming out of local government, if you have issues, you have a public gallery. From the committee's point of view, it is great to see the work that has gone into the representations, and what people have said and where the answers lie in the back of this report. My experience through this committee is that not all the issues are resolved when we have this meeting. Are there any significant issues out there? Do you see that you can overcome all the issues? Are the few issues left achievable?

**Mr MANNERING** - All the issues we have still to deal with are achievable. They all would be related to accommodation-type work, such as fencing, how wide people's accesses become and how far we seal back and all of those sorts of things. I think they are things we will be able to resolve as we keep going. A few landowners are concerned about how much land we need to take with the widening, but we will just have to work through that as we go.

The upgrade treatment we are proceeding with is definitely well accepted by the community. There is no doubt that they appreciate the safety benefits they are getting.

**Mr SHELTON** - I understand you've been through community consultation and up at the community centre with the last plan; there were a lot of people there and it was very well received by the community.

**Mr MANNERING** - Yes, that is true.

**Mr LLEWELLYN** - From a compensation point of view with acquisition of adjacent land and that sort of thing - they might not be happy?

**Mr MANNERING** - The Land Acquisition Act obviously provides a process for landowners to be compensated for the impacts. It is something we have to work through.

**Mr LLEWELLYN** - No significant issues though? A little bit further up the road I know there was one that lasted for about five or 10 years.

**Ms KING** - Nothing like that.

**Mr MANNERING** - I have only heard this anecdotally, but the feedback I've been hearing is the land acquisitions on the Midland Highway upgrade at the moment have actually been proceeding well. The ones up at Bagdad went through pretty well.

### **Removal of Vegetation**

4.9 The Department noted there was a need to remove trees and vegetation within the road reserve. Some were heritage plantings while others were not. In its submission, the Department highlighted its strategy for heritage plantings and other non-heritage vegetation, noting that the aim was to minimise any impacts where possible, and where trees in the road reserve needed to be removed, consultation would occur to determine appropriate plantings outside of the road reserve. The witnesses expanded on this matter at the hearing:

**Mr VALENTINE** - Just a question on plantings. The historic or heritage plants - can you verify that really probably only two or three trees out of the 23 remaining trees in the heritage avenue will be removed or trimmed to accommodate the works?

**Mr MANNERING** - Yes, that is right.

**Mr VALENTINE** - You have not had any issues there with any neighbours?

**Mr MANNERING** - No, not with the historic heritage plantings. We do have some other plantings, which we saw during the inspection. There is (sic) some poplar trees on the eastern side... ..the poplars, are north of School Road, so before the Eddington Road property, south of the Eddington Road property. Then also between De Camera Road and the southern end of School Road. We have some poplar trees in those locations which we are impacting on. They are trees currently in the road reservation. We are working with the landowners through the department at the moment.

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

4.10 In assessing any proposed public work, the Committee seeks assurance that each project is a good use of public funds and meets identified needs. The Committee questioned the Department's representatives who confirmed this, adding that the design was the end result of consulting extensively to ensure it met the community's needs:

**CHAIR** - Do you believe that this project is value for money? Do you believe it is fit for purpose? Have you done all the right consultation?

**Messrs ROSS, KING, MANNERING** -Yes.

**CHAIR** - We have the consultation where we need it?

**Mr ROSS** - On this project, listening to the community was a big part of why we changed the project from the wire rope strategy to the current median strategy. We have taken time to do that and therefore we have come up with a solution we think is fit for purpose and value for money for the communities.



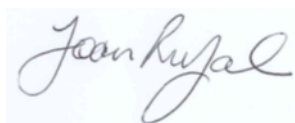
## **5 DOCUMENTS TAKEN INTO EVIDENCE**

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

- Midland Highway Safety Upgrade Works Package – Mangalore to Bagdad Stage 2 – Submission to the Parliamentary Standing Committee on Public Works – Department of State Growth – 31 May 2017.

## 6 CONCLUSION AND RECOMMENDATION

- 6.1 The Committee is satisfied that the need for the proposed works has been established. Once completed, the proposed works will improve safety for road users and local residents by separating northbound, southbound and right-turning vehicles through the provision of a 3.0m wide central median turning lane with regular traffic islands and pedestrian refuges, accompanied by a reduction in the speed limit to 80km/h.
- 6.2 These measures will reduce the potential for head-on collisions and will provide safer access to properties and side roads through the provision of a safe designated space for right turning vehicles. The potential for, and severity of, run-off road crashes will also be reduced by widening sealed shoulders to 2.0m and removing roadside hazards, or, where they cannot be removed, protection with a safety barrier.
- 6.3 Accordingly, the Committee recommends the Midland Highway Safety Upgrades–Mangalore to Bagdad Stage 2, at an estimated cost of \$27.41 million, in accordance with the documentation submitted.



**Parliament House  
Hobart  
26 July 2017**

**Joan Rylah MP  
Chair**

