



PARLIAMENT OF TASMANIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Midland Highway Safety Upgrade – Spring Hill

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

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 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:-

Midland Highway Safety Upgrade – Spring Hill

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 3.5km length of the Midland Highway over Spring Hill between the recently completed works south of Spring Hill and north of Spring Hill.
- 2.2 The Midland Highway Safety Upgrades – Spring Hill 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, due to a lack of adequate safety features in many areas. 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 that result in crashes and, therefore, road infrastructure design needs to take account of these errors.
- 2.5 The proposed works will include the following safety treatments:
 - Separation of northbound and southbound traffic through the provision of a flexible wire rope safety barrier within a 2.1m central median;
 - Widening of the existing carriageway to accommodate the typical road cross section being employed for the Midland Highway upgrades, which includes additional overtaking opportunities through an alternating '2+1' traffic lane arrangement;
 - Extending sealed shoulders to 2.0m;

- Reducing roadside hazards;
- Junction upgrades at the Tedworth Drive/Bisdee Tier junction and the Hutton Park private access;
- Provision of a public turning facility at the Tedworth Drive/Bisdee Tier junction and a private turning facility at the Hutton Park private access;
- Upgrading the 2 existing trucks stops (1 in each direction); and
- Associated earthworks with the proposed widening, requiring significant cutting in some sections due to the nature of the terrain.

2.6 These safety treatments will:

- Reduce head-on collisions through provision of a flexible safety barrier within a central median;
- Reduce the incidence and severity of run-off road crashes, by removal of, or protection from, roadside hazards, and by widening the carriageway to allow for correction if a driver loses control of their vehicle;
- Provide safe overtaking opportunities through a '2+1' lane arrangement;
- Maintain a 110 km/h speed environment, consistent with the Tasmania Guidelines for Category One Roads which apply to the Midland Highway;
- Improve safety at junctions; and
- Contribute to upgrading the Midland Highway to a minimum 3-Star AusRAP rating.

3 PROJECT COSTS

3.1 Pursuant to the Message from Her Excellency the Governor-in-Council, the estimated cost of the work is \$9.63 million-\$11.09 million.

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

Cost Item	Estimated Value
Scoping and Development Phase costs (including design and project management)	\$806,459
Property Acquisition	\$5,000
Delivery Phase costs (including contract management, project management, and insurance costs)	\$567,968
Estimated construction contract costs, including: <ul style="list-style-type: none"> • Earthworks • Drainage • Pavements • Bituminous surfacing • Bridge structures • Traffic facilities • Landscaping 	\$7,859,889
Expected contingency on base estimate outlined above (P50) plus Escalation	\$1,354,412
<i>Expected project out-turn cost (P50)</i>	<i>\$10,593,728</i>

4 EVIDENCE

4.1 The Committee commenced its inquiry on Tuesday, 29 August last with an inspection of the site of the proposed works. The Committee then returned to the Kempton Memorial Hall, Kempton, whereupon the following witnesses appeared, made the Statutory Declaration and were examined by the Committee in public:-

- Damien Dry, Project Manager, Department of State Growth; and
- Muhammed Khan, Consultant Project Manager, Jacobs Pty Ltd.

Overview

4.2 Mr Dry provided an overview of the proposed works:

This is the Midland Highway - Spring Hill project, part of our 10-year action strategy on the Midland Highway, which involves upgrading the safety along the 157 kilometre length of highway between Mangalore and Breadalbane. As part of this we are looking to increase the safety by bringing it up to a three-star rating, which is an AusRAP star rating system, an internationally accredited system. Currently the road is at two stars and through a number of safety upgrades we will be bringing it up to three stars.

Through the safety upgrades, which will be a combination of making sure we have 3.5 metre lane widths, 2 metre sealed shoulder, 2.1 central median, removing roadside hazards and also audible edge lines, will increase the safety to the three star.

Some finer details on this project - this is a 3.3 kilometre section of highway between the south of Spring Hill and the north of Spring Hill project. So we are looking to fill the gap, and will be tying in to the existing safety improvements we completed there a couple of years ago.

We are not looking to do any property acquisition as part of this. There will be two turning facilities, one at Bisdee Tier and another one a private G-Turn, so the landowner can access both sides of the road.

Truck Stop Upgrades

4.3 There is currently one northbound and one southbound truck stop in this section of the Midland Highway. As part of the proposed works the existing truck stops will be upgraded. The upgraded truck stops will be 7m wide, with a stopping lane providing storage capacity for 3 B-double vehicles and a bypass lane which will allow trucks to exit the truck bay around other parked vehicles.

4.4 The Committee sought further detail from the witnesses on the upgrade to the truck bays. The witnesses indicated that the stopping lane and bypass lane will be sealed and line marked and the truck bays will be separated from highway traffic by a safety barrier. The witnesses also indicated that while the truck bays will be signed for trucks, they will not be restricted to trucks only and may be utilised by other vehicles:

Mr SHELTON - Thank you very much for the tour. On the look-around, there is a separation with the pull-over bays at the top of the hill - one going north, one coming south. According to the drawing they will be separated from the main highway.

Mr DRY - Yes.

Mr SHELTON - It was mentioned that there will be a 7 metre width in there for trucks -

Mr DRY - Correct.

Mr SHELTON - Could you explain them.

Mr DRY - There will be a W-beam barrier, and then there will be a 3.5 metre lane to travel through, and then another 3.5 metre lane for the trucks to stop in - long enough to berth the three B-doubles to stop in.

CHAIR - I'd like to raise a few more questions on the truck bays. I assume these truck bays are going to be sealed? Is that correct?

Mr KHAN - Yes, they will be sealed.

CHAIR - And they will be line marked?

Mr KHAN - Yes, they will be.

CHAIR - Terrific. Will they be signed so that not only the everyday user of the highway but tourists and other people will know that there's a pull-off bay coming up?

Mr KHAN - They are signed. They're signed for trucks, but if other people want to use it, they can. It's just that the signage actually specifically shows a truck-parking bay.

CHAIR - For example, when you travel on the Hume Highway and many of the other highways, there are some that say 'Trucks only' - you know, 'Do not enter if you're a car or a caravan'. We're not going to go to that level, because there is very little space for tourism.

Mr KHAN - You are right. We were just looking to reinstate the existing truck facilities that we have there, which can also be utilised by tourists looking to pull over.

Tedworth Drive/Bisdee Tier Turning Facility

4.5 The Committee noted that a G-turn facility would be provided on either side of the Midland Highway at the Tedworth Drive/Bisdee Tier junction to provide access to these roads and to allow vehicles to turn and travel in the opposite direction. At a G-turn facility, traffic is required to pull off to the left into the G-turn facility, in order to make a right hand turn across the highway to access these roads, or to turn and travel in the opposite direction.

4.6 The Committee also noted that, to enable the use of the G-turn facility, a break in the central median wire rope safety barrier was required. The Committee expressed some concern that this may cause confusion for drivers who may seek to make a right hand turn directly from the traffic lane rather than from the G-turn facility on the left. The Committee sought some clarification on how the turning facility would operate and how this situation would be mitigated:

Mr SHELTON - Looking at the second drawing, page 2 - Bisdee Tier turnoff and Tedworth Drive on the left - there are no barriers. It is a crossover there? The barriers exist or don't exist in that portion?.....Now, going north to get to Bisdee Tier you pull off to the left, wait, and then come across the highway. The drawing shows a dotted line where the rope is in the middle. It doesn't exist and it can't exist when going north you can turn right into Bisdee Tier? You can do that under this design?

The next question: if your vehicle is travelling south at 110 kilometres an hour, will you be allowed to turn right into Tedworth Drive, considering there is no barrier there?

Mr DRY - The first question, yes. A vehicle heading north, coming along the Midland Highway will turn left into Tedworth Drive and then be able to cross over into Bisdee Tier. There will be a gap in the barrier there.

As for a vehicle heading south and then turning -

Mr SHELTON - If they are in the southbound lane, the single lane coming down the hill, and there is a gap in the rope, then I suggest someone is going to try to turn right.

Mr KHAN - There is a G-turn on the left-hand side. You would do exactly what you would do if you are coming up from the south as you would do if you were coming from the north.

Mr SHELTON - Right, okay.

Mr KHAN - If you veer left and then you come across, you'd be able to cut across and go straight over to Tedworth Drive, so there's all that space here.

Mr SHELTON - So it doesn't actually show a G-turn in there -

Mr KHAN - No, it doesn't as yet, but there's a little note that says, 'New G-turn facility' - there's a little note there.

Mr SHELTON - It doesn't have the centre barrier; it's just got the route, and so it needs to be well marked. Otherwise we'll have vehicles pulled up in the middle of the single lane coming south wanting to turn right.

Mr KHAN - Yes, certainly. That's a fair comment. The latest line-marking plans have chevrons marked down there to delineate that -

CHAIR - And it will be a no-right turn sign for people turning south?

Mr KHAN - Yes, it will be. They'll be encouraged to take that veer left and then go across -

CHAIR - To turn right, go left?

Mr KHAN - Yes.

Mr SHELTON - Go left to turn right. Okay, thanks for that clarification.

Drainage

4.7 In its submission the Department noted that the project site enjoyed good drainage conditions and was not subject to flooding. At the hearing, Mr Dry noted that existing culverts would be extended to accommodate the widened pavement and were designed with sufficient hydraulic capacity to cater for a 100-year average recurrence interval flood event:

Mr VALENTINE - The drainage and shedding of water off the road - are there any problems with that? You have the culverts worked out through the guttering?

Mr DRY - Yes, I think we have mentioned that in the report. Generally the capacity of the culverts will allow for that one-in-100-year flood to carry those. We will just be looking to widen the culverts to accommodate the widening of the road.

Site Crash History

4.8 The Committee noted that the crash data provided in the Department of State Growth (the Department) submission showed that 15 crashes occurred within the project site between January 2006 and December 2014. The Committee sought some clarification on whether this represented a high crash incidence for this section of the Midland Highway. The witnesses did not have the relevant crash data on hand to answer the Committee's question but did take the question on notice and committed to providing the Committee with this additional information:

CHAIR - Very good. Thank you. I have another question on a different subject. I noted that there's been 15 crashes in this 3.3 kilometres - is that a high level of crash incidence per kilometre or per distance?

Mr KHAN -That's a very good question. I can't think of the statistics on other sections of road that were for 2006 to 2014, so that was a number of years. I could take that on notice and get back to you, if you'd like the specifics on that.

CHAIR – Right..... I was just wondering how urgent - it's all urgent, I get that - but it was really just a matter of interest, so thank you if you could come back to me on that.

Mr KHAN - Yes.

4.9 Subsequent to the public hearing, Mr Dry provided to the Committee the following information on the crash history for the project site and the Midland Highway generally:

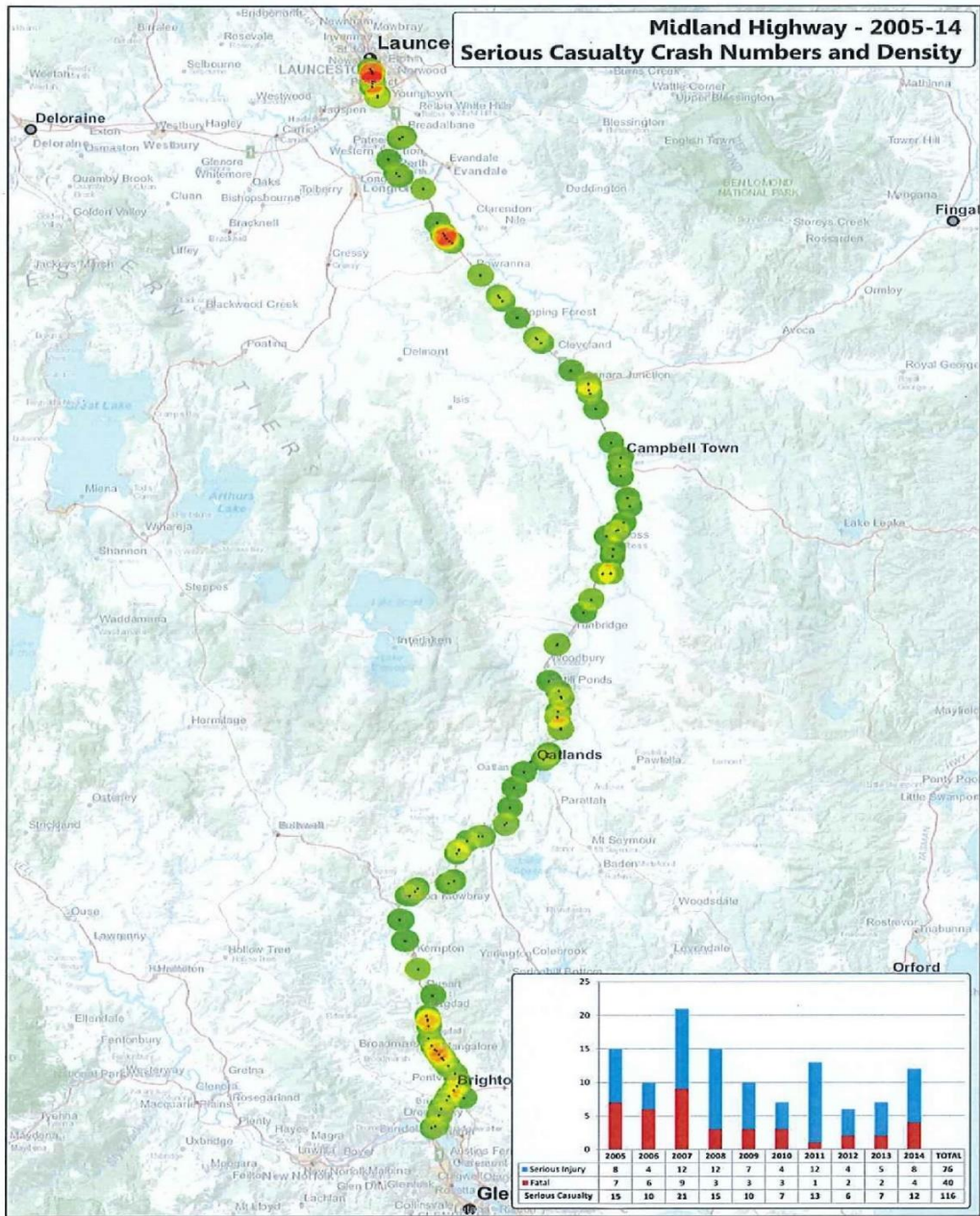
.....I have now spoken to our internal traffic engineering branch and received a response. The short answer is no, the number of crashes is average for the Highway.

The Midland Highway Strategy is about a mass action treatment for the entire highway between Mangalore and Launceston, rather than crash rate for individual sections.

- *Crash analysis found similar crash rates and similar crash types dispersed along the entire length of the highway.*
- *There were no crash clusters.*
- *70% of serious and fatal crash involved head-on incident involving opposing traffic flow.*
- *Impossible to determine where the next serious or fatal crash would occur.*
- *Most effective treatment for cross centreline type crashes is median barrier.*
- *With such a disperse crash problem, mass action treatment was necessary – consequently development of the Midland Highway Strategy.*
- *Link upgrade priority based on a range of factors, including crash data, road condition, environmental and terrain issues, easy of construction, ability to have multiple sites being upgraded simultaneously whilst minimising travel delay.¹*

4.10 The map on the following page provided by the Department of State Growth depicts the serious crash patterns along the length of the Midland Highway:

¹ Excerpt from email from Mr Damien Dry, dated 5 September 2017, providing additional information from the Department of State Growth on the Midland Highway crash history.



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² Attachment to email from Mr Damien Dry, dated 5 September 2017, providing additional information from the Department of State Growth on the Midland Highway crash history.

Consultation With Affected Landowners

4.11 In its submission, the Department of State Growth noted that “no property acquisition is required as part of these works”³. The Department also noted that “Individual meetings have been held with affected landowners to discuss the design. All landowners are accepting of the design and access layouts”⁴.

4.12 The Committee sought further assurance from the witnesses that affected landowners did not have any outstanding concerns with the proposed works:

Mr VALENTINE - As far as the frontages are concerned, no particular issues from the farmers and the like?

Mr DRY - No. The design consultants and I have been liaising with the property owners to make sure they are happy. Given we are not acquiring, there aren't too many accesses along here and they have generally been very happy with what we are planning to do.

Impact on Threatened Flora

4.13 The Committee noted that the proposed works were not expected to have a significant impact on the number of threatened or listed flora species present within the project site. The Committee sought further information on these impacts, including how this had been determined:

Mr VALENTINE - ... Just with respect to the flora and fauna, in reading the report, it seems to say there will be some threatened species taken out, but they're not very good examples of the species and it's not considered to be of high impact. Is that right?

Mr DRY - That is correct. As part of the roadworks, obviously we're looking to widen the road a little bit, so that will mean we'll have to take a sliver of road further beyond the expanse of the earthworks. That means that we'll be impacting slightly on these things, but given the quantum beyond that, it's very insignificant. The quality as well is quite low.

Mr VALENTINE - Is that the opinion of the people doing the study or is it just casual observance?

Mr DRY - This has been referred to our professional teams, so we've got an environmental unit that looks after this so that was their opinion.

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

4.14 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 Mr Dry who confirmed that the project would assist in meeting the objectives of the *Midland Highway Strategic 10 Year Action Plan*, with safety improvements to provide a minimum of a 3-star AusRAP rating for the entire length of the Midland Highway, and that this would be achieved in a way that provided value for money:

CHAIR - Thank you. Do you believe that this project is value for money for the taxpayers of the state?

Mr DRY - Yes, I believe it is value for money.

CHAIR - Is it the best solution that we have to get to AusRAP 3?

Mr DRY - Yes, this is the best solution. Yes, it is.

³ Department of State Growth submission, page 7.

⁴ Ibid, page 9.

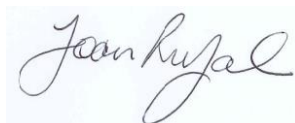
5 DOCUMENTS TAKEN INTO EVIDENCE

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

- Midland Highway Spring Hill – Submission to the Parliamentary Standing Committee on Public Works – Department of State Growth, 7 August 2017.
- Email from Mr Damien Dry, dated 5 September 2017, providing additional information from the Department of State Growth on the Midland Highway crash history.

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 all road users by reducing the incidence and severity of crashes.
- 6.2 The proposed works will eliminate head-on crashes by separating opposing traffic with a wire rope safety barrier in the central median. The proposed works will also reduce the frequency and impact of other crashes through the removal of roadside hazards or protection from them by installing roadside barriers, extending the sealed shoulders of the roadway to allow for correction in the event of loss of control, the provision of formal turning facilities and junction upgrades.
- 6.3 Accordingly, the Committee recommends the Midland Highway Safety Upgrade–Spring Hill, at an estimated cost of \$10.593 million, in accordance with the documentation submitted.

A handwritten signature in cursive script, reading "Joan Rylah", is centered on a light blue rectangular background.

**Parliament House
Hobart
3 October 2017**

**Joan Rylah MP
Chair**