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Phone 1800 030 688 Fax (03) 6233 5800
Email: Mia.Potter@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au

Tasmanian Government

Ms Anne Cunningham
Chair, Development Assessment Panel
New Bridgewater Bridge Major Project
Tasmanian Planning Commission
Level 3, 144 Macquarie Street
Hobart TAS 7001

By email: tpc@planning.tas.gov.au

New Bridgewater Bridge Major Project – Response to Representations

Dear Ms Cunningham,

Thank you for the opportunity to participate in the Development Assessment Panel's hearing process for the New Bridgewater Bridge Major Project (the Project) and to clarify matters relating to the Proponent's Major Project Impact Statement (MPIS).

Throughout the course of the first four days of hearings, a number of matters were raised and discussed that warranted the submission of clarifying or supplementary information in response.

This information is provided by the Proponent as follows:

Attachment A – Consultation Plans of the Chosen Design, Department of State Growth, December 2021

(Note: These plans reflect the same content as the plans submitted with Appendix AA of the MPIS, but were prepared and released by the Proponent after the submission of the MPIS to more easily and efficiently illustrate the Chosen Design to the public and stakeholders.)

Attachment B - Boyer/Old Main Road Intersection Swept Paths, MCD

(Note: This information was requested by the Panel to be supplied by the Proponent)

Attachment C - Scenario Traffic Modelling, Black Snake Rd & Boyer Rd Junctions, Midson Traffic, 23 March 2022

(Note: This further analysis is in response to associated queries at the Panel hearings and focuses on the Boyer/Old Main Road Intersection and Lyell Hwy / Black Snake Road Intersection and takes into consideration future potential residential subdivisions identified by Brighton and Glenorchy Councils.)

Attachment D - Clarification of Intent of Table 5 – Traffic Impact Assessment

(Note: refers to Table 5, page 62 of Appendix 3 of the Initial Assessment Report - Traffic Impact Assessment. The location descriptions using in this table were inaccurate/misleading and the second page of Attachment D provides clearer location descriptions)

Attachment E - Consolidated plans showing anticipated potential Noise Wall Locations

(Note: These plans were prepared by combining the Noise Wall location on Sheet 0009 of Appendix AA of the MPIS with the figures in Appendix J – Noise Impact Assessment of the

MPIS as applicable to the Chosen Design. The Noise Wall adjacent to the Black Snake Inn has not been included considering the advice at the hearings from the Tasmanian Heritage Councils concerns regarding heritage impacts.)

The Proponent confirms the clarification it provided at the hearings that it is the intention for Boyer Road / Old Main Road Intersection to be a four-way give-way junction joining Boyer Road with Gunn Street and the the one-way Bridgewater Bridge on-ramp. Due to turning swept paths of the design vehicles (refer Attachment B), the limited area available, and without significantly impacting adjacent private properties, a roundabout is not proposed nor is it necessary from a traffic efficiency perspective (refer Attachment C).

The Proponent also confirms the clarification it provided at the hearings that it is the intention to close the current intersection of the northern end of Old Main Road with the Midland Highway as shown in Sheet 0009 of Appendix AA of the MPIS. The detailed design of this closure will be prepared as part of the design development by the contractor.

We look forward to continuing to participate in the upcoming hearings and to engage with the Panel and other Representors on these matters.

The project welcomes any queries from the Commission or the Panel in order to clarify the above matters and would be glad to meet and discuss further. If you wish to discuss our response, please contact Mia Potter, Manager Approvals, New Bridgewater Bridge Project at Mia.Potter@stategrowth.tas.gov.au or on 03 6166 4860.

Yours Sincerely,

Ben Moloney
Project Director, New Bridgewater Bridge Project, Department of State Growth

23 March 2022

EXISTING CAUSEWAY AND BRIDGEWATER BRIDGE

NEW BRIDGEWATER BRIDGE

< HOBART

BRIGHTON >

FOOTPATH

SHARED PATH

New Bridgewater Bridge
Chosen Design.
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Australian Government

HOBART CITY DEAL

Tasmanian Government

< HOBART

BROOKER HIGHWAY

BLACK SNAKE ROAD

ONE-WAY TRAFFIC -->

NEW NORFOLK >

LYELL HIGHWAY

<-- ONE-WAY TRAFFIC

< MAIN ROAD

FOOTPATH

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BOYER ROAD

OLD MAIN ROAD

< HOBART

GUNN STREET

MIDLANDS HIGHWAY

BRIGHTON >

FOOTPATH

SHARED PATH

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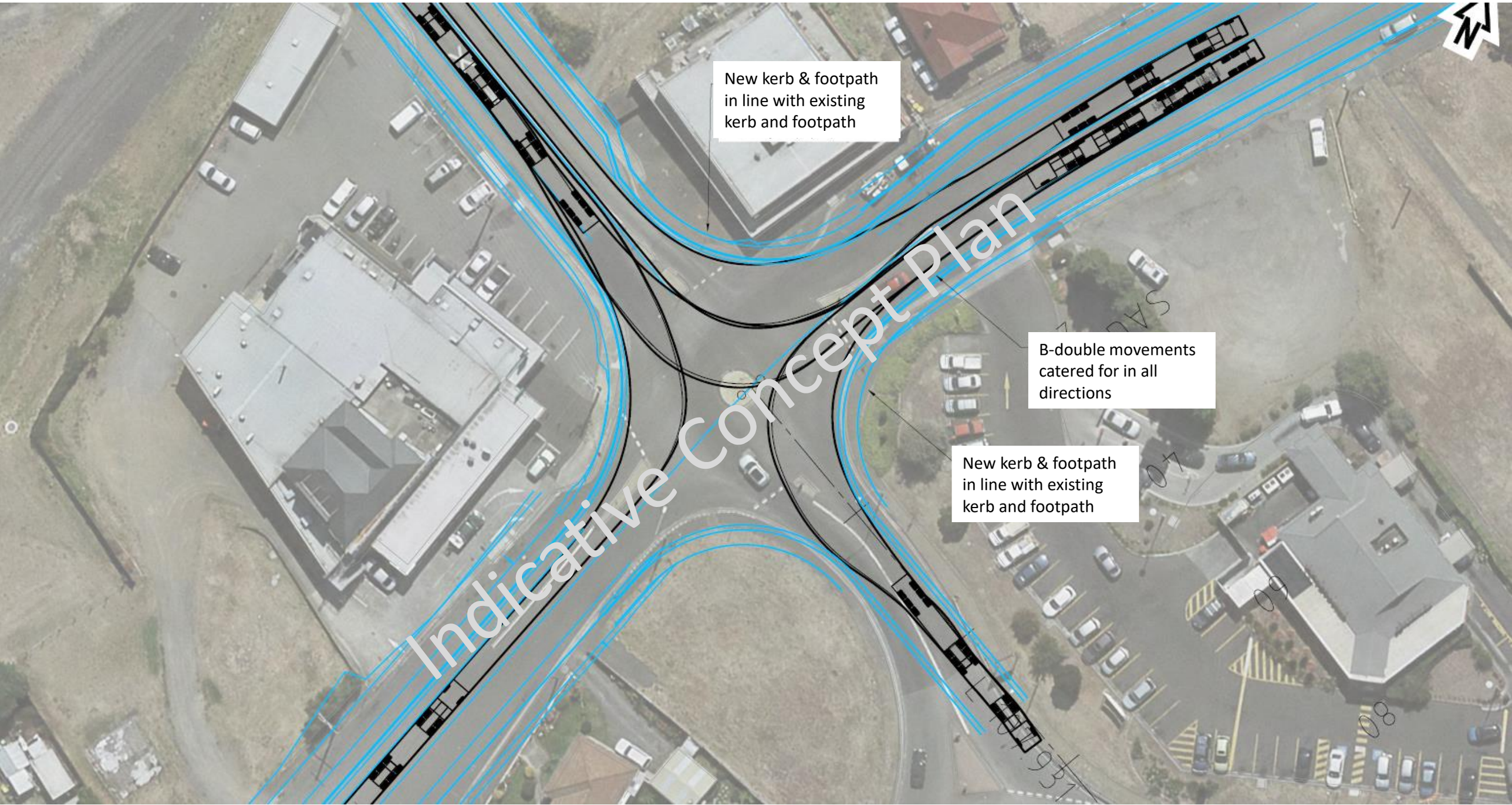
NEW BRIDGEWATER BRIDGE PROJECT

Boyer/Old Main Road Intersection Swept Paths

Indicative arrangement of the Boyer/Old Main Road intersection is shown in the figure below.

This is a indicative concept plan only, with design work presently underway to prepare the Developed Concept Plan, noting that there is a commitment from the contractor to avoid impeding on the private property at 8-10 Old Main Road when refining their design.



Keith Midson
Midson Traffic Pty Ltd
28 Seaview Avenue
Taroona TAS 7053
0437 366 040

23 March 2022

Mr Bryce Taplin
Burbury Consulting
287 Macquarie Street
Hobart TAS 7000

Dear Bryce,

BRIDGEWATER BRIDGE – SCENARIO TRAFFIC MODELLING, BLACK SNAKE RD & BOYER RD JUNCTIONS

This letter provides the modelling results associated with the directions from the Bridgewater Bridge Tasmanian Planning Commission hearings.

1. Black Snake Road Junction

The Chosen Design intersection arrangements for the Black Snake Road junction consists of a T-junction with Black Snake Road giving way to the northbound Brooker Highway on and off-ramps. This is shown in Figure 1.

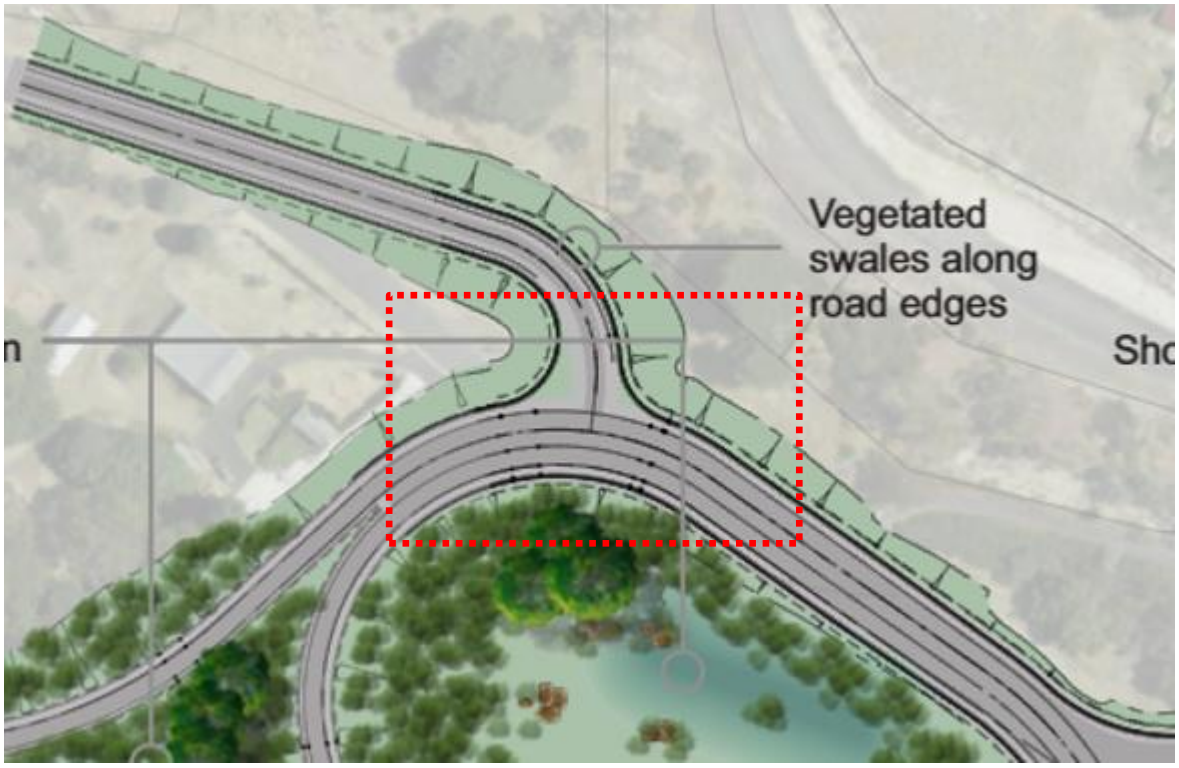
Modelling undertaken by Midson Traffic during the development of the Bridgewater Bridge design and modelling undertaken by the contractor indicated that this junction would perform at a high level of service in future years under forecast traffic growth.

Glenorchy City Council indicated that a future development may result in an additional 900 residential lots that will be accessed via Black Snake Road as well as the road network to the south of Black Snake Road.

Without details of this development it has been assumed that two-thirds of the traffic generation will access the road network via Black Snake Road. The traffic generation associated with the future Black Snake Road development would therefore be:

- 4,440 vehicles per day — 7.4 trips per dwelling per day
- AM peak 426 vehicles per hour — 0.71 trips per dwelling per hour
- PM peak 468 vehicles per hour — 0.78 trips per dwelling per hour

Figure 1 Chosen Design Black Snake Road Junction



SIDRA traffic modelling was undertaken for the proposed Black Snake Road junction for the following scenarios:

- 2032 AM Peak without Black Snake Road (900 lot) development
- 2032 PM Peak without Black Snake Road (900 lot) development
- 2032 AM Peak with Black Snake Road (900 lot) development
- 2032 PM Peak with Black Snake Road (900 lot) development

The SIDRA modelling assumed the same turning movement distribution for the additional traffic generation as the movements associated with the base modelling.

The results are summarised in Table 1, Table 2, Table 3 and Table 4.

Table 1 2032 AM Peak Without 900 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Black Snake Rd								
1	L	35	0.0	0.051	10.5	LOS B	0.2	1.2
3	R	3	0.0	0.051	10.7	LOS B	0.2	1.2
Approach		38	0.0	0.051	10.5	LOS B	0.2	1.2
East: Brooker Hwy Off-Ramp								
4	L	11	0.0	0.144	8.2	LOS A	0.0	0.0
5	T	269	0.0	0.144	0.0	LOS A	0.0	0.0
Approach		280	0.0	0.144	0.3	NA	0.0	0.0
West: Brooker Hwy On-Ramp								
11	T	446	0.0	0.229	0.0	LOS A	0.0	0.0
12	R	13	0.0	0.012	9.5	LOS A	0.0	0.3
Approach		459	0.0	0.229	0.3	NA	0.0	0.3
All Vehicles		777	0.0	0.229	0.8	NA	0.2	1.2

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 2 2032 AM Peak With 900 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Black Snake Rd								
1	L	265	0.0	0.446	13.7	LOS B	2.7	18.6
3	R	28	0.0	0.446	13.9	LOS B	2.7	18.6
Approach		294	0.0	0.446	13.7	LOS B	2.7	18.6
East: Brooker Hwy Off-Ramp								
4	L	87	0.0	0.185	8.2	LOS A	0.0	0.0
5	T	269	0.0	0.185	0.0	LOS A	0.0	0.0
Approach		357	0.0	0.185	2.0	NA	0.0	0.0
West: Brooker Hwy On-Ramp								
11	T	446	0.0	0.229	0.0	LOS A	0.0	0.0
12	R	105	0.0	0.106	10.1	LOS B	0.4	2.9
Approach		552	0.0	0.229	1.9	NA	0.4	2.9
All Vehicles		1202	0.0	0.446	4.8	NA	2.7	18.6

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 3 2032 PM Peak without 900 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Black Snake Rd								
1	L	32	0.0	0.078	13.4	LOS B	0.3	1.9
3	R	7	0.0	0.078	13.7	LOS B	0.3	1.9
Approach		39	0.0	0.078	13.4	LOS B	0.3	1.9
East: Brooker Hwy Off-Ramp								
4	L	39	0.0	0.264	8.2	LOS A	0.0	0.0
5	T	474	0.0	0.264	0.0	LOS A	0.0	0.0
Approach		513	0.0	0.264	0.6	NA	0.0	0.0
West: Brooker Hwy On-Ramp								
11	T	268	0.0	0.138	0.0	LOS A	0.0	0.0
12	R	37	0.0	0.046	11.1	LOS B	0.2	1.2
Approach		305	0.0	0.138	1.3	NA	0.2	1.2
All Vehicles		857	0.0	0.264	1.5	NA	0.3	1.9

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 4 2032 PM Peak With 900 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Black Snake Rd								
1	L	164	0.0	0.531	21.5	LOS C	2.8	19.6
3	R	37	0.0	0.531	21.8	LOS C	2.8	19.6
Approach		201	0.0	0.531	21.6	LOS C	2.8	19.6
East: Brooker Hwy Off-Ramp								
4	L	206	0.0	0.354	8.2	LOS A	0.0	0.0
5	T	474	0.0	0.354	0.0	LOS A	0.0	0.0
Approach		680	0.0	0.354	2.5	NA	0.0	0.0
West: Brooker Hwy On-Ramp								
11	T	268	0.0	0.138	0.0	LOS A	0.0	0.0
12	R	196	0.0	0.313	14.0	LOS B	1.4	9.7
Approach		464	0.0	0.313	5.9	NA	1.4	9.7
All Vehicles		1345	0.0	0.531	6.5	NA	2.8	19.6

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

It can be seen that in all modelling scenarios that the worst Level of Service is B during the AM peak, and LOS C during the PM peak (Black Snake Road approach) when including additional traffic generation associated with the potential Black Snake Road development.

On this basis, the intersection design is considered adequate and appropriate for the potential traffic that will utilise the junction in future years. It is further noted that it may take longer than 10 years for the development to generate the predicted traffic generation. The modelling undertaken in this assessment is likely to be relevant beyond 2032.

2. Boyer Road Junction

The Chosen Design intersection arrangements for the Boyer Road/ Old Main Road junction consists of a four-way give-way junction with Old Main Road having priority. The eastern leg of the junction will be a one-way road that will connect to the southbound on-ramp of the Bridge. The junction layout is shown in Figure 2.

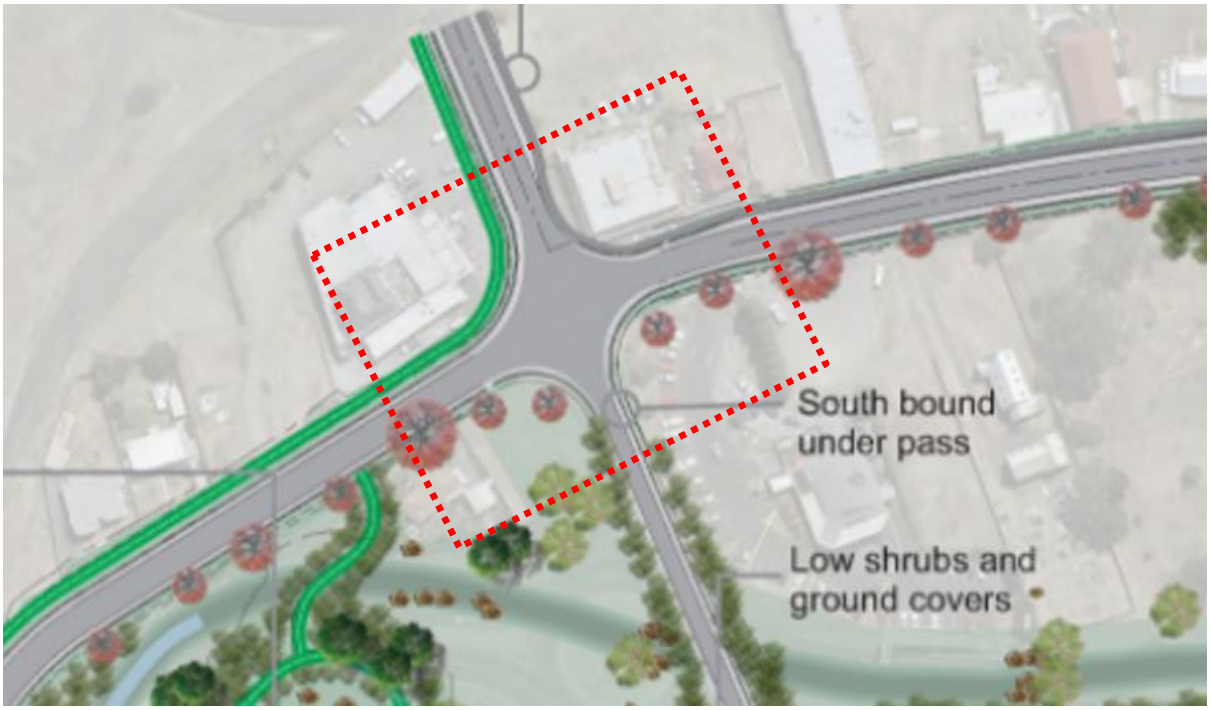
Modelling undertaken by Midson Traffic during the development of the Bridgewater Bridge design and modelling undertaken by the contractor indicated that this junction would perform at a high level of service in future years under forecast traffic growth.

Brighton Council have indicated that a future development may result in an additional 600 residential lots that will be accessed via Boyer Road.

Without details of this development it has been assumed that all of the traffic generation will access the road network via Boyer Road (noting that in reality some of the traffic generation would access New Norfolk and other areas excluding from the Boyer Road junction). The traffic generation associated with the future Boyer Road development would therefore be:

- 4,440 vehicles per day 7.4 trips per dwelling per day
- AM peak 426 vehicles per hour 0.71 trips per dwelling per hour
- PM peak 468 vehicles per hour 0.78 trips per dwelling per hour

Figure 2 Chosen Design Boyer Road/ Old Main Road Junction



SIDRA traffic modelling was undertaken for the proposed Boyer Road junction for the following scenarios:

- 2032 AM Peak without 600 lot development
- 2032 PM Peak without 600 lot development
- 2032 AM Peak with 600 lot development
- 2032 PM Peak with 600 lot development

The SIDRA modelling assumed the same turning movement distribution for the additional traffic generation as the movements associated with the base modelling.

The results are summarised in Table 5, Table 6, Table 7 and Table 8.

Table 5 2032 AM Peak Without 600 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Old Main Rd								
1	L	96	0.0	0.113	8.2	LOS A	0.6	3.9
2	T	1	0.0	0.113	0.0	LOS A	0.6	3.9
3	R	87	0.0	0.113	8.9	LOS A	0.6	3.9
Approach		184	0.0	0.113	8.5	NA	0.6	3.9
North: Old Main Rd								
7	L	2	0.0	0.037	8.5	LOS A	0.2	1.1
8	T	5	0.0	0.037	0.3	LOS A	0.2	1.1
9	R	43	0.0	0.037	8.8	LOS A	0.2	1.1
Approach		51	0.0	0.037	7.9	NA	0.2	1.1
West: Boyer Rd								
10	L	94	0.0	0.225	9.4	LOS A	1.0	7.1
11	T	92	0.0	0.225	8.1	LOS A	1.0	7.1
12	R	19	0.0	0.225	9.6	LOS A	1.0	7.1
Approach		204	0.0	0.225	8.8	LOS A	1.0	7.1
All Vehicles		439	0.0	0.225	8.6	NA	1.0	7.1

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 6 2032 AM Peak With 600 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Old Main Rd								
1	L	226	0.0	0.183	8.2	LOS A	1.0	7.2
2	T	1	0.0	0.183	0.0	LOS A	1.0	7.2
3	R	87	0.0	0.183	8.9	LOS A	1.0	7.2
Approach		315	0.0	0.183	8.4	NA	1.0	7.2
North: Old Main Rd								
7	L	2	0.0	0.069	9.1	LOS A	0.3	2.0
8	T	5	0.0	0.069	0.9	LOS A	0.3	2.0
9	R	75	0.0	0.069	9.4	LOS A	0.3	2.0
Approach		82	0.0	0.069	8.8	NA	0.3	2.0
West: Boyer Rd								
10	L	221	0.0	0.595	13.2	LOS B	6.2	43.3
11	T	216	0.0	0.595	11.9	LOS B	6.2	43.3
12	R	43	0.0	0.595	13.5	LOS B	6.2	43.3
Approach		480	0.0	0.595	12.7	LOS B	6.2	43.3
All Vehicles		877	0.0	0.595	10.8	NA	6.2	43.3

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 7 2032 PM Peak Without 600 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Old Main Rd								
1	L	241	0.0	0.175	8.4	LOS A	1.0	7.1
2	T	21	0.0	0.175	0.2	LOS A	1.0	7.1
3	R	47	0.0	0.175	9.0	LOS A	1.0	7.1
Approach		309	0.0	0.175	7.9	NA	1.0	7.1
North: Old Main Rd								
7	L	1	0.0	0.118	9.4	LOS A	0.6	3.9
8	T	38	0.0	0.118	1.2	LOS A	0.6	3.9
9	R	108	0.0	0.118	9.6	LOS A	0.6	3.9
Approach		147	0.0	0.118	7.5	NA	0.6	3.9
West: Boyer Rd								
10	L	69	0.0	0.197	10.6	LOS B	0.8	5.8
11	T	69	0.0	0.197	9.3	LOS A	0.8	5.8
12	R	11	0.0	0.197	10.8	LOS B	0.8	5.8
Approach		149	0.0	0.197	10.0	LOS A	0.8	5.8
All Vehicles		606	0.0	0.197	8.3	NA	1.0	7.1

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

Table 8 2032 PM Peak With 600 Lot Development

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m
South: Old Main Rd								
1	L	478	0.0	0.302	8.4	LOS A	2.1	14.5
2	T	21	0.0	0.302	0.2	LOS A	2.1	14.5
3	R	47	0.0	0.302	9.1	LOS A	2.1	14.5
Approach		546	0.0	0.302	8.1	NA	2.1	14.5
North: Old Main Rd								
7	L	1	0.0	0.286	11.6	LOS B	1.5	10.3
8	T	38	0.0	0.286	3.4	LOS A	1.5	10.3
9	R	219	0.0	0.286	11.9	LOS B	1.5	10.3
Approach		258	0.0	0.286	10.6	NA	1.5	10.3
West: Boyer Rd								
10	L	132	0.0	0.508	16.5	LOS C	3.5	24.2
11	T	132	0.0	0.508	15.2	LOS C	3.5	24.2
12	R	20	0.0	0.508	16.7	LOS C	3.5	24.2
Approach		283	0.0	0.508	15.9	LOS C	3.5	24.2
All Vehicles		1087	0.0	0.508	10.7	NA	3.5	24.2

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.

It can be seen that in all modelling scenarios that the worst Level of Service is B during the AM peak, and LOS C during the PM peak (Boyer Road approach) when including additional traffic generation associated with the potential development connecting to Boyer Road.

On this basis, the intersection design is considered adequate and appropriate for the potential traffic that will utilise the junction in future years. It is further noted that it may take longer than 10 years for the development to generate the predicted traffic generation. The modelling undertaken in this assessment is likely to be relevant beyond 2032.

Please contact me on 0437 366 040 if you require any further information.

Yours sincerely,

Keith Midson BE MTraffic MTransport FIEAust CPEng EngExec NER

DIRECTOR
Midson Traffic Pty Ltd

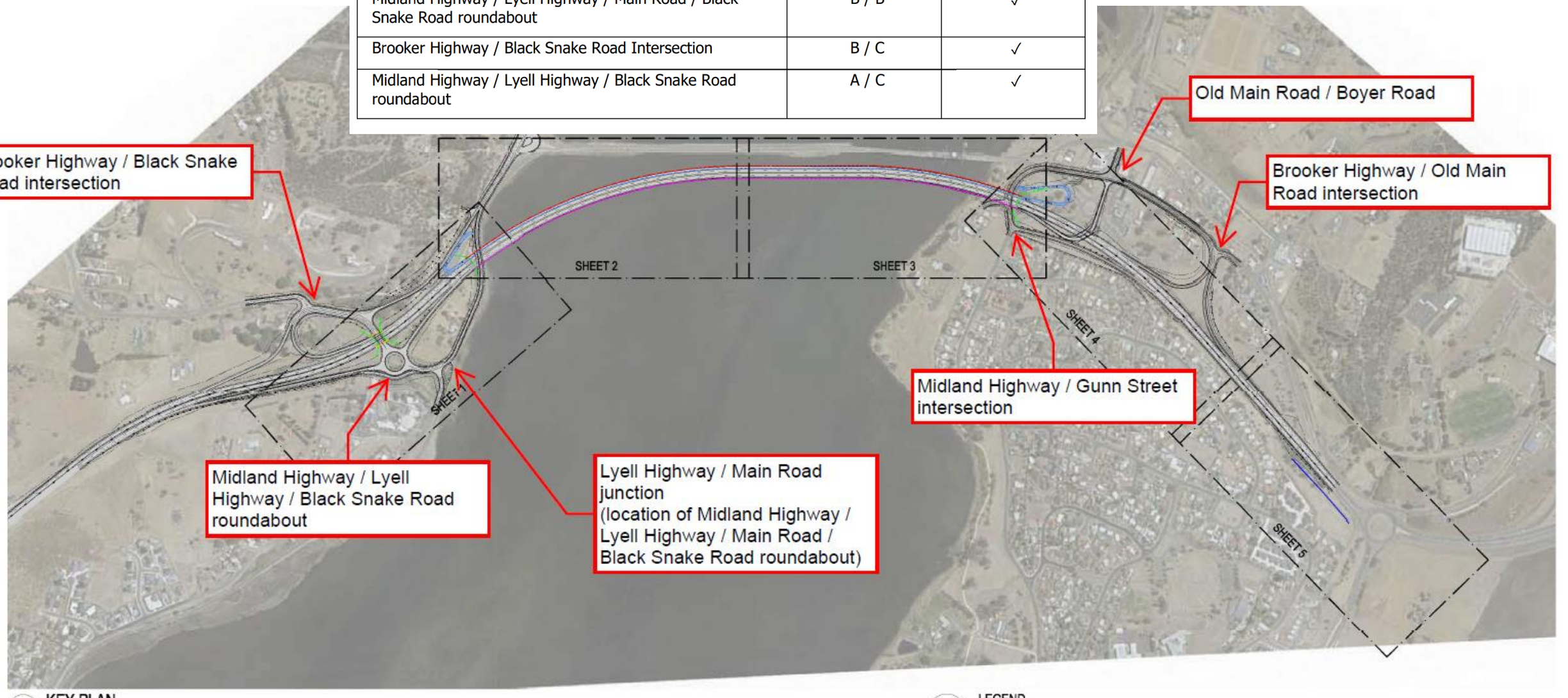
NEW BRIDGEWATER BRIDGE PROJECT

Clarification of Intent of Table 5 - Traffic Impact Assessment

(ie page 62 of Appendix 3 of the Initial Assessment Report - Traffic Impact Assessment)

Table 5 SIDRA Modelling Summary Results

Intersection Location	Overall LoS (AM / PM)	95th Percentile Queues
Old Main Road/Boyer Road	A / A	✓
Midland Highway/Gunn Street Intersection	A / A	✓
Brooker Highway / Old Main Road Intersection	B / B	✓
Midland Highway / Lyell Highway / Main Road / Black Snake Road roundabout	B / B	✓
Brooker Highway / Black Snake Road Intersection	B / C	✓
Midland Highway / Lyell Highway / Black Snake Road roundabout	A / C	✓



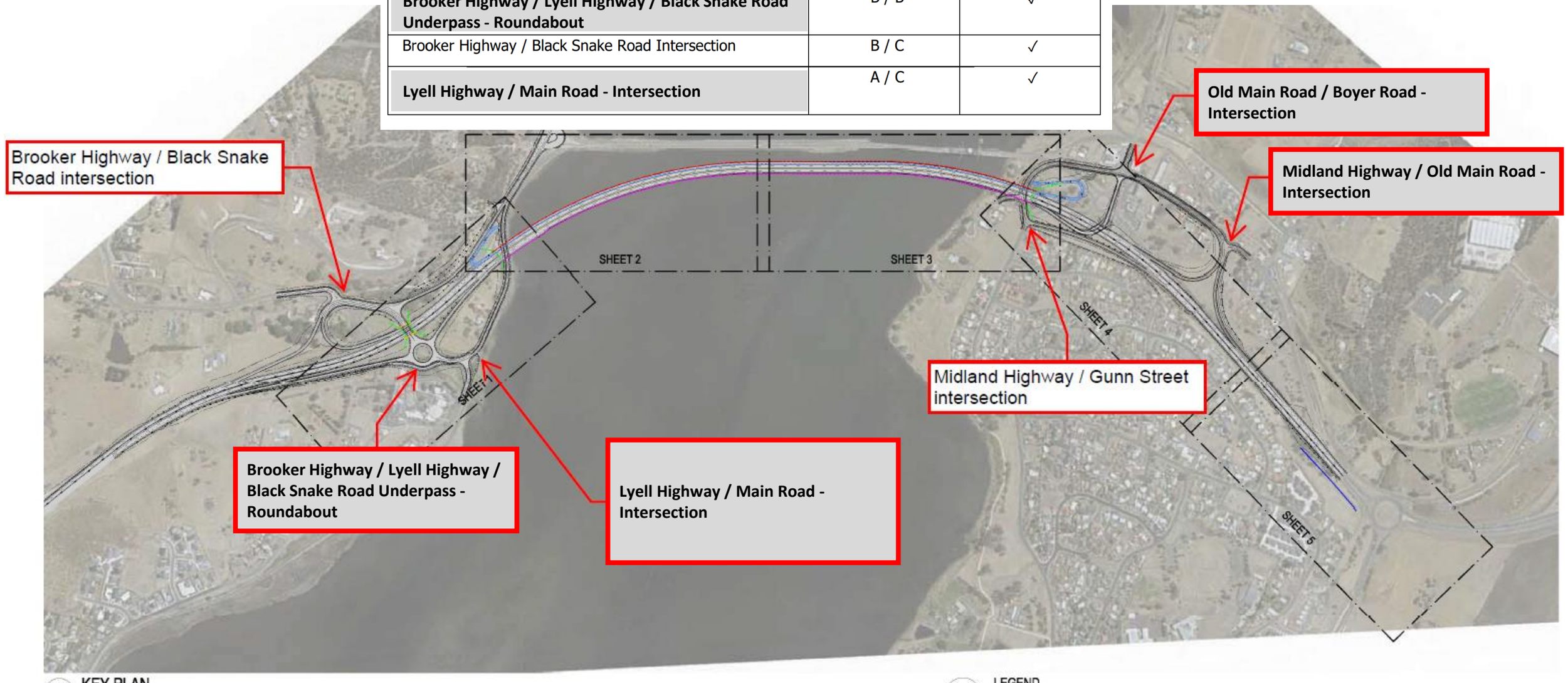
NEW BRIDGEWATER BRIDGE PROJECT

Revised Intersection Location Descriptions for Table 5

(ie page 62 of Appendix 3 of the Initial Assessment Report - Traffic Impact Assessment)

Table 5 SIDRA Modelling Summary Results

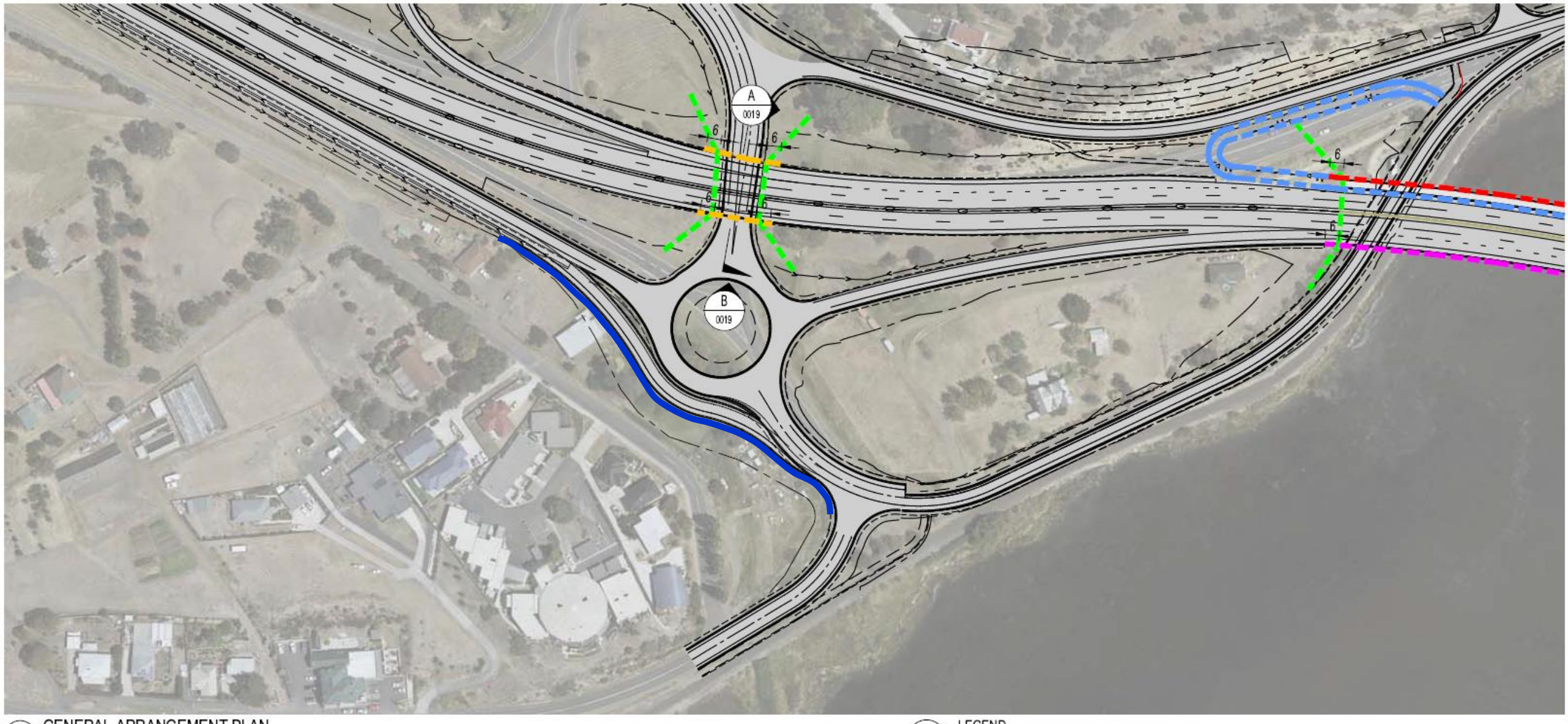
Intersection Location	Overall LoS (AM / PM)	95th Percentile Queues
Old Main Road/Boyer Road - Intersection	A / A	✓
Midland Highway/Gunn Street Intersection	A / A	✓
Midland Highway / Old Main Road - Intersection	B / B	✓
Brooker Highway / Lyell Highway / Black Snake Road Underpass - Roundabout	B / B	✓
Brooker Highway / Black Snake Road Intersection	B / C	✓
Lyell Highway / Main Road - Intersection	A / C	✓



NEW BRIDGEWATER BRIDGE PROJECT

Potential Locations of Noise Walls (Sheet 1 of 3)

Indicative potential locations, noting that the need for the provision of noise walls, barriers and other mitigation techniques will be determined through noise modelling of the design in accordance with Tasmanian State Road Traffic Noise Management Guidelines (Revision 1 October 2015).



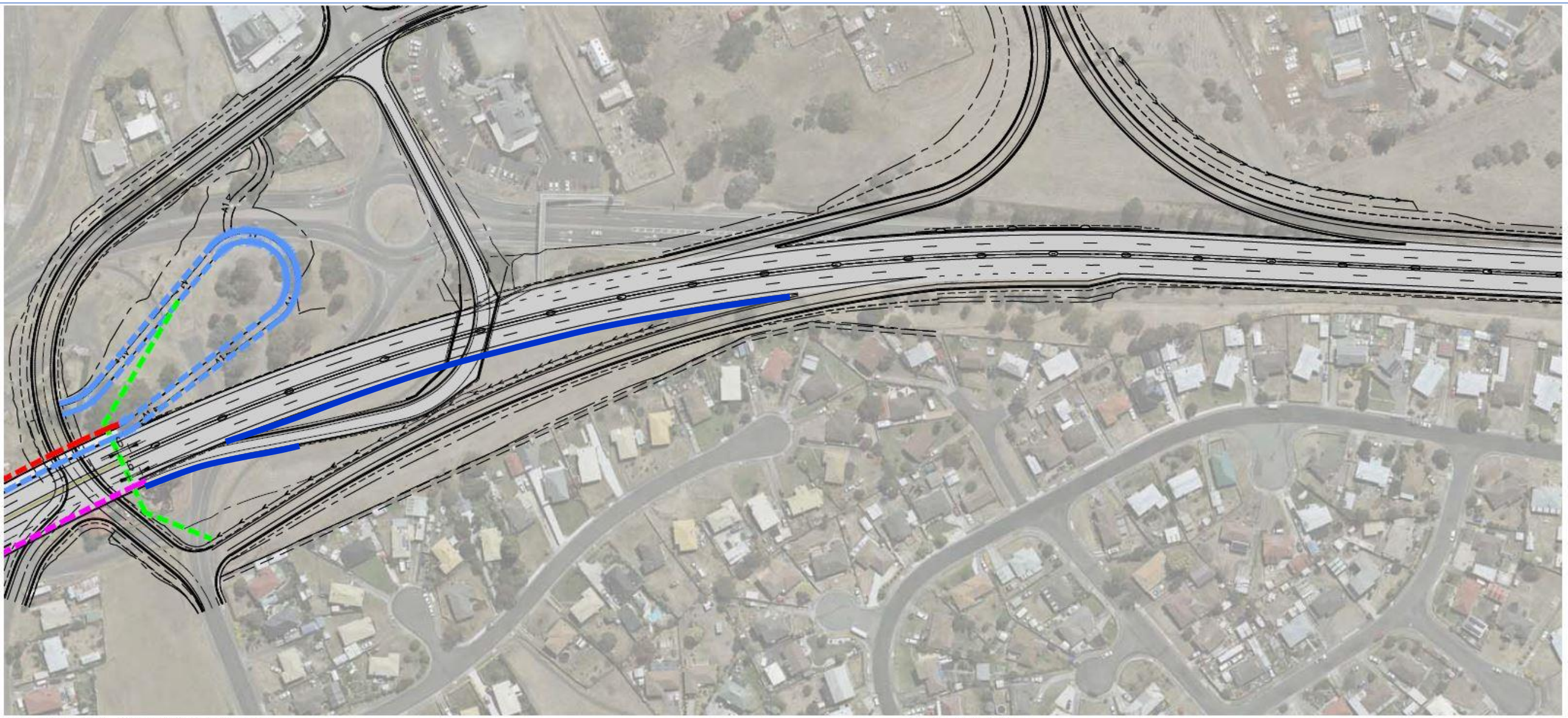
01 / 0002 GENERAL ARRANGEMENT PLAN
SCALE 1:2000

(Location based on figure in MPIS App J – Noise Impact Assessment, page 26, applied to chosen design)

NEW BRIDGEWATER BRIDGE PROJECT

Potential Locations of Noise Walls (Sheet 2 of 3)

Indicative potential locations, noting that the need for the provision of noise walls, barriers and other mitigation techniques will be determined through noise modelling of the design in accordance with Tasmanian State Road Traffic Noise Management Guidelines (Revision 1 October 2015).

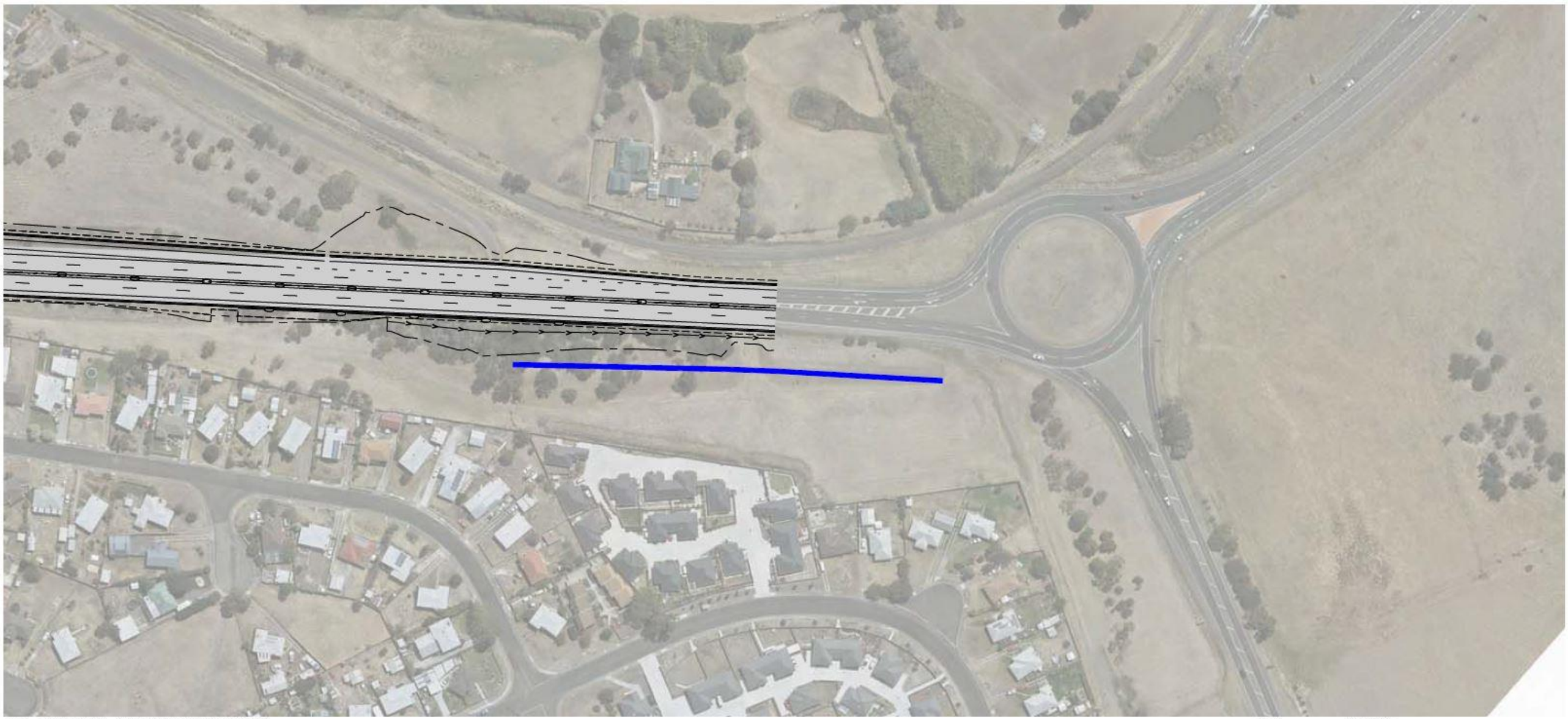


(Location based on figure in MPIS App J – Noise Impact Assessment, page 26, applied to chosen design)

NEW BRIDGEWATER BRIDGE PROJECT

Potential Locations of Noise Walls (Sheet 3 of 3)

Indicative potential locations, noting that the need for the provision of noise walls, barriers and other mitigation techniques will be determined through noise modelling of the design in accordance with Tasmanian State Road Traffic Noise Management Guidelines (Revision 1 October 2015).



05 0002 GENERAL ARRANGEMENT PLAN
SCALE 1:2000

LEGEND

PROPOSED NOISE WALL

(as per MPIS App AA – Sheet 0009)