



SPECIAL MEETING

AGENDA

28 OCTOBER 2022

Your attendance is required at a Special meeting of Council to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 28 October 2022 commencing at 11:00am for transaction of the enclosed business.

R Chessman

ACTING CHIEF EXECUTIVE OFFICER
27 October 2022

Please note:

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

TABLE OF CONTENTS

ITEM	SUBJECT	PAGE NO
1	OPENING.....	1
2	PRESENT	1
3	APOLOGIES AND LEAVE OF ABSENCE	1
4	DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA	1
5	OFFICERS' REPORTS	2
	5.1 ROCKHAMPTON RING ROAD	2
6	CLOSURE OF MEETING.....	55

1 OPENING

1.1 Acknowledgement of Country

2 PRESENT

Members Present:

The Mayor, Councillor A P Williams (Chairperson)
Deputy Mayor, Councillor N K Fisher
Councillor S Latcham
Councillor C E Smith
Councillor C R Rutherford
Councillor M D Wickerson
Councillor D Kirkland
Councillor G D Mathers

In Attendance:

Mr R Cheesman – Acting Chief Executive Officer

3 APOLOGIES AND LEAVE OF ABSENCE

4 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

5 OFFICERS' REPORTS

5.1 ROCKHAMPTON RING ROAD

File No:	13672
Attachments:	1. FRFRPS Study Outcomes and Implementation Plan 2011 ↓ 2. Council Report of 10 November 2020 ↓
Authorising Officer:	Ross Cheesman - Acting Chief Executive Officer
Author:	Angus Russell - Executive Manager Strategy and Planning Martin Crow - Manager Infrastructure Planning

SUMMARY

This report provides discussion of the Rockhampton Ring Road and the Australian Government's decision to defer funding of the project.

OFFICER'S RECOMMENDATION

THAT Council resolve to:

1. Convey its disappointment to the relevant Federal and State leaders, Ministers and local members of Parliament.
2. Request a review and reconsideration of Rockhampton Ring Road project funding in 2023/24 Federal and State Budgets and allocation of sufficient funding to complete the entire project without reducing its scope.
3. Seek commitments from both Federal and State Governments to commence construction no later than January 2024.
4. Support Mayor Tony Williams in making all reasonable representations and efforts to bring the Rockhampton Ring Road project back into near term Federal and State Governments budgets and achieve fair and reasonable outcomes for Rockhampton and the wider region.

COMMENTARY

The Rockhampton Ring Road (RRR) is one of a limited number of projects that will serve to transform the Rockhampton region and further delays after two decades of planning will have lasting impacts on our community and economy.

The existing Bruce Highway through Rockhampton is operating at or near capacity. The existing Fitzroy River bridges experience significant congestion and delay with little opportunity to improve operation along the road corridors that funnel traffic onto the bridges. This congestion affects both National Highway and local commuter traffic.

The Neville Hewitt Bridge (completed in 1980) carries some 32,000 vehicles per day and the Fitzroy River Bridge (completed in 1952) carries a further 40,000 vehicles per day. Both bridges are effectively at capacity with the intersections at either end at capacity and delivering poor levels of service.

The Bruce Highway through Rockhampton is the last heavily signalised section of the Bruce Highway with 19 sets of traffic signals in close proximity through Rockhampton. This results in significant congestion and delays along the Bruce Highway, including for freight and commercial vehicle movements both through and within Rockhampton.

The Bruce Highway is a part of the National Land Transport Network and the RRR will represent the new Bruce Highway through Rockhampton. The project is a key component in the Bruce Highway Upgrade Program and will reduce congestion and remove a significant volume of heavy vehicles travelling through Rockhampton city.

Based on the 2018 Traffic Census data, an estimated 3,100 heavy vehicles passed through the centre of Rockhampton daily, which equates to around 1 vehicle passing through every 28 seconds. Traffic modelling estimates that between 13,000 and 16,000 vehicles, including 2,100 to 2,600 heavy vehicles, would use the RRR each day.

The RRR alignment is largely unchanged from the western alignment recommended in the 2011 *Fitzroy River Floodplain and Road Planning Study* and the 2008 *Rockhampton Traffic Study*. The RRR project has, and continues to be strongly supported as Council on the bases that the project:

- Reduces congestion on the existing Neville Hewitt and Fitzroy River Bridges, at the Yeppen Roundabout and along Fitzroy Street, Yaamba Road, Norman Road and Alexandra Street.

Congestion generally reduces transport efficiency and impedes economic activity. It can reduce amenity for both road users and land uses that adjoin the congested routes. The RRR provides improved access for emergency services and will be beneficial for future public transport routes in and around Rockhampton.

- Redistributes heavy vehicles and through traffic away from the Rockhampton city centre.

The RRR will redistribute Bruce Highway through traffic including long-haul heavy vehicle movements away from the city centre and has the potential to divert local cross-city heavy vehicle movements away from the city centre and existing bridge crossings. This will contribute to enhancing both transport productivity and road safety.

- Significantly reduce the travel time through Rockhampton.

The RRR will bring significant economic benefits and employment through its construction phase and will provide ongoing economic benefits through reduced congestion and travel times both within and through Rockhampton. The RRR will reduce travel time through Rockhampton, particularly between the growth areas of Gracemere and Parkhurst and from the Capricorn Coast to Rockhampton CBD.

- Provides a 1% AEP flood immune Bruce Highway route and reduces the substantial impacts on Upper Dawson Road in times of flood.

The Bruce Highway services a population of some 750,000 people north of Rockhampton. Providing a high level of flood immunity is critical to the resilience of north Queensland during periods of major flooding. The provision of a 1%AEP flood immune Bruce highway route, without the need to divert highway and heavy vehicle traffic to Local Council Roads is vitally important to the Rockhampton community.

- Links and supports development of Rockhampton's two primary residential and employment growth areas at Gracemere and Parkhurst.

Future residential growth will be focused on the urban fringes at Parkhurst and Gracemere. The RRR will provide better connectivity between these growth fronts and with employment generating areas in the Gracemere and Parkhurst Industrial Areas. Improved linkages between the Parkhurst Industrial Area (PIA) and the Capricorn Highway west will increase its attractiveness for industrial investment and development.

- Links Gracemere and Parkhurst more directly with the Airport, Rockhampton city centre and critical community infrastructure such as the Rockhampton Base Hospital.

The RRR is also anticipated to improve access to key facilities and infrastructure in south Rockhampton (airport, hospital, showgrounds, schools and CBD). The RRR is also anticipated to support residential development in the north-west Parkhurst area by providing an alternate road connection and capacity into and out of that area. This will directly support some 3,000 additional dwellings and associated investment.

The RRR will also provide an alternative access from Gracemere, Alton Downs and Ridglands to facilities in North Rockhampton including the CQ University and Department of Agriculture and Fisheries as well as to Yeppoon and the Capricorn Coast.

- Provides improved access for the Australian Defence Force and other visiting defence forces to and from the Western Street Barracks and Rockhampton Airport to the Shoalwater Bay Military Training Area and further north.

The RRR will provide improved access to these facilities and may ultimately support increased defence related activities and defence presence in Rockhampton.

Both DTMR and Council transport planning has been based on delivery of the Ring Road project within the next 5 years. Council's own complex land use and infrastructure planning has been on the same basis and while a twelve-month delay might be managed, anything beyond this is unpalatable.

With detailed design underway and despite some design and approval matters remaining unresolved, the basis for Council's strong support of the RRR remains intact. Intuitively and supported by previous and current network level modelling, the overall Rockhampton region transport network will perform significantly better with the RRR in place than without it.

The October 2022 Federal Budget outcome to defer the RRR project by a "few years" is highly undesirable. The reasons provided publicly for this decision are the rapid rise in cost, worker shortages and inflation. Council does not deny these circumstances and faces the same issues itself in delivering its own capital works. However, these conditions are not unique to Rockhampton and are being experienced statewide and nationally. Capital cost escalations are also evident across many large infrastructure projects. It is also highly improbable that the RRR will be any cheaper than it is today.

The question then is why is Rockhampton disadvantaged with the RRR being delayed while other major public infrastructure projects are commencing and continuing across the State and nationally?

Given the announcement of support and funding for several new Queensland road projects in the Federal election campaign and subsequent Budget, it is difficult to imagine that the Queensland Government wasn't complicit in the decision to defer the RRR or was compliant at the very least.

The RRR needs to commence now, not in four years with no guarantee that it won't be reprofiled or deferred further in subsequent Federal and State Budgets. It also needs to be delivered without compromising its intended scope.

The implications of inaction are real and impact at many levels. Traffic congestion imposes real costs on the Rockhampton community and Bruce Highway traffic. It puts a handbrake on economic growth, impedes residential, industrial and agricultural development with significant and lasting adverse economic impacts and will cause lasting reputational damage to the Rockhampton region.

Many local businesses are also understood to have made significant investments in positioning themselves to support delivery of the RRR project and maximise local content of the project.

BACKGROUND

The Rockhampton Ring Road (RRR) is the result of two decades of comprehensive planning and advocacy.

A third bridge over the Fitzroy River at Rockhampton has been formally contemplated since the Department of Transport and Main Roads (DTMR) 2002 *Capricorn Integrated Regional Transport Plan* and its need and potential location was identified in the 2008 *Rockhampton Traffic Study* (RCC). The subsequent 2011 *Fitzroy River Floodplain and Road Planning Study* (DTMR) was jointly funded by the Australian and Queensland Government and provided a comprehensive assessment of options for the Bruce Highway at Rockhampton.

The outcome of the *Fitzroy River Floodplain and Road Planning Study: Study Outcomes and Implementation Plan* report detailed a staged implementation strategy for the project. A copy of that report is attached for information.

Stage1 (Yeppen North completed in 2014), Stage 2 (Yeppen South completed in 2016) and Stage 3 (Rockhampton Northern Access completed in 2021) have subsequently been delivered.

Stages 4 and 8 of the 2011 implementation plan generally represent what is referred to as the current RRR project from the Capricorn Highway through to Yeppoon Road. The 2011 planning cost estimates for these stages were \$700M-\$850M and \$500M-\$650M respectively (2011 dollars). Combined, these estimates amounted to between \$1.2B and \$1.5B.

Between June 2011 and June 2022, the Roads and Bridges Construction Index (Queensland) has escalated by 26% and based on the 2011 estimates the project would be estimated to be between \$1.5B and \$1.9B in 2022.

In February 2017 \$65 million was allocated by the Federal and Queensland governments to commence planning and preservation works for the Ring Road.

The need for the RRR was further confirmed in the *Rockhampton Gracemere Capricorn Coast Area Transport Study* (2018) which reaffirmed the benefit of the western alignment for the Rockhampton Ring Road.

In November 2018 the Federal Government announced that it had allocated \$800 million towards the project in an 80/20 split with the Queensland Government and in January 2019, the Queensland Government announced its 20 per cent share of funding for the project, with a \$200 million commitment.

The combined \$1B announced funding would have been based on DTMR project estimates at the time. Assuming a 2018 base year, the Roads and Bridges Construction Index (Queensland) has escalated by 12.3% between June 2018 and June 2022 and would result in a nominal \$1.12B project cost in 2022.

The Queensland DTMR opened Expressions of Interest (EOIs) for the project, closing on 16 December 2021. The Department also announced the project is expected to be split into two separate packages, which are expected to be awarded in mid to late 2022.

In October 2022 the apparent cost of the project had escalated to \$1.7B and the project was deferred in the new Federal Government's October Budget – by a "few years".

PREVIOUS DECISIONS

Rockhampton Regional Council has provided input into the planning of the RRR project and has been a strong advocate for its funding and delivery over many years.

On 22 February 2011 Council resolved to reaffirm its preference for a western alignment of the Bruce Highway as identified in the 2008 *Rockhampton Traffic Study*.

On 11 December 2018 Council resolved to support the proposed rail and road corridor declaration, subject to a clear delineation of an off ramp at the Airport and other critical transport links. Council also resolved to request that the DTMR provide a confidential briefing to Council on the RRR project.

On 27 October 2020 Council resolved to request a report be presented that details the benefits and impacts (road network, land use planning, community, etc) of the RRR project. That report was made to Council in November 2020 and is attached for information.

The most recent report made to Council was in July 2021 and related to several design matters of the RRR project.

BUDGET IMPLICATIONS

Council has engaged at length with DTMR around the RRR planning and design at Council's own expense. This has demonstrated Council's good will and support of the project.

Delays to the RRR project may have direct and substantial financial implications for Council's capital program along with significant economic impacts that ultimately also impact Council's rate and revenue growth.

CORPORATE/OPERATIONAL PLAN

This report supports the following Corporate Plan efforts:

- As a community leader, we advocate for the benefit of our community
- Our strategic planning supports the Region's growing population and enables economic development
- We support projects that strengthen the Region's economic development
- We advocate for the Region with all levels of government and support non-Council projects that benefit the Region

CONCLUSION

This report has been prepared to provide background and commentary on the Rockhampton Ring Road project and to support Council's advocacy for timely delivery of the project.

ROCKHAMPTON RING ROAD

FRFRPS Study Outcomes and Implementation Plan 2011

Meeting Date: 28 October 2022

Attachment No: 1



FITZROY RIVER FLOODPLAIN AND ROAD PLANNING STUDY

Study Outcomes and Implementation Plan

LEGEND

WESTERN ROAD
CORRIDOR

WESTERN RAIL
CORRIDOR

Fitzroy River Floodplain and Road Planning Study

Study Outcomes and Implementation Plan

Prepared for
Department of Transport and Main Roads

Prepared by
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8 December 2011
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TABLE OF CONTENTS

TABLE OF CONTENTS

1.0	Background	1
2.0	The Strategy	1
2.1	Western Combined Road and Rail Corridor	1
2.2	Western Road Corridor.....	3
2.3	Western Rail Corridor.....	5
3.0	Implementation.....	7
3.1	Rockhampton Ring Road Stages.....	8
3.2	Rockhampton Ring Road Implementation Plan.....	16
3.2.1	Potential Costs	17
3.3	Rockhampton Rail Bypass Stages	19
3.3.1	Western Rail Corridor Implementation Plan	20
3.3.2	Potential Costs	20
4.0	Further Recommendations	22
4.1	Rockhampton Transport Model development.....	22
4.1.1	Rockhampton SATURN Model	22
4.2	Rockhampton Ring Road Levee Land Use Investigation.....	22
4.2.1	Potential Land Use Benefits.....	22
4.2.2	Potential Flooding Impacts	22
4.3	Rail Infrastructure and Operations Investigation.....	22
4.3.1	Intermodal Hub Investigation.....	22
4.3.2	Workshop Operation and Location Investigation.....	23
4.3.3	Passenger Station Operation and Location Investigation	23
4.3.4	Denison St/Alexander Bridge Future Use Investigation.....	23
4.3.5	Triggers for the Western Rail Corridor	23
5.0	Assumptions and Limitations.....	24
5.1	Corridor Extents	24
5.2	Accessibility	24
5.3	Flood Impacts	24
5.4	Population Projections	24

1.0 BACKGROUND

The Fitzroy River Floodplain and Road Planning Study has investigated long term solutions for existing and forecast Bruce Highway and North Coast Rail Line flooding, freight and road transport impacts in and around the city of Rockhampton. While the study has assessed solutions with a 2031 time horizon, it has made recommendations for corridor protection for infrastructure that would provide for the transport needs of the region well beyond 2031.

The Study has assessed current and future demands on the Bruce Highway and the North Coast Rail Line and makes recommendations that will help inform long term transport infrastructure investment decisions in Central Queensland. Specifically, the study has examined ways of reducing congestion within Rockhampton and improving the highway's and railway line's accessibility during major flood events to reduce the impact of Fitzroy River flooding on these vital links.

This strategy draws on the work documented in the seven previous study technical reports and makes recommendations for actions to follow.

2.0 THE STRATEGY

The centrepiece of the strategy is the Western Combined Road and Rail Corridor, comprising the Western Road Corridor and the Western Rail Corridor. The strategy recommends the staged implementation of the western combined road and rail infrastructure to provide for the strategic transport needs of Rockhampton and Central Queensland to 2031 and beyond. It addresses the objectives of the study by:

providing improved access of the Bruce Highway and North Coast Rail Line at the Yeppen Crossing during major flood events, significantly reducing the isolation of Rockhampton and North Queensland during major flood events

providing an alternative route for heavy vehicles travelling through the city which will also connect the growth areas of Parkhurst and Gracemere where significant future industrial and residential growth is planned

removing heavy rail from Denison Street and providing faster travel times for through rail freight, while maintaining connections to existing rail infrastructure

improving safety and amenity within Rockhampton by reducing traffic including freight in urban areas

providing for long term economic and population growth for the entire region.

2.1 Western Combined Road and Rail Corridor

The strategy recommends that a combined corridor be protected with sufficient width to accommodate the ultimate Western Road Corridor and Western Rail Corridor. Corridor width has been nominally set at:

- combined corridor 140m
- rail only corridor 60m
- road only corridor 80m

These widths have been based on providing sufficient width for the ultimate long term development:

- 4 lane divided highway, 110km/hr, at Q100 flood levels
- 2 railway tracks, 100km/h standard operating speed, 120km/h for a tilt train, and service road at Q100 flood levels
- limited access corridor with grade separation of all intersections
- grade separation between road and rail, connection to existing rail infrastructure can be maintained as required
- services and ancillary infrastructure such as water treatment devices.

There will be opportunities to refine and optimise the corridors with further detailed planning including field investigation and consultation as the projects progress through further planning, design and delivery stages.

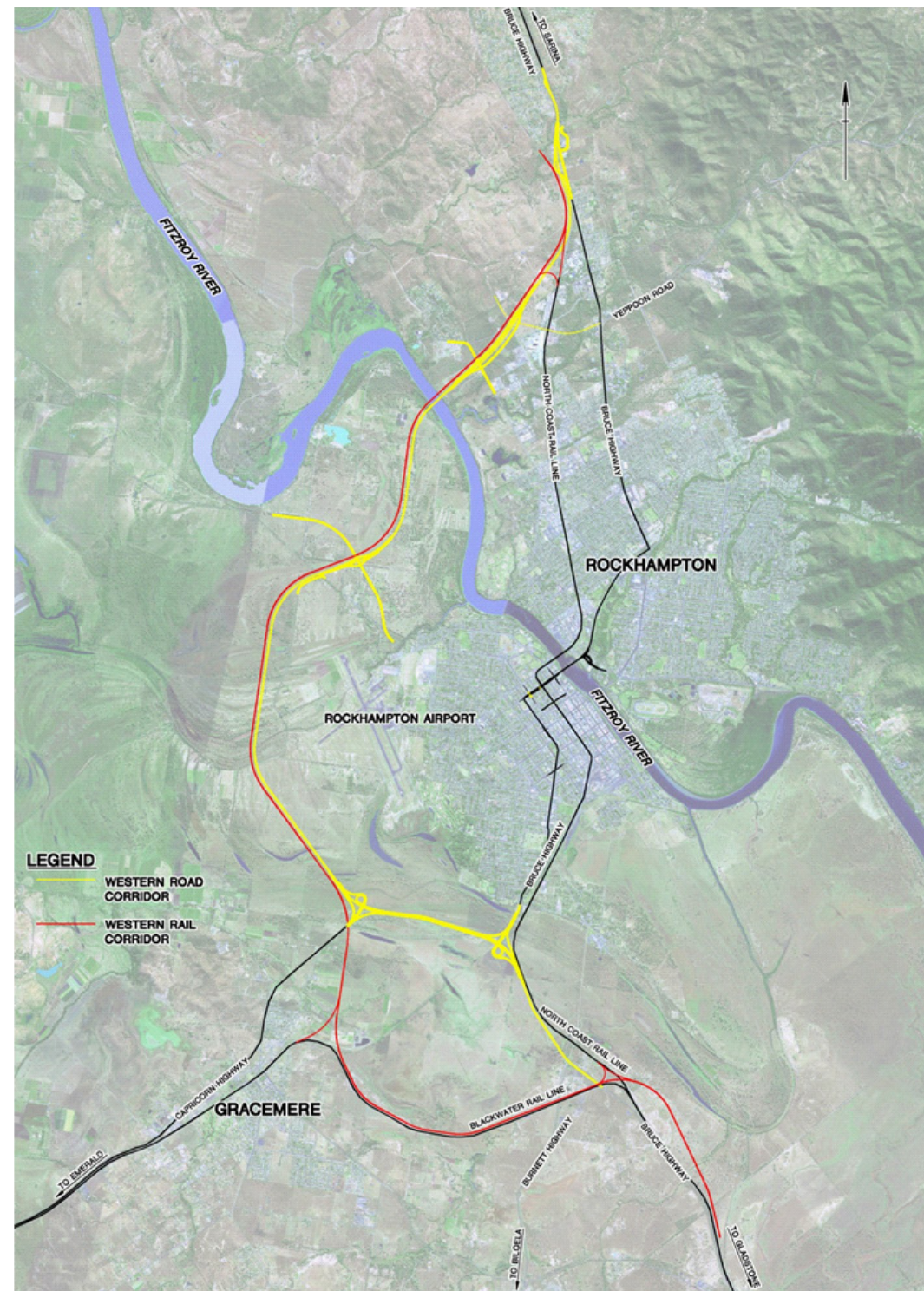
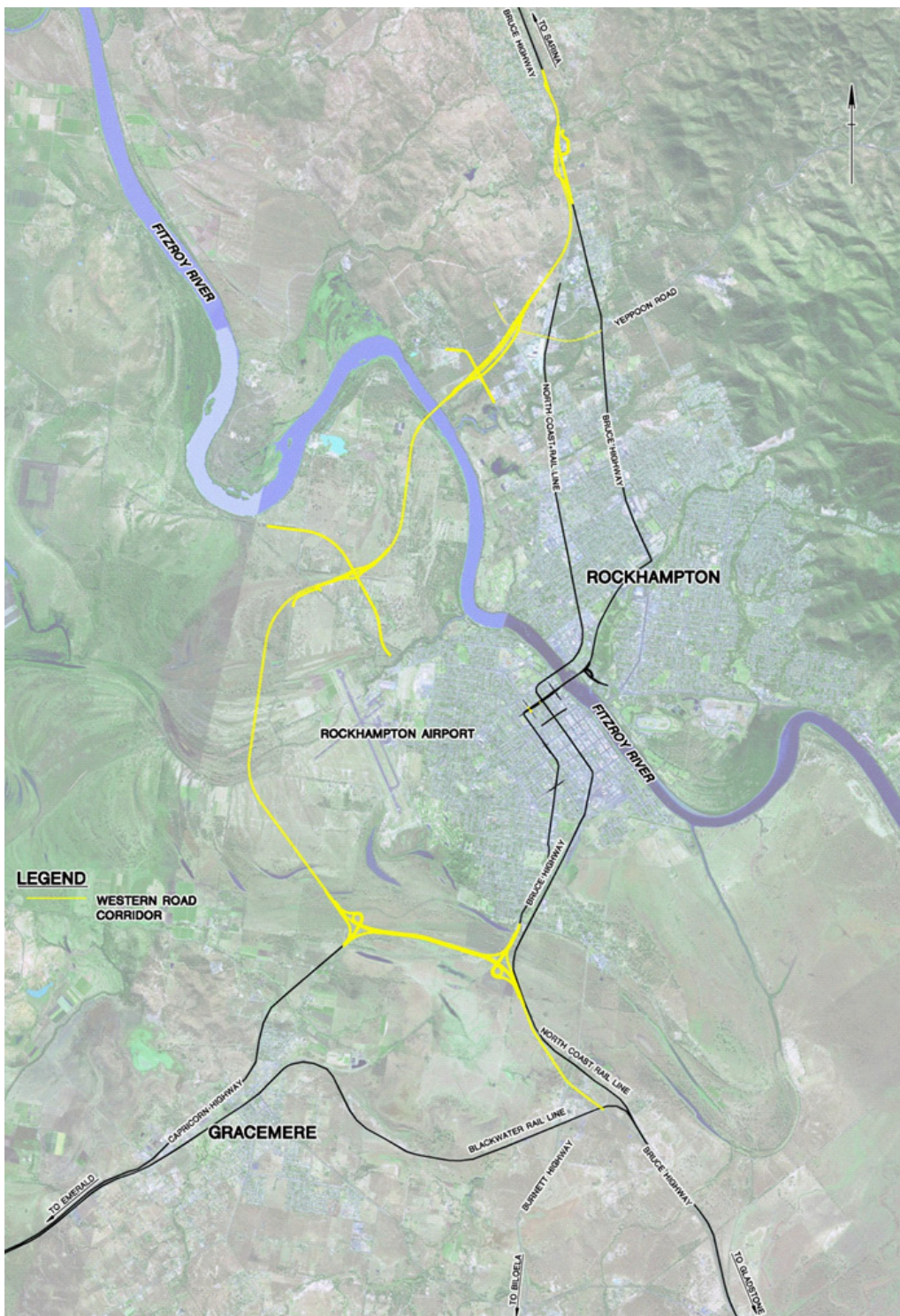


Figure 2-1 Western Combined Road and Rail Corridor



2.2 Western Road Corridor

A “Rockhampton Bypass” (Rockhampton Ring Road) has been identified in the Queensland Government *Bruce Highway Upgrade Strategy* July 2011 for planning and corridor preservation in the next 5 to 10 years.

The Western Road Corridor is a 22km deviation of the Bruce Highway. It extends as far south as the Burnett Highway intersection and north to Glenlee (north of Parkhurst). From the south the corridor alignment follows the Bruce Highway alignment until it deviates at the Capricorn Highway intersection (Yeppen Roundabout). It follows the Capricorn Highway for approximately 2km before it deviates north through the Yeppen Floodplain where it sweeps around the airport at Pink Lily and crosses (and connects to) Rockhampton Ridgeland Road before crossing the Fitzroy River north of Limestone Creek. From there it connects to Alexandra Street at Parkhurst and to the Yeppoon Road via a new connection. The western corridor connects back to the Bruce Highway at Glenlee near Ramsay Creek.

The fully developed corridor is not required until well beyond the timeframes of the study; as such its design has been used to determine a maximum long term corridor width in order to understand its physical impacts. To accommodate projected traffic to 2031, the infrastructure has been scaled down from its ultimate form and designed as a Q100 immune 2 lane road with at-grade intersections. As 2031 is the study horizon, this is the form of the proposed infrastructure which has been staged, costed, and had its performance assessed against the specific study objectives.

Figure 2-2 Western Road Corridor

2.3 Western Rail Corridor

The Western Rail Corridor is a 28km deviation of the North Coast Rail Line from the junction with the Blackwater Line at Rocklands south of Rockhampton to Glenlee north of Parkhurst. The corridor follows the Blackwater Line from its connection to the North Coast Line at Rocklands for approximately 5km before turning North and crossing over Scrubby Creek and the Capricorn Highway. From here the corridor runs parallel with the Western Road Corridor to Glenlee where it rejoins the North Coast Line. Angles are provided at Rocklands and Parkhurst to maintain connectivity to the existing North Coast Line for access to the station and other facilities and the Yeppoon Branch. This would enable the existing line along Denison Street and the Alexandra Bridge to be decommissioned.

To accommodate expected rail traffic to 2031 the corridor's infrastructure has been designed as a 1 track Q100 flood level line connecting from the existing Blackwater Line near Gracemere to Glenlee. While the Blackwater Line is currently single track it is near capacity and planning is underway by QR National for its duplication. Once duplicated the line would have the same capacity as the remainder of the combined North Coast/Coal Line between Rocklands and Gladstone. While the existing Blackwater Line is currently less than the Q100 flood level it has significantly better access during major flood events than the existing North Coast Line through the Yeppen Crossing. There are opportunities to improve this if required either with the planned duplication of the Blackwater Line or the construction of a dedicated freight/passenger line if required in the future.

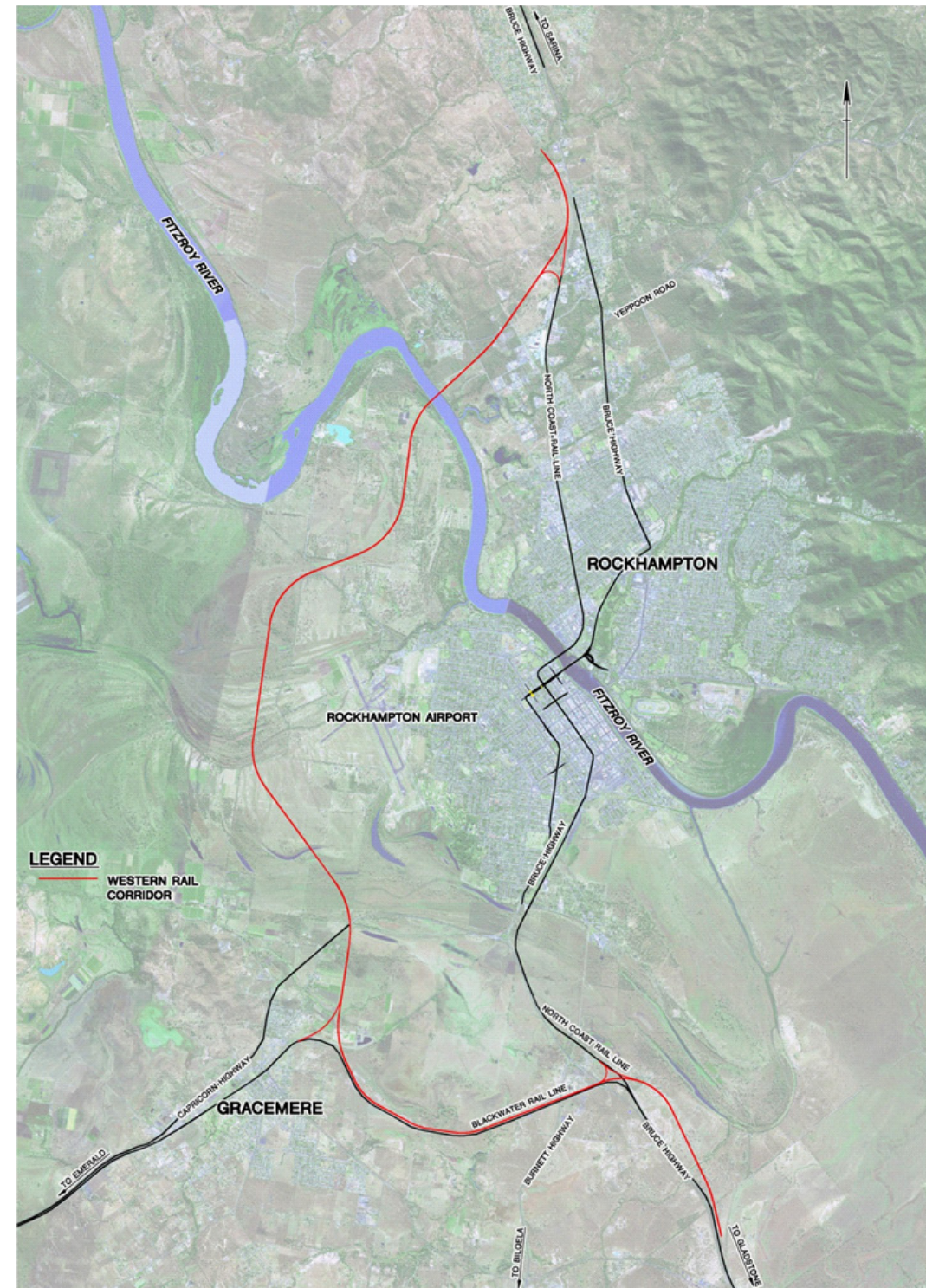


Figure 2-3 Western Rail Corridor

3.0 IMPLEMENTATION

An indicative program for the staged implementation of the Western Combined Road and Rail infrastructure has been developed. This program includes works already in planning as well as upgrades to the existing network that will enable the work to be staged.

Indicative timeframes have been assigned to stages of developing the Rockhampton Ring Road (within the Western Road Corridor), within the timing being determined based on projected traffic growth and capacity. Timing of the implementation of the Western Rail Corridor's is not able to be defined at this stage as the need for the corridor is based on operational and amenity issues rather than capacity restrictions. A key recommendation of the study is that further work be undertaken to understand the triggers for the relocation of the North Coast Rail Line through Rockhampton.

Individual components of the implementation program as depicted in Figure 3 1 (road strategy) and Figure 3 13 (rail strategy) are described in the following:

3.1 Rockhampton Ring Road Stages

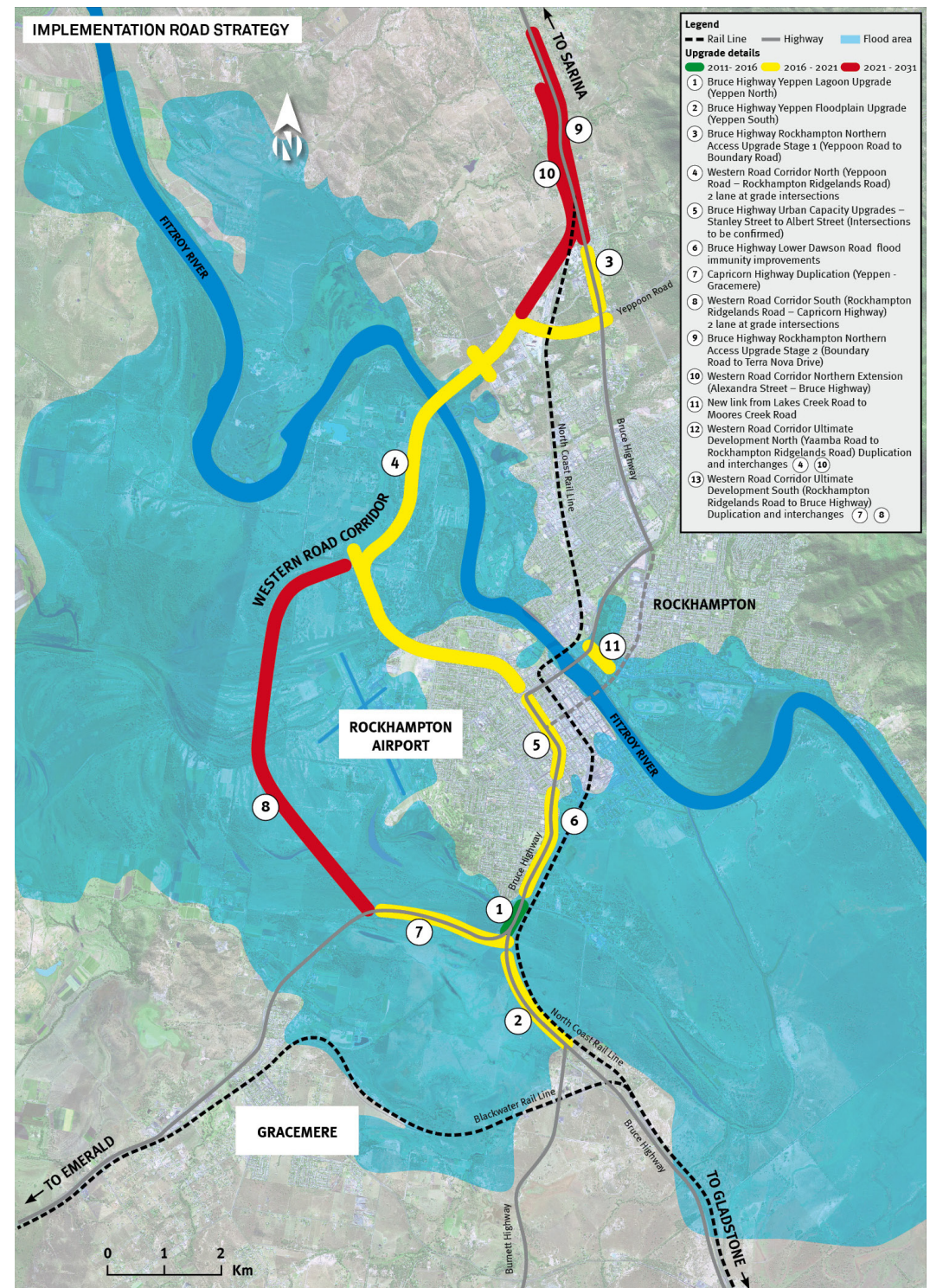


Figure 3-1 Rockhampton Ring Road Stages

1. Bruce Highway Yeppen Lagoon Upgrade (Yeppen North)

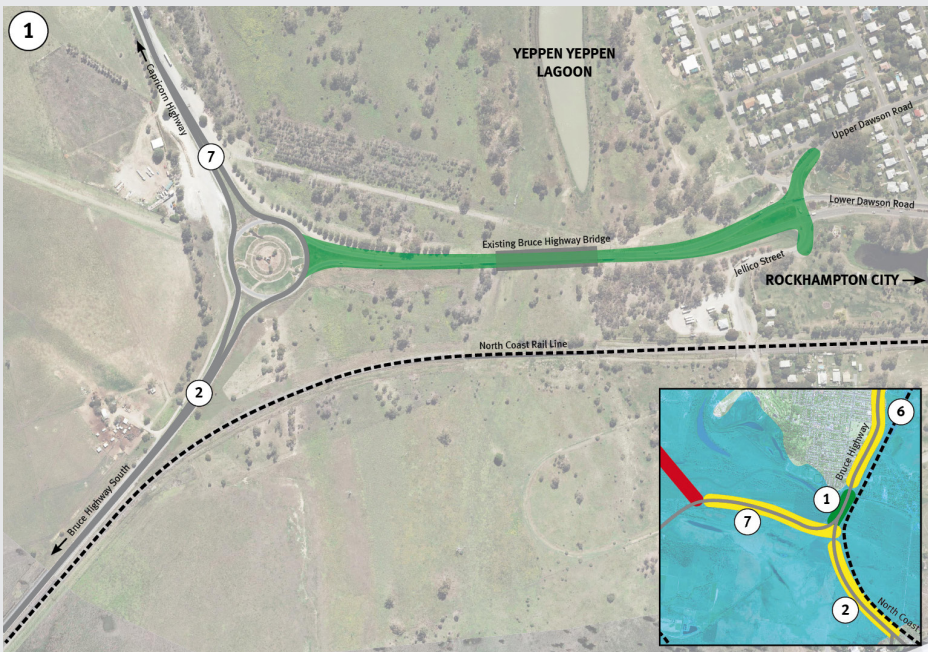


Figure 3-2 Existing Bruce Highway – Capricorn Highway to Jellico Street

It is envisaged that Stage 1 will provide:

- improved safety and congestion
- approximately 1km long with 70km/hr speed zone
- additional two lanes to provide a total of four lanes
- new 420m two lane bridge
- two new lanes built to Q100 flood heights (excluding roundabout)
- upgrade Jellico Street to an at-grade signalised intersection
- slip lane from the Capricorn Highway east bound, to the Bruce Highway north bound lanes.

2. Bruce Highway Yeppen Floodplain Upgrade (Yeppen South)

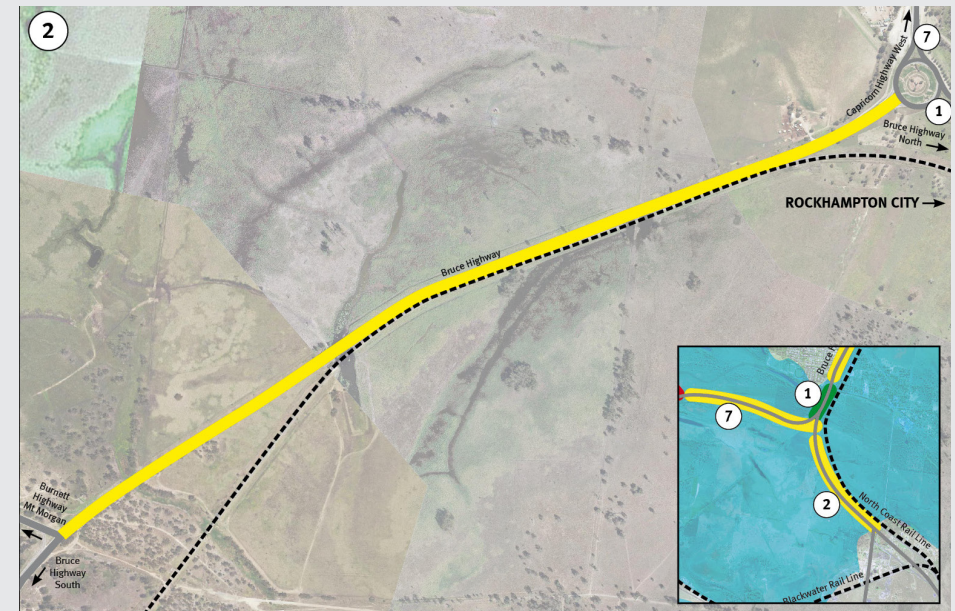


Figure 3-3 Existing Bruce Highway – Burnett Highway to Yeppen Roundabout

It is envisaged that Stage 2 will provide:

- improved access to Rockhampton during major flood events
- approximately 3km long with 90km/hr to 110km/hr design speed
- additional two lanes to provide a total of four lanes
- significant length of new two lane bridge
- two new lanes built to Q100 flood heights which connect to the Q100 embankment at the southern end of the Yeppen Lagoon Upgrade (Yeppen North)
- upgrade Bruce Highway and Burnett Highway intersection - at-grade unsignalised intersection
- south bound slip lane bypassing the Yeppen Roundabout.

3. Bruce Highway Rockhampton Northern Access Upgrade Stage 1 (Yeppoon Road to Boundary Road)

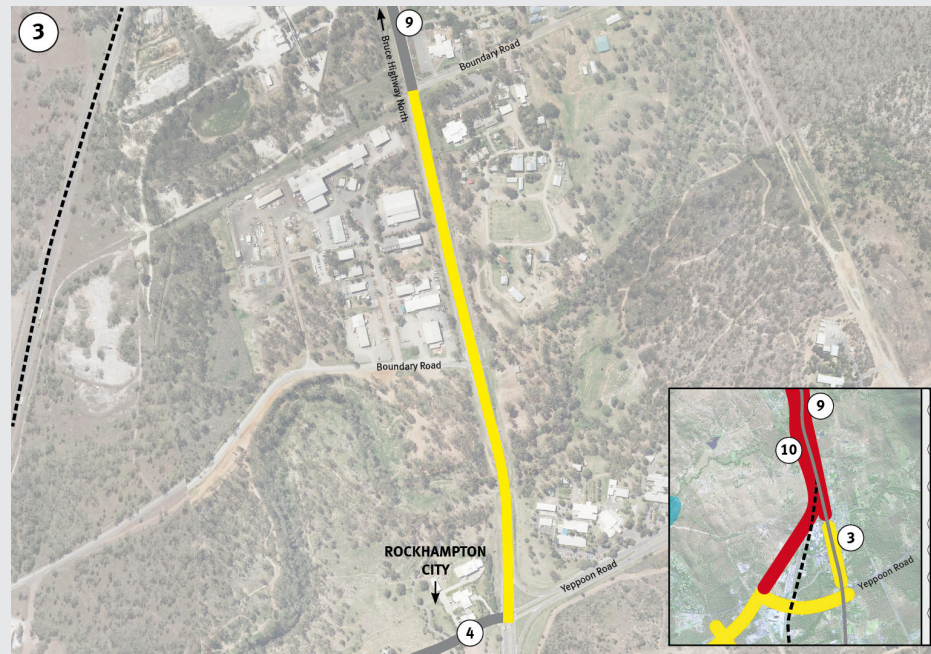


Figure 3-4 Stage 3, Existing Bruce Highway - Yeppoon Road to Boundary Road

It is envisaged that Stage 3 will provide:

- improve road safety, reduce congestion and reduce travel times on the northern approach to Rockhampton
- additional two 1.2km long lanes to provide a total of four lanes with 90km/h design speed
- in conjunction with Rockhampton Northern Access Upgrade Stage 2 this upgrade could defer the need for Stage 10, the Northern Extension of the Western Road Corridor
- upgrade Bruce Highway / Yeppoon Road intersection and both Bruce Highway / Boundary Road intersections (all at-grade).

4. Rockhampton Ring Road North (Yeppoon Road – Rockhampton Ridgelands Road) 2 lane at-grade intersections

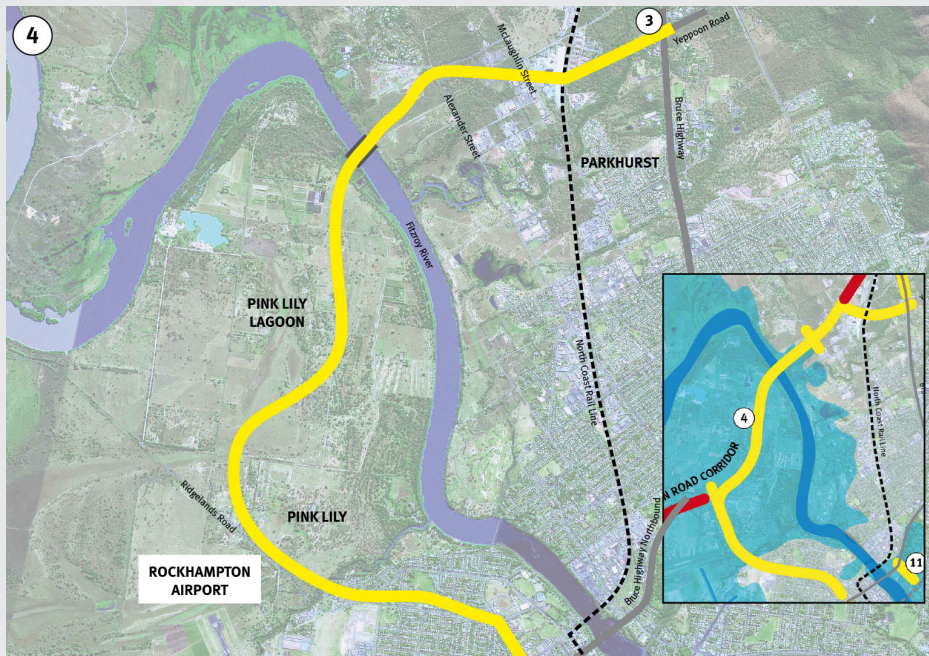


Figure 3-3 Existing Bruce Highway – Burnett Highway to Yeppen Roundabout

It is envisaged that Stage 4 will provide:

- reduced congestion within Rockhampton particularly on the two existing bridges
- new two lane rural road constructed to Q100 flood levels including a major crossing of the Fitzroy River
- upgrades to existing roads to provide a sufficient connection to the existing Bruce Highway
- at-grade intersection at Rockhampton Ridgelands Road, Alexandra Street and McLaughlin Street
- add south bound slip lane bypassing the Yeppen Roundabout.

5. Bruce Highway Urban Capacity Upgrades – Stanley Street to Albert Street (Intersections to be confirmed)



Figure 3-6 Stage 5, Albert Street to Stanley Street

It is envisaged that Stage 5 will provide:

- existing intersection capacity upgrades to reduce congestion through the urban area of South Rockhampton
- while the detail of each intersection treatment is to be confirmed in future planning including consultation, these upgrades could defer the timing of the Western Road Corridor South (Stage 8, the proposed link from Rockhampton Ridgelands Road / Albert Street to the Capricorn Highway).

6. Bruce Highway Lower Dawson Road flood improvements

Further investigations in regard to the feasibility of this work needs to be carried out prior to any formal commitments. Alternative routes via local roads may be an acceptable solution given the low frequency of major floods.

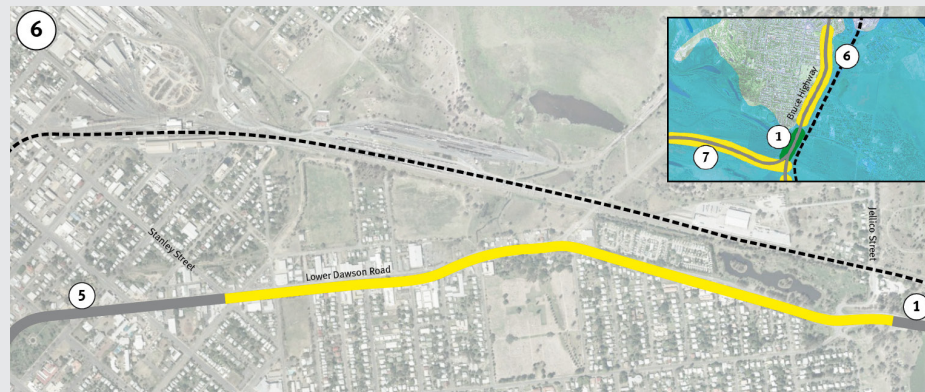


Figure 3-7 Stage 6, Jellico Street to Stanley Street

It is envisaged that, if required Stage 6 will provide:

- two lanes of the existing Bruce Highway above the Q100 flood level
- a Q100 level route for the Bruce Highway that may defer the need to provide high level immunity on the Rockhampton Ring Road.

Access to existing businesses, residents and local roads would need to be addressed.

7. Capricorn Highway Duplication (Yeppen - Gracemere)



Figure 3-8 Stage 7, Gavia-Gracemere Road to Yeppen Roundabout

It is envisaged that Stage 7 will provide:

- low level duplication of the Capricorn Highway between Gavia-Gracemere Road and the Yeppen Roundabout
- capacity for growing traffic volumes between Gracemere and Rockhampton
- no improvement to flood immunity
- a connection between the Rockhampton Ring Road and the Bruce Highway.

8. Rockhampton Ring Road South (Rockhampton Ridglands Road – Capricorn Highway) 2 lane at grade intersections

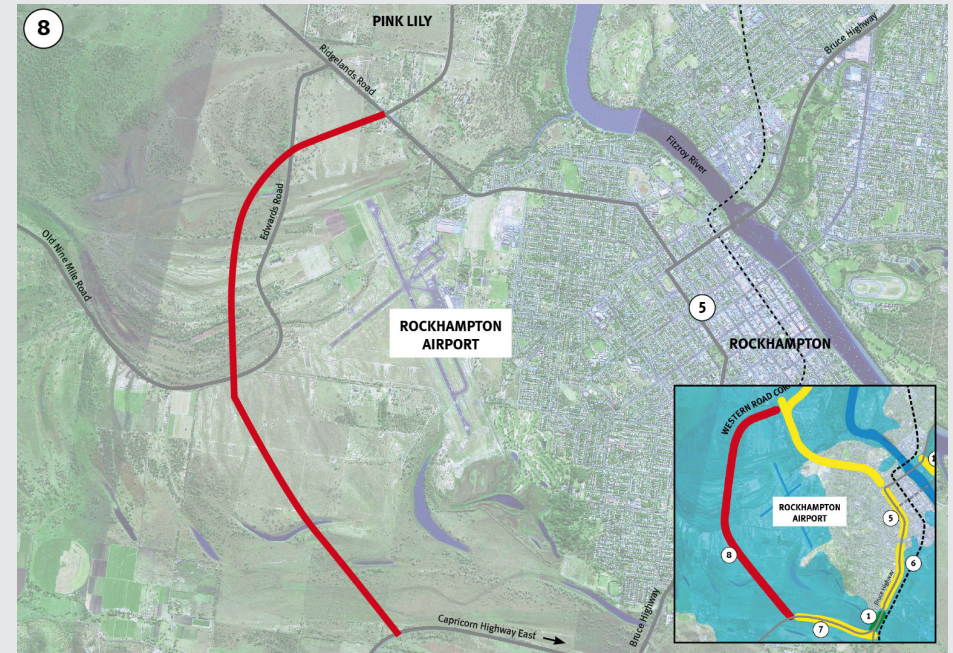


Figure 3-9 Stage 8, Rockhampton Ridglands Road to Capricorn Highway

It is envisaged that Stage 8 will provide:

- 2 lane rural highway from Rockhampton Ridglands Road to the Capricorn Highway possibly initially constructed at a lower than Q100 flood level
- intersection at Capricorn Highway and overpass at Nine Mile Road
- the southern extent of the Rockhampton Ring Road.

9. Bruce Highway Rockhampton Northern Access Upgrade Stage 2 (Boundary Road to Terra Nova Drive)

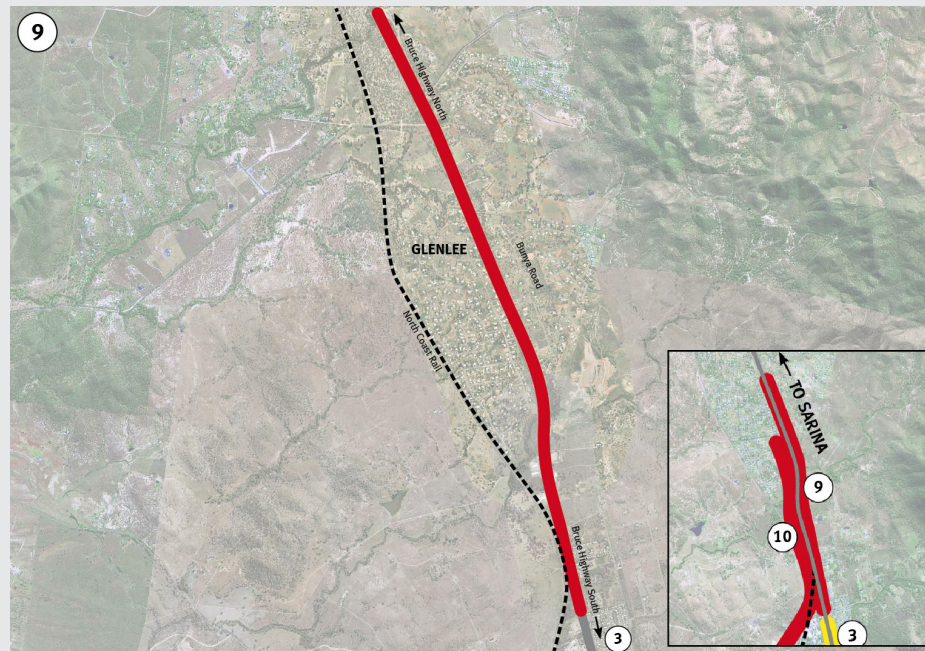


Figure 3-10 Stage 9, Boundary Road to Terra Nova Drive

It is envisaged that Stage 9 will provide:

- 4 km upgrade of the Bruce Highway to four lanes between Boundary Road and Terra Nova Drive, north of Parkhurst
- improved road safety and reduced congestion and travel times on the northern approach to Rockhampton
- potential to defer the need for the northern extension of the Rockhampton Ring Road (Stage 10).

10. Rockhampton Ring Road Northern Extension (Alexandra Street – Bruce Highway)

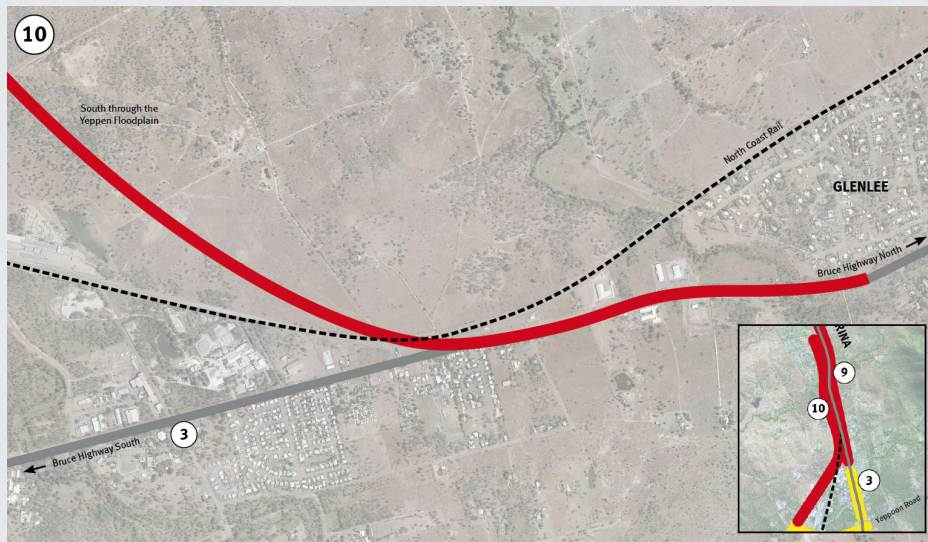


Figure 3-11 Stage 10, Boundary Road to Terra Nova Drive

It is envisaged that Stage 10 will provide:

- the final stage of the Rockhampton Ring Road
- bypass of a number of intersections and accesses

11. New link from Lakes Creek Road to Moores Creek Road



Figure 3-12 Stage 11, Moores Creek Road to Lakes Creek Road

It is envisaged that Stage 11 will provide:

- a connection between Lakes Creek Road and the Neville Hewitt Bridge
- opportunity to ban heavy vehicles from the Fitzroy Bridge
- opportunity to remove cattle trucks from the centre of the CBD.

12. Rockhampton Ring Road Ultimate Development North (Yaamba Road to Rockhampton Ridgелands Road) Duplication and interchanges

It is envisaged that Stage 12 will provide:

- long term construction (beyond 2031) of the ultimate cross section (4 lanes, Q100, grade separated) for the northern part of the Rockhampton Ring Road between Yaamba Road and Rockhampton Ridgелands Road

13. Rockhampton Ring Road Ultimate Development South (Rockhampton Ridgелands Road to Bruce Highway) Duplication and interchanges

It is envisaged that Stage 13 will provide:

- long term construction (beyond 2031) of the ultimate cross section (4 lanes, Q100, grade separated) for the southern part of the Rockhampton Ring Road between Rockhampton Ridgелands Road and the Bruce Highway at the Yeppen Roundabout

3.2 Rockhampton Ring Road Implementation Plan

An indicative staging program for the delivery of the Rockhampton Ring Road is shown below and in Table 3 1. The optimum staging strategy, including the economic impacts and benefits of each stage will need to be investigated and confirmed during future study phases.

Stage	Description	2011- 2016	2016 - 2021	2021 - 2031	Beyond 2031
		Short Term		Medium Term	Long Term
1	Bruce Highway Yeppen Lagoon Upgrade (Yeppen North)	■			
2	Bruce Highway Yeppen Floodplain Upgrade (Yeppen South)		■		
3	Bruce Highway Rockhampton Northern Access Upgrade Stage 1 (Yeppoon Road to Boundary Road)		■		
4	Rockhampton Ring Road North (Yeppoon Road – Rockhampton Ridgелands Road) 2 lane at grade intersections		■		
5	Bruce Highway Urban Capacity Upgrades – Stanley Street to Albert Street (Intersections to be confirmed)		■		
6	Bruce Highway Lower Dawson Road flood improvements		■		
7	Capricorn Highway Duplication (Yeppen - Gracemere)		■		
8	Rockhampton Ring Road South (Rockhampton Ridgелands Road – Capricorn Highway) 2 lane at grade intersections			■	
9	Bruce Highway Rockhampton Northern Access Upgrade Stage 2 (Boundary Road to Terra Nova Drive)			■	
10	Rockhampton Ring Road Northern Extension (Alexandra Street – Bruce Highway)			■	
11	New link from Lakes Creek Road to Moores Creek Road			■	
12	Rockhampton Ring Road Ultimate Development North (Yaamba Road to Rockhampton Ridgелands Road) Duplication and interchanges				■
13	Rockhampton Ring Road Ultimate Development South (Rockhampton Ridgелands Road to Bruce Highway) Duplication and interchanges				■

Table 3-1 Rockhampton Ring Road Implementation Plan

3.2.1 Potential Costs

Estimates have been prepared for the preferred road implementation strategy. The estimates have been based on the following assumptions:

- the estimates have been developed in accordance with the Department of Main Roads Project Cost estimating Manual
- Stage 3 estimate was provided by the Department of Transport and Main Roads
- the projects are delivered by traditional Road Construction Contract (RCC) delivery as a single project.
- costs are in 2011 dollars with no allowance for escalation
- a contingency of 60% has been applied
- the estimates are based on the first two lanes being constructed to an estimated Q100 height (except for Stage 7, which is low level).

Note: Additional costs to the local network upgrades that will be required as a result of the implementation of the Rockhampton Ring Road work has not been included in the above costs.

Stage	Description	Estimate (2011 dollars)	Length	Bridge
1	Bruce Highway Yeppen Lagoon Upgrade (Yeppen North)	\$85M	1km	420m
2	Bruce Highway Yeppen Floodplain Upgrade (Yeppen South)	\$450M-\$550M	3.7km	2.5km
3	Bruce Highway Rockhampton Northern Access Upgrade Stage 1 (Yeppoon Road to Boundary Road)	\$100M-\$150M	0.8km	70m
4	Rockhampton Ring Road North (Yeppoon Road – Rockhampton Ridgeland Road) 2 lane at grade intersections	\$700M-\$850M	8.7km	640m
5	Bruce Highway Urban Capacity Upgrades – Stanley Street to Albert Street (Intersections to be confirmed)	\$35M-\$40M	2km	
6	Bruce Highway Lower Dawson Road flood improvements (if required)	\$35M-\$40M	1.5km	
7	Capricorn Highway Duplication (Yeppen - Gracemere), Low level / existing carriage way height (not to Q100 height)	\$60M-\$100M	2.5km	200m
8	Rockhampton Ring Road South (Rockhampton Ridgeland Road – Capricorn Highway) 2 lane at grade intersections	\$500M-\$650M	8.4km	1.14km
9	Bruce Highway Rockhampton Northern Access Upgrade Stage 2 (Boundary Road to Terra Nova Drive)	\$120M-\$160M	2.4km	
10	Rockhampton Ring Road Northern Extension (Alexandra Street – Bruce Highway)	\$450M-\$550M	4.3km	100m
11	New link from Lakes Creek Road to Moores Creek Road	\$60M-\$100M	1.3km	80m
12	Rockhampton Ring Road Ultimate Development North (Yaamba Road to Rockhampton Ridgeland Road) Duplication and interchanges	Very Long Term		
13	Rockhampton Ring Road Ultimate Development South (Rockhampton Ridgeland Road to Bruce Highway) Duplication and interchanges	Very Long Term		
TOTAL (NO ESCALATION i.e. 2011 dollars)		\$2.6B-\$3.2B	36.6km	5.15km

Table 3-1 Rockhampton Ring Road Implementation Plan

3.3 Rockhampton Rail Bypass Stages

1. Parkhurst to Gracemere (connection to Blackwater Line)

It is envisaged that Stage 1 will provide:

- single track rail line at Q100 flood levels
- bridges and embankments to match the Rockhampton Ring Road
- a bypass of the urban area of Rockhampton
- connection to the Blackwater line (assumed already duplicated) near Gracemere
- connections to existing rail infrastructure such as the station, maintenance yard, intermodal terminals and ballast quarry
- ability to decommission the line in Denison Street and across the Alexandra Bridge

2. Dedicated North Coast Line track adjacent to Blackwater Line

It is envisaged that Stage 2 will provide:

- dedicated freight and passenger line adjacent to the Blackwater Line
- long term capacity to accommodate growth in coal haulage

3. Ultimate Development Parkhurst to Rocklands (Duplication)

It is envisaged that Stage 3 will provide:

- long term ultimate development - 2 tracks at Q100 flood heights

Staging of the Rockhampton Rail Bypass could also include potential relocation of associated infrastructure such as:

- Rockhampton Station
- maintenance yard
- intermodal terminals.

It was not in the scope of this study to investigate the feasibility of relocation of associated infrastructure.

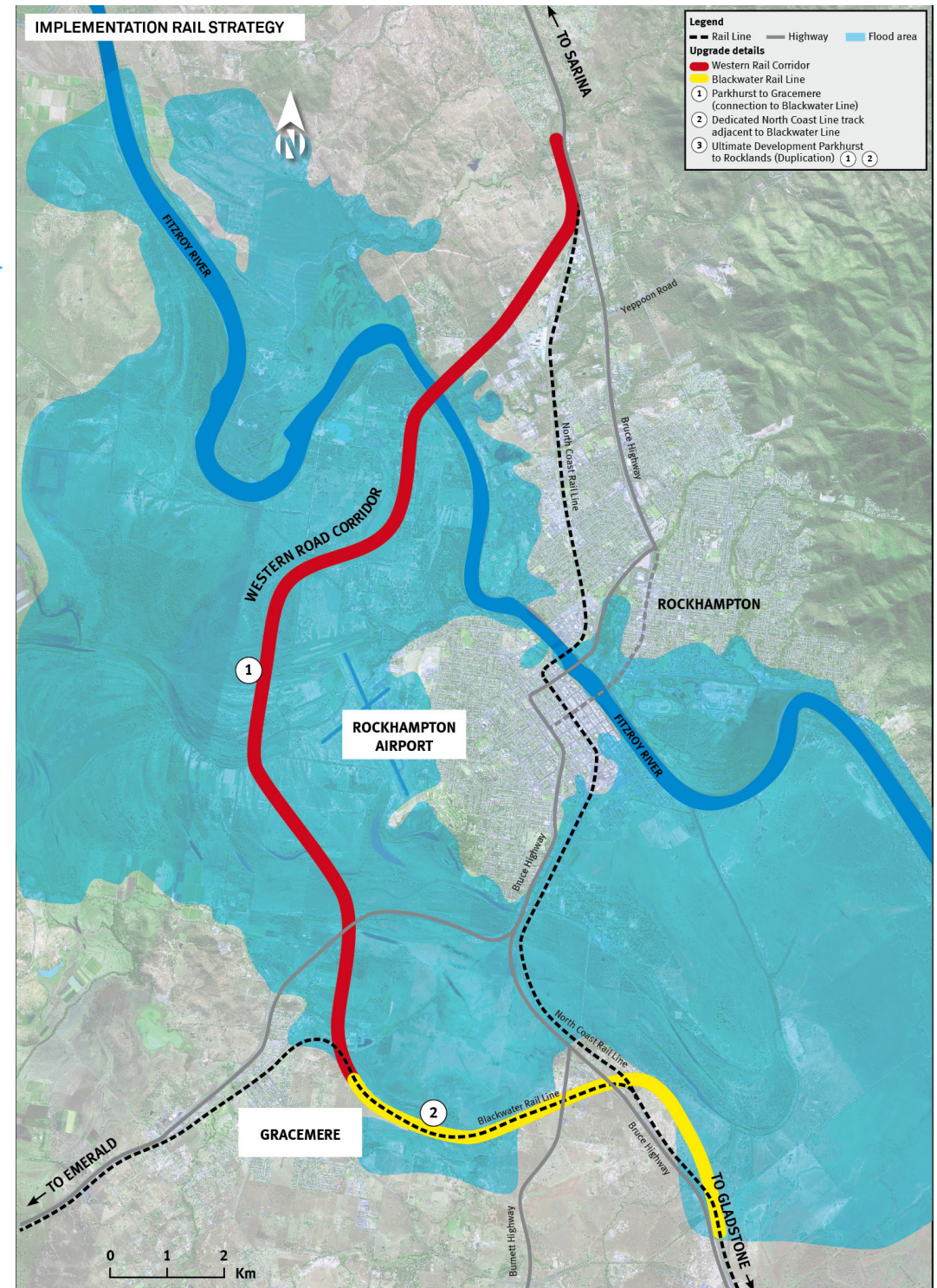


Figure 3-13 Rockhampton Rail Bypass Stages

3.3.1 Rockhampton Rail Bypass Implementation Plan

Stage	Description	Stage 1	Stage 2	Stage 3
1	Parkhurst to Gracemere (connection to Blackwater Line)			
2	Dedicated North Coast Line track adjacent to Blackwater Line			
3	Ultimate Development Parkhurst to Rocklands (Duplication)			

Table 3-3 Rockhampton Rail Bypass Implementation Plan

3.3.2 Potential Costs

Estimates have been prepared for the preferred road implementation strategy. The estimates have been based on the following assumptions:

- the estimates have been developed in accordance with the Department of Main Roads Project Cost estimating Manual
- the projects are delivered by traditional Road Construction Contract (RCC) delivery as a single project
- costs are in 2011 dollars with no allowance for escalation
- a contingency of 60% has been applied
- the estimates are based on the first two lanes being constructed to an estimated Q100 height.

Stage	Description	Estimate (2011 dollars)	Length	Bridge
1	Parkhurst to Gracemere (connection to Blackwater Line)	\$600M - \$700M	9.4 km	4.9 km
2	Dedicated North Coast Line track adjacent to Blackwater Line	Very Long Term		
3	Ultimate Development Parkhurst to Rocklands (Duplication)	Very Long Term		
TOTAL (NO ESCALATION i.e. 2011 dollars)		\$600M - \$700M	9.4 km	4.9 km

Table 3-4 Rockhampton Rail Bypass Implementation Plan – Potential Costs

4.0 FURTHER RECOMMENDATIONS

4.1 Rockhampton Transport Model development

4.1.1 Rockhampton SATURN Model

The Rockhampton SATURN model provided for the study, while being suitable for comparing alternative corridor options, was limited in its ability to accurately assess the re-assignment of traffic within the network due to congestion. This was because the model has no road hierarchy coded in the network.

This means that the highways, collector roads and even local streets have all been given the same capacity and one which is relatively high for an urban street network.

The model therefore has a limited ability to accurately reflect delays and potentially the route choice associated with a congested network. The implication of this limitation is that solutions to congestion will potentially demonstrate lower benefits than those which could be ultimately achievable. To update this model with appropriate capacities and road hierarchy will be a significant task and will require a re-validation to include journey time and queue observations.

It is recommended that the model be updated in this way to enable a detailed evaluation of the strategy and to more accurately define the benefits and staging of the Rockhampton Ring Road.

4.2 Rockhampton Ring Road Levee Land Use Investigation

4.2.1 Potential Land Use Benefits

Throughout the study anecdotal reports of the benefits of providing flood improvements to the airport and areas at the northern end of the airport have been received from the community and other stakeholders. These benefits include not only the protection of the airport during floods but also the opportunity to provide additional Q100 immune land for industrial or other development. The Western Road and Rail infrastructure potentially provide the opportunity to utilise embankment in the Pink Lily area to act as a levee and divert flood waters from the airport and areas to the north of the runway. For example, levee investigations have been carried out to reduce the flood impacts on the entire runway at the Rockhampton Airport.

4.2.2 Potential Flooding Impacts

Providing this additional developable land would result in higher levels of afflux in the upper areas of the floodplain. The study has modelled two potential levee scenarios that show varying levels of additional afflux to the north of the corridor resulting in greater than existing flood impacts on a number of properties.

It is recommended that a land use study be carried out to determine the benefit or otherwise of the additional land for development that the levee option provides. This study would need to determine the land use planning and economic benefit of the land which would be made available compared to the cost of providing for it (flooding impacts).

4.3 Rail Infrastructure and Operations Investigation

4.3.1 Intermodal Hub Investigation

The combined western corridor would provide the opportunity to consider a new location for an intermodal terminal either on the new corridor or to the south of the connection to the existing network. The key requirements for intermodal terminals are:

1. efficiency: The terminal needs to be located along the corridor in an appropriate location to support an efficient supply chain
2. hours of operation: Restriction on hours of operation due to neighbouring land uses adversely affects the flexibility of the terminal to match the arrival and departure times of containers and trains
3. connection to Strategic Road Network: A terminal within the western corridor or south of the interface with the existing network would have strong connections to the road network heading north, south, and west of Rockhampton, as well as connection to major arterial roads within Rockhampton
4. size of terminal: appropriate for train and truck size, as well as size for container stacking.

While it was not the objective of this strategy to force current operations and activities to move from their current location, the benefits that the Western Rail Corridor could provide for a future intermodal facility should be considered as part of long-term planning for freight. Other locations that should be considered would include south of the connection to the existing North Coast Line. However, the benefits of being able to provide a more optimal intermodal terminal on the western corridor should be further investigated.

4.3.2 Workshop Operation and Location Investigation

The western corridor could provide opportunities for further enhancement of operations at the rail workshops adjacent to the railway station, as the holding capacity for wagons and locomotives waiting to be maintained or having completed their maintenance could be increased. The western corridor could also make available currently undeveloped land adjacent to the new rail corridor for augmenting the capacity of the existing facility with additional facilities. Although the workshop is owned by QR National, further investigation of opportunities should be considered to capture the benefits of the western corridor.

4.3.3 Passenger Station Operation and Location Investigation

Existing passenger train operations would be maintained at the existing railway station in South Rockhampton as part of the western corridor. An opportunity was identified on the western corridor close to the northern connection for a potential future station if further investigations identified this to be a more suitable long-term location. It is recommended that an investigation of the origin or destination of passengers who catch rail services is undertaken to identify the most suitable location for a station.

4.3.4 Denison St/Alexandra Bridge Future Use Investigation

The removal of heavy rail from Denison Street and the Alexandra Bridge could provide an opportunity to transform the existing corridor into a community asset. Throughout the project it was identified by many stakeholders that the corridor should be retained for local public transport and active transport options.

Alexandra Bridge is heritage listed and is likely to need to be retained in its current form. This would still allow for a new deck to be provided for both public transport and active transport across the Fitzroy River. Further investigations would be required to identify the most suitable use for the corridor and the Alexandra Bridge when rail operations relocate to the western corridor.

4.3.5 Triggers for the Western Rail Corridor

There are a variety of potential triggers for the development of the western corridor for rail that are not able to be modelled. Most of them are related to the operation of the whole North Coast Line corridor and cannot be considered in isolation. The rail related triggers could include:

- demand for additional capacity of the rail network through more trains or longer trains. It is not just the pure capacity of the network through Rockhampton that would be the driver but also the impact that more or longer trains would have on level crossing safety, road network delays, and the community
- increased tonnage limits for trains on the corridor would be a trigger for the new corridor as the Alexandra Bridge has a load limit that restricts the axle load tonnage for trains
- improving journey times for freight along the North Coast Line could also be a trigger for the western corridor as it improves through journey times for freight services
- there are many locations along the existing North Coast Line that do not currently have a suitable level of flood immunity for the robustness of the rail corridor. When the improvement in flood immunity the western corridor provides becomes a high priority when compared with other locations along the network this would trigger the project.

Each of these potential triggers cannot be considered in isolation, as a combination of the triggers will likely drive the development of the western corridor. Further network wide (North Coast Line) investigation is required to clarify these triggers and the likely timing of the western rail corridor.

5.0 ASSUMPTIONS AND LIMITATIONS

The overall objective of the strategy is to identify a long term corridor for the Bruce Highway and North Coast Rail Line at Rockhampton. The road and rail alignments have been designed based on a number of assumptions to ensure that the corridors identified are robust enough to accommodate any variations to design assumptions that may occur during the development of the corridor designs.

5.1 Corridor Extents

The corridors have been designed based on limited ground investigation and with aerial survey. No geotechnical field investigation has been carried out at this stage. There will be opportunities to refine and optimise the corridors with further detailed planning including field investigation and consultation as the projects progress through to design and delivery.

5.2 Accessibility

The scheme design that is documented and costed is based on construction to Q100 flood heights. Assuming that the Yeppen Crossing upgrades (Yeppen North and Yeppen South) are in place, there may be opportunities to provide for lower road heights that will cater for the smaller flood events, particularly for the section south of the Fitzroy River (Stage 8). Any lower level options would need to be assessed for their flood impacts. Any reduction in the target flood event would result in a lowering of grade line and subsequent reduction in required corridor width. Designing for Q100 throughout ensures that the corridor will have sufficient width for all cases.

5.3 Flood Impacts

A number of factors that are beyond the scope of this study to resolve will affect the ultimate design of the infrastructure within the corridor. A major factor is the determination of an acceptable level of flood impacts caused by afflux as a result of the corridor and the desirability of providing for areas of improved flood impacts, for industrial or other developments immediately north of the airport. Resolving this issue is beyond the scope of this strategy, so the approach taken has been to:

- investigate an option with a relatively small length of bridging that provides a high level of improved flood impacts immediately north of the airport and a high level of afflux north and west of the proposed alignment (levee option)
- investigate an option with a longer length of bridging that provides minimal or no level of improved flood impacts immediately north of the airport and a lower level of afflux north and west of the proposed alignment (low afflux option).

For both cases assumptions have been made about the design of the Yeppen Floodplain Upgrade (Yeppen South), as its design has not been determined yet.

The two options represent a “high cost” and a “low cost” scenario, with the low afflux option expected to be more costly than the levee option due to the significantly increased length of bridging. They also represent the two different types of outcomes or opportunities that the corridor provides. For costing and design purposes a third option was developed that was between the high and low cost scenarios. This was developed to provide an indication of the “average” cost of developing the corridor. It also provides a design basis for identifying the extents of the corridor that will accommodate a range of solutions.

5.4 Population Projections

Updated PIFU population projections (May 2011) have been revised higher than the projections used for this study. The revised demographics were not able to be accommodated within the time frames of this study, but it is understood that population projections have been revised up to 7% higher than the study projections. The implication of this increased population projection is a potentially large increase in trips on the network. While this is not expected to change the overall outcomes of the study, it could impact on the timing of its recommendations.

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ROCKHAMPTON RING ROAD

Council Report of 10 November 2020

Meeting Date: 28 October 2022

Attachment No: 2

ORDINARY MEETING

10 NOVEMBER 2020

11.5 ROCKHAMPTON RING ROAD BENEFITS AND IMPACTS REPORT

File No: 13672
Attachments: Nil
Authorising Officer: Martin Crow - Acting General Manager Regional Services
Author: Stuart Harvey - Coordinator Infrastructure Planning

SUMMARY

Council has called for a report on the benefits and impacts of the Rockhampton Ring Road. This following report provides Council officers understanding of probable benefits and impacts for this proposed project.

OFFICER'S RECOMMENDATION

THAT the Rockhampton Ring Road Benefits and Impacts report be received.

COMMENTARY

Council have requested a report be presented to Council that details the benefits and impacts (road network, land use planning, community, etc) by the Rockhampton Ring Road project.

The Rockhampton Ring Road (RRR) project is a \$1B road project travelling from the Capricorn Highway in Gracemere, West of Rockhampton, crossing the Fitzroy River and connecting back into the Bruce Highway at the Yeppoon Road intersection. DTMR are proposing to build the road to a 1%AEP (1in100 year) flood immunity through a series of bridges and embankment construction.

The basis of Council's support

The proposed alignment is largely unchanged from the western alignment recommended in the 2011 Fitzroy River Floodplain and Road Planning Study. The western alignment was supported as Council's preferred alignment primarily on the following bases—

- Linked and supported development of Rockhampton's two primary residential and employment growth areas at Gracemere and Parkhurst.

Rockhampton's mid to long term growth is constrained by the Fitzroy River floodplain and Bereserker Ranges. As a result, future residential growth will be focused on the urban fringes at Parkhurst and Gracemere. The RRR will provide better connectivity between these growth fronts and with employment generating areas in the Gracemere and Parkhurst Industrial Areas. In effect, commuting from Parkhurst to work in Gracemere, and vice versa, becomes more viable and expands employment options for residents.

It is anticipated that improved linkages between the Parkhurst Industrial Area (PIA) and the Capricorn Highway west, including to the Bowen and Galilee Basins, will increase its attractiveness for industrial investment and development. Infill development in the PIA will improve the efficiency of infrastructure services and support upgrades of existing infrastructure to more contemporary standards.

- Linked Gracemere and Parkhurst more directly with the airport, city centre and community infrastructure such as the base hospital.

In addition to linking Rockhampton growth fronts with each other, the RRR is also anticipated to improve access of those areas to key facilities and infrastructure in south Rockhampton (airport, hospital, showgrounds, schools and CBD).

ORDINARY MEETING

10 NOVEMBER 2020

Improving accessibility of the Rockhampton Airport from the north, west, south and east supports its function of providing regular passenger transport (RPT) services to a regional catchment and positions it well for current and future expansion of airfreight services.

The RRR is also anticipated to support residential development in the north-west Parkhurst area by providing an alternate road connection and capacity into and from that area and take some growth pressure off the Alexandra Street road corridor.

The RRR will also provide an alternative access from Gracemere, Alton Downs and Ridgeland (and south/west Rockhampton) to facilities in North Rockhampton including the CQ University and Department of Agriculture and Fisheries – as well as to Yeppoon and the Capricorn Coast.

- Reduced congestion on the existing Neville Hewitt and Fitzroy River Bridges, at the Yeppen Roundabout and along Yaamba Road and Alexandra Street.

Congestion generally reduces transport efficiency and impedes economic activity. It can reduce amenity for both road users and land uses that adjoin overly congested routes. Passing traffic and related “exposure” is however also a positive attribute for many commercial businesses. As a result there are likely to be both positive and negative implications of traffic redistribution associated with the RRR, particularly where that redistribution is significant. By way of example, a modest increase in traffic through the Wandal commercial centre may have positive impacts on businesses in that area.

The road corridors anticipated to benefit most from the RRR will be Norman Road, Yaamba Road (State controlled) and Alexandra Street.

- Redistributed heavy vehicles and through traffic away from the Rockhampton city centre.

While one of the advantages of the RRR is to redistribute heavy vehicles away from the city centre that success of this will be related to whether the redistributed traffic is local heavy vehicle movements or long-haul heavy vehicle movements. In terms of long-haul heavy vehicle movements, Rockhampton is a key logistics location relative to Brisbane and to management of driver fatigue. Long-haul freight travelling from SEQ through and beyond Rockhampton may still use Rockhampton as a critical stop. Gaining a better understanding of heavy vehicle movements through and within our region would be beneficial for future infrastructure planning.

- Offered opportunities to improve the flood immunity of the airport, as critical infrastructure, by combining road embankment and flood levee options.
- Provided improved access for the Australian Defence Force, including access from Western Street to Shoalwater Bay and further north.

The Rockhampton Airport and nearby Western Street Barracks are key access and staging points for the Australian Defence Forces and others (allied forces in joint exercises and Singapore Armed Forces exercises) conducting military training. The RRR will provide improved access to these facilities and may ultimately support increased defence related activities.

- Significantly reduced the travel time through Rockhampton.

There is no doubt that a project of the scale of the RRR will bring significant economic benefits and employment through its construction phase. It should also bring ongoing economic benefits through reduced congestion and travel times both within and through Rockhampton.

Being largely a greenfield alignment, disruption to existing traffic and businesses during construction will be limited relative to on-line projects such as the Rockhampton Northern Access Upgrade.

Land Use implications

ORDINARY MEETING

10 NOVEMBER 2020

The RRR has been included as strategic infrastructure in Council's Planning Scheme Strategic Framework since 2015.

While explored during the FRRFPS, it is unlikely the RRR will precipitate any changes to the land use patterns where it traverses the Fitzroy River floodplain due to the obvious flooding constraints and existing development control mechanisms in the Rockhampton Region Planning Scheme.

Land use changes may however occur in areas adjacent to the RRR off the floodplain. These areas include in Parkhurst, and particular in supporting infill development in the PIA as noted earlier (and possibly flowing on to the nearby Kawana industrial area). The expected construction of Rookwood Weir will generate some intensification of rural land uses along the Fitzroy River and may then lead to demand for logistics and industry services located in the PIA and GIA. Improved access between these agricultural industries and industrial areas would be beneficial.

Other off-network land use implications (that also need to be considered in the context of existing planning controls) potentially include:

- Commercial development in and around the Rockhampton Airport Precinct
- Supporting residential development and growth in Parkhurst and Gracemere
- Supporting development in Gracemere and the GIA as noted earlier
- Demand for new "service centres" on Yaamba Road north of Yeppoon Road connection of the RRR

While the majority of the corridor will not impact on the noise amenity of a significant number of properties (largely traverses rural and industrial land uses), noise management at Parkhurst may be a consideration (particularly Riverside Estate).

A number of business owners including accommodation providers and service stations located along existing highway have expressed concerns about the RRR being detrimental to their businesses. However in terms of travel time for alternative regional centre stops, Mackay is a further 330 km or 3 1/2 hours north, Emerald a further 270 km or 3 hours west and Gladstone a further 110km or 1 hour south and requires a deviation from the highway. As a result, it is arguable that the RRR will not have an appreciable impact on travel stop or accommodation decision of travelers.

Other Considerations

The RRR potentially provides improved access for emergency services, particularly during peak times when the Fitzroy and Neville Hewitt Bridges are congested or impeded due to traffic accidents. The RRR may also be beneficial for future public transport routes in and around Rockhampton and the corridor (and new bridge) may provide a services corridor for future infrastructure eg potential trunk water main from GWTP to Gracemere.

Transport / Traffic Impact Considerations

The bases for Council's support of the western ring road alignment remain largely intact however further investigations by DTMR have recommended against combining the road embankment and airport flood levee options due to significant afflux impacts. Details on the preliminary design and arrangements of road sections and intersections have been developed by DTMR as part of the business case development however consultation with Council and other stakeholders has been limited.

Council had requested the technical documentation associated with the Business Case for the Ring Road project and were provided with some of the key technical reports. One of these was the Traffic Modelling Report produced as part of the Business Case for the project. Officers have reviewed the report and have some key comments / concerns around the report content.

As a general comment, the report lacks detail with regards to intersection performance (specifically intersections with Council roads) and the impacts to the Council road network as

ORDINARY MEETING

10 NOVEMBER 2020

a result of the project. The Traffic modelling report serves as a transport economics report, quantifying the economic benefits of the projects, rather than detailing the impacts to the road network and wider transport implications for the Rockhampton region. With the current level of information provided by DTMR, Council officers are unable to definitively comment on the impacts of the Ring Road on the Council road network.

Intuitively and supported by previous and current network level modelling, the overall road network will perform better with the ring road in place than without it. Changes, both positive and negative, are possible in the Wandal Road, Lion Creek Road, Graeme Acton Way, Western Street, Jardine Street, Hunter Street and North Street corridors on the southside and Norman Road, Moores Creek Road, Alexandra Street, Farm Street, Hollingsworth Street, Haynes Street and Glenmore Road corridors on the northside. As the business case has now been accepted by other levels of Government and detailed design has commenced, more detailed modelling of the impacts to the local road network is required.

The following are some key areas where Council officers require further information to inform adequate assessment of this project's impacts. Please note that this is not an exhaustive list of all of Council officer's comments.

1. DTMR and Council have shared transport models with a strategic level model (RLSTM) and at a more specific network level model (IRMM). These models have been utilized for the RRR project however there is disparity between the volumes of traffic predicted on the ring road in each of the models. DTMR has used one model to reflect the benefits of the project (RLSTM reflecting high volumes on the Ring Road) and the other to reflect the impacts (IRMM reflecting lower volumes on the Ring Road). **Council officers would like some explanation on how this disparity has occurred and confirmation of which model DTMR are using for this project going forward. A consistent model is required to be used across the business case and detailed design process.**

2. The RLSTM Model and IRMM Model provided to Council do not reflect the intersection configurations shown in the business case drawings. Additional intersections, changes from interchanges to signalised intersections and roundabouts are not reflected in any of the traffic modelling. These are likely to have impacts on both the efficiency of the ring road and Council's road network. **Council Officers would like DTMR to model the proposed intersection arrangements as shown in the business case drawings and update their traffic report accordingly.**

3. The RLSTM model predicts 8000 vehicles per day entering and exiting onto Lion Creek Road / Wandal Road in 2024 RRR developed case scenario and 9800 vehicles per day in the 2044 RRR Developed case scenario. There is no discussion around where this traffic goes and what impacts that has on the existing network. Ridgeland Road at Lion Creek currently has 3012vpd and Wandal Road has 5017vpd. There is not sufficient detail to determine what the daily increase on these roads is as a result of the Ring Road project. In some locations this may cause traffic volumes to exceed the road capacity. Some intersections within proximity to the Ring Road are also approaching failure in the base case scenarios. With traffic from the ring road re-routing vehicle paths, re-routed traffic may approach the minor legs of these intersections and this may have a significant impact on intersection performance. **Council officers would like to see more detail on the proposed increase in traffic on the connections (and surrounding local road network) to the Ring Road. Where there is an impact, Council request DTMR's proposed plans to mitigate these impacts.**

4. DTMR have not provided any SIDRA analysis of individual intersections along the Ring Road in the Traffic Modelling Report. As a result, Council are not certain on what the impacts to Council roads are; where Local Roads intersect the State Controlled network. There is a risk that the level of service afforded to the Local Government legs of the intersection are below Council's desired standards of service. **Council officers would like the individual SIDRA analysis for the intersections along the Ring Road to understand the level of service on the Local Road legs of the intersections.**

ORDINARY MEETING

10 NOVEMBER 2020

5. Council officers are also not convinced that the proposed at-grade intersection at Alexandra Street is the most appropriate intersection configuration. Given the significant grade changes, heavy vehicle movements and intent for the ring road to be a continuous free flowing road; it appears to be inconsistent with the objectives of the project. There are concerns that this at-grade intersection will introduce significant delay to the ring road, and cause significant acceleration and deceleration of heavy vehicles on the approach and departure of this intersection. Not only will this have an impact on heavy vehicle productivity, it has the potential to have significant amenity and noise impacts on the surrounding residential areas. This intersection will provide direct access to the Parkhurst industrial estate and it is anticipated that it will attract route changes for a significant number of heavy vehicles. **Council have not been provided with enough information to understand what impacts the Alexandra Street at-grade intersection will have, as opposed to the originally proposed grade separated interchange.**

6. Council Officers are concerned about the proposed access arrangements for the Dreamtime Cultural Centre. Although there has been some discussion with Council Officers around the impacts to the operations on the property and how access may be impacted, a satisfactory arrangement has not been achieved to date. The business case drawings appear to redirect the access up to Nuttall Street (noting that Nuttall Street isn't a declared road). The drawings do not depict a connection to the Nuttall Street easement nor include any analysis of this on the performance of the Nuttall Street / College Road / Bruce Highway intersection. Council Officers consider this property to be negatively impacted by the proposed access arrangements in the business case. **Council Officers would like more information on the analysis and decisions that led to the proposed access arrangements for the Dreamtime Centre and require further discussion with DTMR on maintaining the same level of access to this facility as pre-Ring Road.**

7. The Traffic Modelling report does not mention or refer to any of the Heavy Vehicle routes in Rockhampton or Gracemere and how these might be changed by this project. Heavy vehicle routing is likely to change upon completion of this project and Council are unsure of how this will change travel behavior. **Council Officers would like to know DTMR's intentions with Heavy Vehicle Routes and changes to existing arrangements.**

8. The Traffic Modelling report contains modelling for one set of assumptions with regards to traffic flow and behavior. Traffic patterns and behavior can be sensitive to changes in the model and in the road network. There has been no sensitivity testing of the proposed alignment in terms of changes to signal times, changes to network preference and impedance on specific roads in the network. **Council officers request sensitivity testing be undertaken on key variables in the model to understand the impact of altering these variables on the wider road network.**

9. The traffic modelling report includes investigation of both with and without SRFL flood scenarios on highway and local vehicle traffic. Although some benefits are evident in having more connections into the City and to travel to and from the north, the scenarios modelled raise some concerns with officers about redirection of traffic. The scenarios provide little information on how the diversions will operate. In the absence of the SRFL and based on the projected traffic volumes in the report (26,000 vpd), Council Officers do not see the continued use of Upper Dawson Road, as an alternative to a flooded Lower Dawson and Gladstone Road, as acceptable. **Council Officers would like further information and discussion with DTMR on their proposed plans with regards to flood diversions.**

The aforementioned issues are brought before Council to inform them of the traffic related gaps in the planning work that has been completed by DTMR as a part of the Ring Road Project. As mentioned before, Council Officers currently do not have sufficient information in order to quantify the traffic impacts, benefits or disadvantages of this project.

BACKGROUND

The proposed Rockhampton Ring road alignment was an outcome of the Fitzroy River Floodplain and Road Planning Study (FRF&RPS) that commenced in November 2009 and concluded in December 2011. The project was delivered by the Department of Transport

ORDINARY MEETING**10 NOVEMBER 2020**

and Main Roads and was funded by the Australian Government (\$5 million). The study investigated several different road alignments for a future state controlled highway however a western alignment was the recommended option. This was also Councils preferred alignment.

DTMR undertook a \$65 million project to undertake the planning for the Rockhampton Ring Road in 2019-20. Following the Queensland Government Treasury Framework, the business case for the road construction project submitted to the Australian Government for approval and the project has progressed to the detailed design phase. Jacobs SMEC Design Joint Venture have been appointed to deliver the detailed design.

PREVIOUS DECISIONS

On 22 February 2011 Council resolved to reaffirm its preference for a western alignment of the Bruce Highway as identified in the 2008 Rockhampton Traffic Study.

On 11 December 2018 Council resolved to support the proposed rail and road corridor declaration, subject to a clear delineation of an off ramp at the Airport and other critical transport links. Council also resolved to request that the Department of Transport and Main Roads provide a confidential briefing to Council on the Rockhampton Ring Road.

On 27 October 2020 Council resolved to request a report be presented that details the benefits and impacts (road network, land use planning, community, etc) by the Rockhampton Ring Road project to the next Council meeting.

BUDGET IMPLICATIONS

The impacts of the Rockhampton Ring Road project may bring forward intersection or road upgrades on the Local Government road network. Some upgrade projects, particularly along Alexandra Street may be brought forward as a result of this project.

RISK ASSESSMENT

There is a risk that if Council are not involved in the planning process shortly, that our opportunity to provide meaningful input to the project will be missed. Generally once a project has approved funding and enters detailed design stage, the ability to make large changes (for example from an at-grade intersection to a grade separated overpass) is significantly limited.

CORPORATE/OPERATIONAL PLAN

3.1.1 Consult on, advocate, plan, deliver and maintain a range of safe urban and rural public infrastructure appropriate for the Region's needs, both present and into the future.

CONCLUSION

This report highlights Council officer's comments and concerns with the current information that has been provided to Council regarding the Rockhampton Ring Road project. These comments are provided to Council for their consideration and to provide context for future discussions between Council and DTMR on this project.

6 CLOSURE OF MEETING