RAIL, TRAM AND BUS UNION

(QLD BRANCH)

Submission to the Cross River Rail Request for Project Change

February 2017

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Introduction

The Australian Rail, Tram and Bus Industry Union (RTBU) acknowledge the importance of the Cross River Rail (CRR) project.

The RTBU welcomes any new and appropriate investment in rail infrastructure in SEQ as it is recognised that current public transport infrastructure is not able to cater for anticipated population growth in SEQ.

For this reason, RTBU was a strong supporter of the original Cross River Rail (CRR) 2011/2012 reference case project proceeding.

The RTBU is a federally registered union of employees with a membership of 35,000 of which approximately 5,000 are in South-East Queensland. The RTBU has members employed in the provision of:

- Passenger bus & rail
- Freight rail
- Rail services, Infrastructure and maintenance

RTBU members perform a range of functions including operations, maintenance and administration. As the representative union of employees in passenger and freight rail transport, the RTBU maintains a vital interest in promoting the social and economic importance of rail infrastructure to the public.

In particular, RTBU members and officials have consistently contributed to debate on matters such as urban planning, efficient passenger and freight transit, energy use, reducing greenhouse gas emissions and social justice.

This submission is part of an important and ongoing community discussion about the many dimensions of urban passenger rail and rail freight transport.

The RTBU firmly believes that the community and economic impacts of – effective and efficient transport networks; safe and viable transport services; and environmentally sustainable transport infrastructure – need to be comprehensively covered by the 2017 CRR Request for Project Change (RPC).

This submission will identify a number of apparent weaknesses in the 2017 CRR Request for Project Change.

In light of the RTBU's unique understanding of rail industry operational and technical issues, we would welcome the opportunity to provide further input to the project as it proceeds.

The RTBU would also be grateful for the opportunity to be involved with any formal advisory bodies that may provide ongoing advice on planning, implementation, operational and/or technical issues in the future concerning the 2017 CRR Project.

For further information about any matter contained in this submission, please do not hesitate to contact me on (07) 3839 4988 or Email owen.doogan@rtbu.com.au.

Yours sincerely

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QUEENSLAND STATE SERETARY

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EXECUTIVE SUMMARY

The RTBU believes that CRR is a transformational project for SEQ. It is vital, however, that the project is not constrained by short-term considerations that will undermine its long-term benefits and viability, and leave future generations short-changed. CRR is a project of national significance for both passenger and freight.

To that effect, the RTBU makes two strong recommendations:

1. **The RTBU recommends the Coordinator General undertake an independent assessment of the operational capacity and longevity of the Change Project, compared to the original CRR reference project.**
2. **The RTBU and the Queensland Government should jointly lobby all major political parties at the Federal Level to obtain Federal funding for the original Reference Project, to ensure the project delivers the best result for both the Queensland and national economies.**

INTRODUCTION

The RTBU welcomes investment in rail infrastructure in South East Queensland. Investment in new and upgraded infrastructure is desperately needed to cater for projected population growth in SEQ over the coming decades.

For this reason, RTBU was a strong supporter of the original 2011/2012 Cross River Rail (CRR) reference project proceeding. The original CRR project was the result of a lengthy, robust and detailed examination. It was also subject to extensive community consultation, and built on studies such as the earlier Inner City Rail Capacity Study (ICRCS) to determine the best rail transport outcomes to cater for for future passenger and rail freight demand in SEQ. Accordingly, the original 2012 reference case CRR was ranked number one of projects ready to proceed by Infrastructure Australia.

This submission draws on much of our previous submissions to the RTBU's previous submissions on the earlier versions of Cross River Rail (CRR):

- The Bus and Train (BaT) Tunnel Project Reference Design (April 2014)
- The Supplementary EIS for Cross River Rail (CRR) August 2012
- The EIS for CRR (October 2011)

The RTBU notes that the proposed Changed Project alignment is significantly shorter and avoids approximately 5km of surface works and station upgrades south of Yeerongpilly and 3.2km of tunnel between Yeerongpilly and Dutton Park.

Furthermore, the 2017 CRR Project (with its project changes most notably a shorter tunnel for the southern corridor) Change Documents provide little details as to the operational strategy. The revised CRR project only provides a basic engineering concept alignment and minimal information about the transport outcomes/objectives for what is ultimately a rail transport project. There is only reference to one rail service plan (2026 AM peak 1hr). As such the 2017 CRR revised Project is absent of important information on throughput capacity or frequency of services or longer-term performance characteristics and capability.

The RTBU believes that the original CRR proposal is significantly superior to the revised, shorter version. Indeed, we believe that the current proposal will not deliver the long-term capacity increase that is needed to future-proof the SEQ transport network.

The RTBU would also suggest there are several risks for the 2017 CRR Project arising from the proposal to truncate the tunnel length on the southern corridor at Dutton Park rather than the longer tunnel to Yeerongpilly as was proposed with the CRR reference project in 2011/2012. The most notable being the constructability aspects and future capacity of the corridor from Dutton Park to Yeerongpilly.

CRR must be considered a project of national significance. Not only will it underpin the future expansion of passenger rail in SEQ, it can free up space on surface corridors for freight into and out of the Port of Brisbane. The projects importance to freight will be even more significant with the delivery of the Federal Government's signature infrastructure project, Inland Rail.

The truncated version of CRR, however, will create a passenger and freight bottleneck between Dutton Park and Yeerongpilly, undermining the huge investment required to deliver a more efficient rail link between Melbourne and Brisbane. For this reason, the RTBU believes that the Federal Government must be involved in CRR as a funding partner, and must contribute financially to ensure the original, longer version of CRR is delivered.

OPERATIONAL STRATEGY

The conventional approach to transport infrastructure projects, particularly rail, is to assess projected demand first, and then determine the type of service levels required to meet that demand. The service levels are generally defined in a Concept of Operation Plan, for various time periods (eg 5-year increments) over the life of the infrastructure asset. Having established demand and service requirements, the required infrastructure to achieve these outcomes is determined. Following on from this other enabling resources are defined to meet the planned service levels. In the case of rail, this includes a resource management plan to meet the service plans - eg, train crew, rollingstock, stabling and maintenance etc.

The RTBU is concerned that, in this case, the CRR Concept of Operations and the related service plan over several years and the 30-year evaluation period have not been provided prior to the decision on an infrastructure solution. This seems to contradict the logical approach of defining the infrastructure solution/requirements to meet the service plans. In other words, we are concerned that the cart has effectively been put before the horse. The absence of a Concept of Operation over the 30-Year evaluation period is an obvious deficiency that should be provided so stakeholders can be assured that the project is appropriately future-proofed. The Coordinator General should insist on a Concept of Operation over the 30-year evaluation period before a project Request for Change is endorsed.

The main area of challenge arising from the decision to move away from the reference project long tunnel to Yeerongpilly, and to have the short southern tunnel surfacing at Dutton Park, will be the post-construction capacity for both passenger and freight services from Dutton Park to Salisbury (particularly from Yeerongpilly to Dutton Park).

This potentially imposes inherent constraints on operations that ultimately will be an issue for QR as the above rail passenger operator and the below rail network manager in the future.

Any capacity limitation between Dutton Park to Salisbury is of concern to the RTBU. Given that passenger priority legislation may displace freight services, there is clear potential for rail freight capacity limitations and reliability risks to have a negative impact on the commercial viability of above rail operators attempting to reach the Port of Brisbane.

PROJECT CONSTRUCTABILITY CHALLENGES

Under the revised Cross River Rail Request for Project Change (RPC), the southern portal and surface works are at a critical location on the network. This is an intensely-used section of the network for both passenger and freight services. The construction in the Park Road - Dutton Park area will prove very challenging, with the tunnel and dive structure required to cross under seven operational tracks whose alignments are constrained by a number of crossovers in a corridor that itself is spatially constrained. The cost of construction will be high due to this complexity.

There are no details in the RPC regarding the construction, staging and scheduling for construction at this site. This information is important for understanding the required track closures programme and its impact on both passenger and freight customers. It would be expected that this type of information would be required by the Coordinator General to undertake an assessment of the environmental impacts on the community during the construction phase, including of noise, vibration, dust and impact on traffic and rail users of a proposed closure program. Moreover, without such important details many stakeholders may not be aware of any adverse outcomes arising from the project change, given the short period of consultation and absence of key information.

PROJECT IMPACTS ON RAIL FREIGHT

Another emerging issue that needs to be considered is the implications of the Federal Government's funding of ARTC to potentially deliver the Melbourne to Brisbane Inland Rail (MBIR). To date, the Federal Government has committed a total of $894 million to the Inland Rail project, although significantly more funding will be required to get the project up and running. We also note that the Inland Rail Business Case in September 2015 indicated it was predicated on a large number of rail freight trains accessing the Port of Brisbane.

The 2017 CRR project makes several assumptions that the Federal Government will fund an alternative dedicated rail freight connection from Acacia Ridge to the Port of Brisbane. However, a read of the MBIR Business Case indicates that such a major investment is not likely until after 2040, or 17 years after CRR project:

> ***5.2.4 Changes to Rail Freight Operations***
>
> *Forecast growth in freight demand, during the first 10 years of operation of the Changed Project, would not be as strong as indicated in the scenarios modelled for the Reference Project. Previous modelling for the Reference Project anticipated the number of freight*

movements on the North Coast Line at opening year was expected to reach 264 movements a week compared to 114 freight movements a week for the revised scenario for the Changed Project. Table 5-8 provides a comparison of the freight demand forecasts for the Reference Project and the Changed Project.

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Table 5-8: Forecast freight demand

The decrease in freight movements reflects the changing demand, particularly a reduction in intermodal trains on the North Coast Line. This may change in the future with the development of Inland Rail.

Rail freight demand is variable due to the influence of a range of external factors. A number of alternatives to meet increasing rail freight demand have been considered. *The Australian Rail Track Corporation (ARTC) has identified possible upgrades to the existing rail corridor extending to the Port of Brisbane that could progressively improve freight capacity. Long-term planning by others has identified a possible rail freight connection in a new corridor to the Port of Brisbane. This would provide for rail freight demand well into the future and free up existing track to meet growth in forecast passenger demand.*

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From these comments, it appears that the revised CRR has given little consideration of the impact or requirements of the other project for the period beyond 2024 - the proposed date of MBIR connecting with Acacia Ridge. Based on the MBIR business case, it is clear there will be a larger number of rail freight trains utilising the existing tracks between Salisbury and Dutton Park for several years, while awaiting the alternative dedicated alternative rail freight corridor to the Port of Brisbane. It seems the forecast of the funding and construction of a dedicated freight connection to the Port of Brisbane is a fundamental underpinning assumption made to avoid responsibility for catering for increase rail freight movement on this key corridor.

If the alternative project connecting Acacia Ridge to the Port of Brisbane does not eventuate, it will have a severe impact on rail freight and all stakeholders dependant on maintaining rail freight capacity. The RTBU strongly supports Inland Rail, and is concerned that unless the CRR project makes adequate allowance for rail freight accessing the Port of Brisbane, it may undermine the effectiveness the Inland Rail project. It is vital that the Coordinator General confirms that these projects are both effective use of public funding and are integrated and coordinated going forward.

PROVISION FOR GROWTH ON THE CORRIDOR SOUTH OF DUTTON PARK

The 2017 CRR Project provides only a basic engineering concept alignment with little detail as to operational strategy. The 2017 CRR Project does not provide important information on throughput capacity or frequency of services or longer-term performance characteristics and capability.

From the limited information contained in the 2017 CRR Project, and our knowledge of the CRR project and the analysis of demand growth and rail network configurations and constraints that underpinned the solution to demand growth and capacity that the original CRR represented, it appears that the 2017 revised Project does not provide anywhere near

the same level of capacity and future proofing that the original CRR provided. It also appears that relying only on the limited surface rail tracks of the existing network, particularly south of Dutton Park, will limit any potential increased inner-city rail capacity.

Unless the revised 2017 CRR Project makes an allowance for a 20-30 year plus capacity solution, this investment in enhancement of rail network capacity will not be a good use of taxpayer's funds.

The community reaction to the impacts of additional surface tracks between Dutton Park and Yeerongpilly, and a desire to avoid this constrained section, resulted in the original CRR tunnel being extended to Yeerongpilly. The reference project also provided increased rail freight capacity from Yeerongpilly to Dutton Park. This change minimised the potentially substantial property and community impacts on the suburbs of Fairfield, Annerley, Yeronga and Yeerongpilly.

The dual tunnel tracks of the revised Project, as indicated in the 2017 CRR Project General Arrangement Diagrams Sheets 1 & 2 will join the existing network at Dutton Park, where there are currently only three tracks to the southern corridor.

This means there will be a convergence of five tracks into three tracks, resulting in competition for available capacity on the existing surface network tracks south of the existing Dutton Park Station. This section of the network is already severely constrained and nearing its capacity.

As a result, a new rail network capacity constraint will develop on the southern corridor that will need to be addressed in the future if the revised Project is to achieve its theoretical capacity. This may take the form of an extension of the tunnel to Yeerongpilly, or further south of Yeerongpilly. Alternatively`, there may be a need future resumptions or resumptions of significant additional corridor width between Dutton Park and Yeerongpilly, or even as far as Salisbury.

PROVISION FOR GROWTH ON CORRIDOR NORTH OF BRISBANE

The 2017 CRR Project also shows no connection to the north to expand capacity in this area. The original CRR forecast showed additional capacity was needed from day one, and also allowed for a northern connection to the future (Trouts Road). *Connecting SEQ 2031* also referred to the North West transport, but this is not indicated in the 2017 CRR Project. Without these connections, the effectiveness of the 2017 CRR Project to service growth from the north of Brisbane will be reduced. It also is not consistent with the Queensland Government's Connecting SEQ 2031 future transport strategy for SEQ.

PROVISION FOR GROWTH IN SERVICES AND STATIONS

While much of the focus of project design has been on track capacity, we believe that insufficient attention has been paid to the issue of node capacity. This is because the ultimate capacity of the project is dependent on the ability of stations to handle large of numbers of people within short periods of time. Or in other words, there is no point building in capacity for a certain number of trains if the stations are not able to handle that amount of foot traffic. Equally, the total operating capacity of the network is effectively

determined by how many people can be funnelled through inner city stations during the morning and evening peaks.

There are essentially two factors which must be addressed to ensure that stations are able to accommodate projected future patronage levels.

Firstly, platforms and tracks need to be configured to allow for the most efficient throughput of trains. This should include provision for two platforms for each line. This enables one train to approach the station while another (in the same direction) is at the station or preparing to depart.

A single track feeding into two platform faces provides greater capacity and reliability than a single line with only a single platform face for passengers to get off and on trains. For example, at Central Station where there are two main lines, the tracks servicing the West-North corridors that feed the single platforms 5 & 6 at Central Station have less capacity than each of the existing two suburban tracks that feed platforms 1,2,3 & 4.

Essentially trains can travel down the train line faster than the speed at which passengers can get off and on trains. As such, an additional platform allows potentially 50% greater throughput. Having additional platforms therefore increases line capacity. For these reasons, and to future proof the infrastructure, provision should be made to allow the main underground (Roma St, Albert St and Woolloongabba) stations to have additional platforms and tracks within 20 years of inception.

Secondly, stations need to be configured to facilitate efficient pedestrian movements, and the quick dispersal of passengers. Passengers need to get in and out of train carriage doors, up and down escalators/stairs and through the ticket barriers as easily as possible. The "vertical capacity" of stations is vital – that is, the capacity of underground stations to move people between street, concourse and platform levels via stairs, escalators and lifts – particularly at "surge" moments when large numbers of people are exiting the station at once.

The RTBU therefore emphases the need for provision of additional platforms as well as high-speed and high-capacity lifts, and multiple entry/exit points to stations, as part of the overall project design. Again, we stress that building in this capacity to the project now will be much cheaper and more practical than trying to "retro-fit" increased capacity to existing tunnels and underground stations in the future.

IMPACT ON SERVICES AND OPERATIONS DURING CONSTRUCTION PHASE

The area of the network between Salisbury and Dutton Park is a shared passenger and freight section on the metropolitan network, and any construction activity has potential adverse implications for both passenger and freight services on this corridor. Currently the dual gauge line from Salisbury to Dutton Park is shared between Gold Coast express services in the peak hours, and in the non-peak is used by freight trains. The lack of track enhancement in this area will no doubt present significant capacity challenges for this single dual gauge track going forward.

Noting this capacity challenge, the RTBU would like to understand how the construction and staging of surface works will impact on existing freight train services that use the existing surface network.

The RTBU would also like to understand how operation of the Project post construction will impact on rail freight reliability and capacity going forward.

The rail freight industry is facing significant challenges maintaining modal share and construction impacts and post construction limitations on operations may have a significant detrimental impact on rail freight operators using this section of the network and their customers.

LONG-TERM CONSEQUENCES

Public transport projects of the scale of CRR need to be considered as long-term investments that deliver returns over decades – not years. A short-term focus on cost containment, while reducing the investment required now, can require future generations to fund expansions of the project at many times current costs. What's more, constraining the project now may require future disruptions on busier networks, or may so constrain the fundamental project boundaries so that logical expansions can never be built.

This is particularly important for tunnel projects where expansion of the tunnel dimensions is not possible, expansions of facilities such as underground stations is almost inconceivable and expansion of the project boundaries at a later time will be difficult, costly and disruptive.

The RTBU also notes that the project economic analysis of the revised project indicates that the original reference project had a BCR 1.42, while and the Change Project has a BCR of 1.41. Furthermore, the Reference Project has a NPV of $2,345m while the Change Project has a NPV of $1,877. These figures suggest the reference project has a better economic benefit and represents better use of public funds.

OPPORTUNITIES FOR VALUE CAPTURE

The RBTU strongly supports the use of value capture methods to help fund passenger rail infrastructure. Indeed, the RTBU has previously identified CRR as one project that is eminently suitable for value capture opportunities.

The most prominent opportunities for value capture, however, are at Yeerongpilly. Indeed, this was recognised in the business case for the Reference project ,which included a proposed Transit-Oriented Development at the Yeerongpilly Station. In this sense, the Reference project is most suitable for both Transit-Oriented Development and the use of value-capture.

ALTERNATIVE APPROACH AND INNOVATION

The RTBU believes there may be opportunities to achieve better value for money by engaging early with Tier 1 constructors to utilise their expertise in project delivery, and to confirm the actual cost differential and the associated risks between the Reference and Change Projects. Constructors that are experienced in tunnel design and delivery ware best placed to make determinations about cost and complexity, and the State Government should take advantage of this expertise as part of its decision-making process.

CONCLUSION

The RTBU believes that CRR is a transformational project for SEQ. It is vital, however, that the projects is not constrained by short-term considerations that will undermine its long-term viability, and leave future generations short-changed.

To that effect, the RTBU makes two strong recommendations:

1. The RTBU recommends the Coordinator General undertake an independent assessment of the operational capacity and longevity of the Change Project, provided relative to the outcomes from the original CRR reference project. The Coordinator General should have an internal challenge team (tasked with highlighting the risks) to undertake a totally independent review of the operational modelling assumptions for the combined Inland Rail and CRR for 20, 30 and 40 years to ensure the longevity of the infrastructure solutions.

2. The RTBU believes that CRR is genuinely a project of national significance. This is because CRR will not only expand the capacity of the passenger network in SEQ, and therefore reduce the economic cost of urban transport congestion, it will also have an important impact on the movement of freight trains on the surface network. In particular, the CRR will have implications for the Inland Rail project in meeting its objective of reaching the Port of Brisbane. To this end, the RTBU is prepared to join with the Queensland Government to lobby all major political parties at the Federal Level to obtain Federal funding for the original reference project, to ensure the project delivers the best result both the Queensland and national economies.