Southern Downs
REGIONAL COUNCIL

Please address all communications to:
The Chief Executive Officer
Southern Downs
Regional Council
PO Box 26
Warwick Qld 4370

mail@sdrc.qld.gov.au
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abn 59 786 792 651

Warwick Office
64 Fitzroy Street
Warwick Qld 4370

Stanthorpe Office
61 Marsh Street
Stanthorpe Qld 4380

t **1300 MY SDRC**
(1300 697 372)

f **07 4661 0333**

Our Ref: TD:MES

16 June 2016

Mr Richard Wood
Department of Infrastructure and Regional Development
111 Alinga Street
CANBERRA ACT 2601

Dear Richard

Re: Southern Downs Connector

As Mayor of Southern Downs Regional Council I believe it is important that feedback is provided in relation to the discussion occurring at present with regard to the proposed Inland Rail route. This is an important project that has the potential to bring demonstrated economic benefit for all of Australia as well as selected regions that are proactive enough to realise and take advantage of the opportunities.

The Southern Downs region, and more specifically Warwick, is a logistics hub. Wickhams Freighters and Hardy's Haulage are just two of a number of firms that are involved in the movement of large components of freight to destinations locally and interstate.

John Dee (abattoir), Grove Juice, GrainX and Thomas Foods (abattoir) process large quantities of agricultural produce for distribution across the state, interstate and overseas, as do the fruit and vegetable growers located in Stanthorpe in the south of the municipality.

Big W continues to operate one of Australia's largest distribution centres in Warwick and at present there are a number of other businesses seeking to establish in Warwick to obtain a competitive advantage from Warwick's strategic location.

Evidence of the strategic importance of Warwick is that GrainX moves about 3,000 containers a year, John Dee about 1,500 containers and Big W moves the equivalent of about 4,000 a year. This is a significant volume of container freight already in existence and would well and truly rival Toowoomba. It should be noted that GrainX was the biggest container exporter of any Grain Plant Operator in Queensland at the end of last year.

It is noted that whilst Toowoomba constantly refers to the Interlink Hub as the only obvious choice in intermodal distribution, the Southern Downs region already has approved the Hendon Intermodal Facility as part of the East West Road and Rail Project encompassing a private rail corridor which, while linking onto the existing Queensland Rail network, would also link onto the Inland Rail should the route come through the Southern Downs.

In the Southern Downs region the leading sectors by value in 2014/15 were Transport, Postal and Warehousing ($191.2 million) and Agriculture ($182.7 million). From 2009-2015 the Transport, Postal and Warehousing Sector of the Southern Downs has grown by 107.6%. Based on this data it is clear that Warwick and the Southern Downs make a significant contribution to the freight and logistics infrastructure of Queensland, as well as being a major producer and processor of agricultural output.

It is with the above in mind that Southern Downs Regional Council would like to formally request that the Federal Government and associated stakeholders consider a change to the proposed Inland Rail route that would include the Warwick loop.

On the current proposed route, a new line is required between Inglewood and Millmerran. The length of this route is 63 kilometres and Southern Downs Regional Council believes that there will be some physical challenges associated with this route.

The proposed new line north of Millmerran to Gowrie is 52 kilometres in length and is proposed to be constructed mainly through laser levelled, flood irrigated, prime agricultural cropping land, with much of this area being black soil. Southern Downs Regional Council believes that any proposed route should avoid highly productive agricultural land wherever possible.

As an alternative to the proposed route, Southern Downs Regional Council is proposing the 4.5 kilometre Southern Downs Connector, which reduces the overall route distance by 20 kilometres and by-passes the residential area of Warwick.

A route reduction of 20 kilometres has the potential to reduce construction costs by as much as $400,000,000, based on construction being estimated at $20 million per kilometre.

The use of the existing rail corridor is the key to managing the costs and scale of the project. Using the existing corridor will provide businesses involved in transport and warehousing, as well as import and export customers, the opportunity of an exceptional distribution point from rail onto major highway networks. It is submitted that the alteration of the route to proceed via the Southern Downs Connector utilises much of the existing rail corridor, which will require upgrading to achieve the engineering standards for the new Inland Rail, but does not require new track to be constructed through prime agricultural land.

It is submitted that the alteration of the route to proceed via the Southern Downs Connector utilises much of the existing rail corridor, which will require upgrading to achieve the engineering standards for the new Inland Rail, but does not require new track to be constructed through prime agricultural land.

It is envisaged that the proposed Southern Downs Connector would allow for the Cambooya to Gowrie section to connect to both new industrial areas west of Toowoomba.

The proposed route of the Southern Downs Connector would also service the new Wellcamp International Airport, a facility that was not even proposed when the original studies were undertaken for the Inland Rail. Wellcamp Airport is a welcome addition to the region and will become an integral component of the

freight and logistics chain in Queensland. Wellcamp Airport has been designated as a "strategic airport" in the State Planning Policy

In addition to the freight component, proximity of rail to the airport may allow at some stage for passenger access via rail for domestic and international flights. It is noted that the opportunity for a rail connection to an airport is most sought after by the operators of other airports around Australia.

It is envisaged that the connectivity to the Port of Brisbane will be enhanced to service the existing and proposed freight distribution facilities and services in Warwick, both of which are forecasted to increase over the next decade in relation to levels of investment and the diversity of services supplied.

Southern Downs Regional Council looks forward to discussing the Southern Downs Connector option further with the Federal Government and the Department to ensure that all factors are taken into consideration as the final route for the Inland Rail is determined.

Yours faithfully

Tracy Dobie
Mayor

C/c

Hon Darren Chester, Federal Minister for Infrastructure & Transport
Senator Fiona Nash
Senator James McGrath
David Littleproud, Federal Candidate for Maranoa
Lawrence Springborg, Member for Southern Downs
John Wagner, Chairman of Wagners
Denis Wagner, Managing Director of Wagners
s.47F(1) Senior Office of Senator Fiona Nash
s.47F(1), Office of Senator Fiona Nash
s.47F(1) Gary Hayes Surveyors

s.22(1)(a)(ii)

[redacted]

From: WOOD Richard
Sent: Tuesday, 21 June 2016 3:43 PM
To: s.22(1)(a)(ii) <s.22(1)(a)(ii)@infrastructure.gov.au>
Subject: FW: Inland Rail- Warwick issues, request to for ARTC to brief state MPS [SEC=UNCLASSIFIED]

forgot to cc you

From: WOOD Richard
Sent: Tuesday, 21 June 2016 3:42 PM
To: FOULDS Alex; MRDAK Mike
Subject: Inland Rail- Warwick issues, request to for ARTC to brief state MPS [SEC=UNCLASSIFIED]

A couple of follow ups from below:

- s.22(1)(a)(was concerned ARTC in its stakeholder meetings has indicated the route is "essentially settled", given comments (which I was unaware of) by the Minister he was open to considering the route travelling via Warwick, around 100 km east of current alignment.
    - I indicated that ARTC was working on the basis of the 2010 Alignment Study and that the business case Government has considered and used as the basis of a further allocation for corridor preservation is based on that;
    - Ultimately, the final route would only be determined as part of the final funding decision and following planning approvals, however major reconsideration would add cost and delay to the project;
    - He asked if local MPs had been briefed (I indicated some MPs had been briefed and all had been advised consultations were occurring but engagement was predominantly with local government (although not Southern Downs Council which covers Warwick as its not on the alignment.
    - I indicated Southern Downs Council has asked to meet with me when in town for the Local Government awards this week, which I am doing at 9am on Wednesday. He was pleased with this.
- As above, I will be meeting with Mayor and CEO of Southern Downs Council on Wednesday (letter attached, which I am yet to respond to). I have been and will be clear that due to Caretaker Conventions I will be listening only. There is some risk they will make mention of this meeting in the local press.
- ARTC have been approached by 2 Qld state MPs from the region (including Lawrence Springborg, former opposition leader) seeking a briefing on 30 June while ARTC are in the region. Springborg's electorate includes Warwick, and Millmerran, where the proposed ARTC alignment passes through. I propose to indicate this is fine, provided ARTC talk about what they are doing, not Government policy or any speculation on changes to the route. Chester's office supports briefing of local MPs and I see no conflict with Caretaker Conventions.

Let me know of any concerns.

Regards

Richard

From: FOULDS Alex
Sent: Thursday, 16 June 2016 4:02 PM
To: WOOD Richard; MRDAK Mike
Subject: RE: Rob Curtin- call re Inland Rail [SEC=UNCLASSIFIED]

Thank you Richard. I think that covers it.

Alex

From: WOOD Richard
Sent: Thursday, 16 June 2016 3:31 PM
To: MRDAK Mike; FOULDS Alex
Subject: s.22(1)(a)(ii) - call re Inland Rail [SEC=UNCLASSIFIED]

FYI- I suspect s.22(1)(a)(ii) call is driven by lobbying to have the route go via Warwick in Qld, where there has been some lobbying of late, (and potentially via Narrandera and Shepparton in Vic/NSW and the Brisbane Port extension). Southern Downs Council CEO and Mayor have asked to meet with me re Warwick option when in town for the LGA Awards next week.

I will give s.22(1)(a)(a call and indicate:

- AG has considered a business case with a specified route and has now indicated ARTC will take the project forward;
- We expect ARTC will take the project forward based on the current alignment, subject to any environmental/planning considerations.
- No further work on alternatives to the alignment is proposed, other than in the context of the Market Sounding process. Furth new work would likely delay the project;
- A final Government decision is expected to be in the form of considering the final business case and funding, likely in next year's Budget.

Richard

Richard Wood
General Manager, Rail and Intermodal
Department of Infrastructure and Regional Development
GPO BOX 594 CANBERRA ACT 2601
☎ Ph s.22(1)(a)(ii) | 🖷 Fax 02 6275 1388 | ☎ Mobile s.22(1)(a)(ii) | s.22(1)(a)(ii) @infrastructure.gov.au

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From: s.22(1)(a)(ii)
Sent: Thursday, 16 June 2016 2:06 PM
To: WOOD Richard
Subject: Inland Rail RFI [SEC=UNCLASSIFIED]

Hi Richard,

I have had a few calls from local MPs in QLD regarding the Inland Rail route.

Can you give me a call when you get a minute. I just want to understand a rough timeline regarding route selection.

Thanks,

s.22(1)(a)(

s.47F(1) | Chief of Staff
Office of the Hon Darren Chester MP
Minister for Infrastructure and Transport
T s.47F(1) | **F** 02 6273 4163 | **M** s.47F(1)
Suite M1 26 Parliament House | CANBERRA ACT 2600

s.22(1)(a)(ii)

Subject: Inland Rail Route - Southern Downs Connector
Location: Richard's Office

Start: Wed 22/06/2016 9:00 AM
End: Wed 22/06/2016 10:00 AM

Recurrence: (none)

Organizer: WOOD Richard

Categories: External Meeting

Dear Mr Wood

I refer to our telephone conversation today and confirm the appointment that I have made for Council's Mayor, Tracy Dobie, and Chief Executive Officer, David Keenan, to meet with you on Wednesday 22 June 2016 at 9.00am at your office at 111 Alinga Street, Canberra.

Please find attached a letter from the Mayor in relation to the Inland Rail Route and the Southern Downs Connector option.

Thank you for making the time to meet with them on such short notice.

Regards

s.47F(1)
PA TO MAYOR & CEO
Southern Downs Regional Council
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f 07 4661 0333

Australian Government

BUILDING OUR FUTURE +

Inland Rail Programme Control Group Meeting

Meeting No. 2016-06

Date/Time: Friday 24 June 2016 (10:30am-12:30pm)

Venue: **Department of Infrastructure and Regional Development (DIRD)**
111 Alinga Street, Canberra, ACT ("Fishbowl Room" ground floor foyer)

Participants:

Department of Infrastructure and Regional Development (DIRD)	**ARTC**
s.22(1)(a)(ii)	s.47F(1) - Chairman
s.22(1)(a)(ii)	s.47F(1)
s.22(1)(a)(ii) - observer	s.47F(1)
s.22(1)(a)(ii) - observer	s.47F(1) - Secretary

Minutes & action list

Ref	Item	Detail	Action by	When
1.	**Welcome & apologies**			
1.1		s.22(1) acted as Chairman in Richard Wood's (DIRD) absence and welcomed PCG participants. Apologies: Richard Word (DIRD).	Noted	
2.	**Review / acceptance of minutes**			
2.1		Minutes of 27 May 2016 meeting accepted as tabled.	Accepted	Closed
3.	**Review of action items**			
3.1	s.22(1)(a)(ii)			

Ref	Item	Detail	Action by	When
3.2	s.22(1)(a)(ii)			
3.3				
3.4	Letter from Southern Downs Regional Council	RB presented a letter dated 16 June 2016 from Southern Downs Regional Council (Mayor Tracey Dobie) questioning why Warwick was not on Inland Rail's preferred alignment. (**ACTION:** ARTC to provide DIRD a responses to issues raised in letter)	ARTC s.47F(1)	ASAP early July
3.5	s.22(1)(a)(ii)			
3.6				
3.7				

Ref	Item	Detail	Action by	When
	s.22(1)(a)(ii)			
3.8				
4.	**Inland Rail Monthly Report and Update**			
4.1	s.22(1)(a)(ii)			

Ref	Item	Detail	Action by	When
	s.22(1)(a)(ii)			
4.2				
5.	**Work programme**			
5.1	Business Case supporting documents	**ACTION:** ARTC to prepare public release versions of various Business Case supporting technical reports.)	ARTC s.47F(1)	August
5.2	ARTC/DIRD Risk Workshop	(**ACTION:** Upon the expected completion of PPR03 milestones in July 2016, ARTC to coordinate a risk workshop for DIRD focusing on the transition to PPR04's next stage development work.)	ARTC s.47F(1)	August
5.3	Victoria Planning Department meeting	(**ACTION**: ARTC to establish regular meetings with Victorian Planning Department and invite DIRD's participation.)	ARTC s.47F(1)	July
6.	**Media, communications & stakeholder relations**			
6.1	Upcoming Speaking engagements	Included in PCG meeting information pack	Noted	
7.	**Other business**			
8.	**Next meeting**			
8.1	s.22(1)(a)(ii)			

s.22(1)(a)(ii)

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Sent: Wednesday, 29 June 2016 3:42 PM
To: WOOD Richard; s.22(1)(a)(ii)
Cc: s.47F(1) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Subject: Input to reponse to Southern Downs Regional Council
Attachments: IR Response to Southern Downs Regional Council June 2016.docx

Richard / s.22(1)(a)(ii)

In Friday's PCG, we undertook to provide some drafting for potential incorporation in a response to Southern Downs Regional Council.

See the attached for your consideration. It has been drafted on the basis that we will take a firm line on the issue.

For discussion when we next talk.

Regards

s.47F(1)

s.47F(1)
Shareholder and Government Relations
Inland Rail

ARTC

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M: s.47F(1)
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Australian Rail Track Corporation
Suite 1, Level 8, 45 Clarence Street
Sydney NSW 2000

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Xx June 2016

Tracy Dobie
Mayor
Southern Downs Regional Council
PO Box 26
Warwick Qld 4370

Dear Mayor Dobie,

Re: Inland Rail - Southern Downs Connector

Thank you for your letter of 16 June 2016.

At the outset I would like to thank the Southern Downs Regional Council for its interest in Inland Rail. The Department is very conscious of the importance of the Darling Downs, including the Southern Downs, as a significant regional contributor to the national economy.

I would like to assure you that the question of the optimum alignment for Inland Rail has received careful consideration in a series of studies that culminated in the report of the Inland Rail Implementation Group, chaired by former Deputy Prime Minister the Hon. John Anderson AO, in September 2015, which recommended that the Australian Government proceed to construct Inland Rail.

The proposed route alignment for Inland Rail was selected after extensive analysis undertaken in the 2010 Inland Rail Alignment Study (IRAS). The IRAS examined multiple route options through South-East Queensland, including various options via Toowoomba or Warwick. The IRAS concluded that the recommended route via Inglewood, Milmerran, Oakey and Gowrie would optimise the service characteristics, construction costs and economic performance of Inland Rail. The alignment was subsequently adopted as the basis for the Inland Rail Programme Business Case that supported the Inland Rail Implementation Group's report.

Thank you for outlining the Southern Downs Connector proposal. The option for an Inland Rail route via both Warwick and Toowoomba, including a cut-off to the west of Warwick equivalent to the Southern Downs Connector, was assessed as part of the IRAS. The analysis did not favour the option via both Warwick and Toowoomba, and concluded that this would be the longest and most indirect route of the various options examined through Queensland. The IRAS estimated that such a route would be approximately 45 minutes longer than the recommended alignment via Milmerran and Oakey, due to a longer route length and a less favourable alignment along the existing rail corridors which would impose lower travel speeds than the recommended option.

It should be emphasised, however, that connectivity to and from Warwick would be provided as part of the current Inland Rail proposal. It is proposed that Inland Rail would be built as dual gauge (standard gauge plus narrow gauge) in order to provide connections to the Queensland Rail regional rail network. The existing Warwick to Toowoomba rail line will connect to Inland Rail at Gowrie, allowing rail traffic from the Southern Downs to utilise the superior service characteristics of Inland Rail for the transit to Brisbane.

The Department would be very happy to meet with the Council to further discuss Inland Rail, at a mutually convenient time in the future.

Yours sincerely,

s.22(1)(a)(ii)

From: MRDAK Mike
Sent: Wednesday, 6 July 2016 9:45 AM
To: WOOD Richard; Carmody Shane; FOULDS Alex; s.22(1)(a)(ii)
Subject: RE: WIN Toowoomba story now available [SEC=UNCLASSIFIED]

Thanks Richard – highlights this is going to get more difficult given the interest involved in the Darling Downs area.

Mike

From: WOOD Richard
Sent: Wednesday, 6 July 2016 9:21 AM
To: MRDAK Mike ; Carmody Shane ; FOULDS Alex ; s.22(1)(a)(ii)
Subject: FW: WIN Toowoomba story now available [SEC=UNCLASSIFIED]

Mike

This relates to media interest in a public meeting on the Inland Rail route between Toowomba and the border.

This may come up if you are in discussions with Minister Chester- from discussions with s.47F(1) a couple of weeks ago this is an issue they are keenly aware of.

ARTC as part of its engagement have been having community meetings along the alignment. This one, in Milmerran, was a follow up to earlier sessions at the request of some stakeholders- I understand they had thought it was a small meeting but the (pending) new local member (Proudfoot) and Wagners family (Wellcamp Airport) turned up, with media in tow.

This is part of the push for the route to move via Warwick, which would utilise more existing line and better access the airport site (Wagners have an interest in freight but may also have an interest in pushing passenger services, increasing cost).

ARTC are doing a further (small) study on the option of the alignment travelling via Warwick and Toowoomba. While the option of Warwick to Brisbane direct was explored in depth in the 2010 study, the Warwick/Toowomba alignment was less well documented as it was ruled out early on due to transit time- essentially adding 45 mins to the Melbourne-Brisbane trip, although the Councils proposal may be slightly different. Once ARTC have done that work we will consider if more is required to assess the economics and strategic merit. An early decision for Government will be how they wish to handle this- opening up the route would add significant delay and could end up with a route that isn't fit for purpose.

A further but related issue is on how the freight task from the existing SE Qld network is best served- ie should it be rolled into ARTC, should parts of its be upgraded over time and parts closed. This will be part of our IGA negotiations with Qld.

If raised I suggest you indicate to the Minister that:

- The issue is twofold-
    - local stakeholders seeking to move the route to address concerns over flooding and land holder issues- ARTC is undertaking consultation to address these issues and it will be subject to all state and federal planning and environmental processes
    - interests including Wagners Airport, Southern Downs Council and existing freight operators seeking an alternative route via Warwick.
        - While superficially attractive, such a route is understood to add transit time that would mean the route may not meet the necessary service specification to drive modal shift

between Melbourne and Brisbane. If interstate traffic doesn't move to rail the ability of the line to cover its operational costs is reduced.
    - The cost of upgrading existing narrow gauge to standard gauge is significant- its not an upgrade but a complete rebuild. However, ARTC is seeking to use existing alignments wherever its feasible to do so.
- We understand ARTC are seeking to undertake community consultation in good faith but will provide (if required) an update to the Minister on how this is being undertaken;
- ARTC are reviewing the work done in 2010 on an alignment via Warwick and Toowoomba, however initial advice is that the alignment was ruled out due to the additional transit time this would add to Melbourne-Brisbane traffic. A further study will be undertaken if required;
- We can arrange a detailed briefing for Mr Proudfoot. (After Caretaker)

Richard

From: s.47F(1) [mailto:s.47F(1) @ARTC.com.au]
Sent: Wednesday, 6 July 2016 8:07 AM
To: WOOD Richard <s.22(1)(a)(ii) @infrastructure.gov.au>
Subject: FW: WIN Toowoomba story now available

Richard, see below. We've got some work to do. Any insight on the letter that the MP refers to re raising concerns about the process with Darren Chester?

s.47F(1)
Executive General Manager Corporate Affairs
Office of CEO

ARTC

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Below is the link to the WIN TV Toowoomba news story tonight.

It was the lead item and if you have any problems accessing the video or link I have copied the transcript below:

Click here to view clip: WIN Toowoomba

tensions have flared at a public meeting over the good evening. tensions have proposed route of the inland link today, with farmers accusing artc of keeping them in the dark. they' re calling for a artc of keeping them in the dark. re-think of the proposed route, both john wagner, and the new member of maranoa, backing the both john wagner, and the new member of maranoa, backing the push. what was supposed to be a small, information session quickly what was supposed to be a small, escalated, as frustrated farmers filed in, looking for answers from escalated, as frustrated farmers artc. we had basically two hours notice when the first meetings were artc. we had basically two hours given in millmerran. they seem to want to keep us in the dark and given in millmerran. they seem not supply much information at all. s artc wouldn' t let us film their artc wouldn' t let us film their staff, and cited "printing for the lack of publicity staff, and cited "printing problems" meetings so far, but david littleproud says, it' s not an isolated incident. i have some littleproud says, it' s not an concerns i' ve had some expressed to me about the manner in concerns i' ve had some concerns which artc have undertaken this consultation process. i' ve raised those concerns with the minister in question darren chester. those concerns with the minister in have a range of concerns about the proposed inland rail route, have a range of concerns about the through their properties and flood issues.a quick show of through their properties and causing of those in favour, said it all. is there anyone here who' s of those in favour, said it all. that' s in favour of the current is there anyone here who' s impacted route? i think you' ve got a pretty clear message to send route? i think you' ve got a your hierarchy down there that pretty clear message to send back to one' s in favour of it, we don' your hierarchy down there that no want it. the artc staff told locals not to panic, because when a route is adopted later this year, there' ll be at least eighteen route is adopted later this year, months of consultation before it' s there' ll be at least eighteen locked in. but those familiar with the approvals process, disagreed. locked in. but those familiar with we are well aware that once you get to that stage you' re ac we are well aware that once you get locked into the corridor, you' re actually doing an environmental impact assessment, of that actually doing an environmental john wagner seconded that, and called for a total rethink. john wagner seconded that, and to see the line, going past the wellcamp airport. it' s really to see the line, going past the important i think for this region not just millmerran and toowoomba, that we actually look at a total not just millmerran and toowoomba, alternative routes to get the for our region and to future alternative routes to get the best ...

s.47F(1)
Executive General Manager Corporate Affairs
Office of CEO

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s.22(1)(a)(ii)

From: WOOD Richard
Sent: Thursday, 7 July 2016 2:55 PM
To: MRDAK Mike
Cc: s.22(1)(a)(ii)
Subject: RE: Proposed Route - Melbourne to Brisbane Inland Rail corridor [SEC=UNCLASSIFIED]

thanks Mike

This is a helpful comment and has also been picked up in some local media.

ARTC are doing a small piece of work to review work on this section of the alignment in the 2010 study. The issue is that while it explored routes via Warwick to Brisbane, the route via Warwick and Toowoomba was less well documented as it was ruled out at a very early stage given its disadvantages. Its not been made public this work is being done, but I think its sensible we have a paper to satisfy Ministers the issue has been considered, given we know the local Member will raise it with him. This review will consider the technical issues (eg route feasibility and running times) rather than demand, although we will leave an option in our demand work to do a piece on that if necessary at a later stage.

The other issues the Mayor raises are the issues of detail in the alignment ARTC is seeking to resolve in the current consultations.

s.47C(1)

Richard

From: MRDAK Mike
Sent: Thursday, 7 July 2016 2:42 PM
To: WOOD Richard
Subject: FW: Proposed Route - Melbourne to Brisbane Inland Rail corridor [SEC=UNCLASSIFIED]

For information

From: MRDAK Mike
Sent: Thursday, 7 July 2016 2:41 PM
To: 'Paul Antonio' <s.47F(1) @tr.qld.gov.au>
Cc: s.47F(1) @artc.com.au
Subject: RE: Proposed Route - Melbourne to Brisbane Inland Rail corridor [SEC=UNCLASSIFIED]

Thank you Paul

Yes the indicative route has been developed after a lot of work on the business case and to balance the need for the most cost-effective route which can provide mode competition for freight and also result in productivity benefits to the economy.

We will be working through the ARTC to settle the details of the route.

Best regards
Mike

From: s.47F(1) [mailto:s.47F(1) @tr.qld.gov.au] **On Behalf Of** Paul Antonio
Sent: Thursday, 7 July 2016 1:25 PM
To: MRDAK Mike <s.22(1)(a)(ii) @infrastructure.gov.au>
Cc: s.47F(1) @artc.com.au
Subject: Proposed Route - Melbourne to Brisbane Inland Rail corridor

Dear Mike

Toowoomba Regional Council has been advocating strongly for the Melbourne to Brisbane Inland Rail project because of the remarkable benefit we believe such infrastructure will bring to our region, as well as the nation more broadly.

I have been surprised over the past 24 hours to learn of calls to change the proposed route of the line in northern NSW and Queensland.

We believe the broad locality of the proposed route, which we understand has been developed after very careful analysis, by and large, is the right fit for this nation building project.

That said, we do believe there may be some minor amendments needed to protect good agricultural land across the Darling Downs, particularly around the Brookstead, and Mt Tyson, as well as the Bringalilly, Millwood and Clontarf areas near Millmerran and we look forward to continuing to work with the ARTC to inform the final route. We also believe an amendment to allow for the development of an intermodal node at the highly productive area of Goondiwindi has merit.

Given such speculation and calls for change has the potential to delay the project, I wanted to communicate Council's strong support for the broad locality of the current route and Queensland industry's enthusiasm for the project.

I have recently issued a media release outlining my position on the project http://www.tr.qld.gov.au/about-council/news-publications/media-releases/12557-mayor-says-proposed-inland-rail-route-is-on-the-right-track

Should you wish to contact me to discuss this matter further, my mobile number is s.47F(1) .

Kind Regards

Paul Antonio
Mayor
Toowoomba Regional Council
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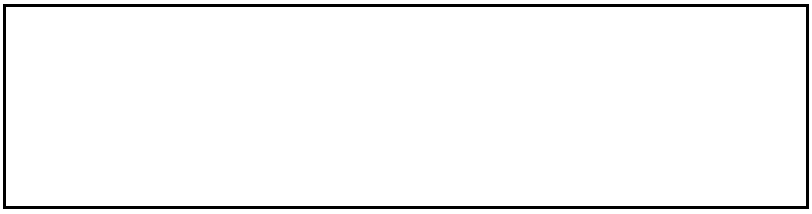

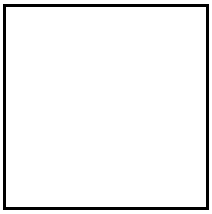

Filed in diary manager

s.47F(1)

From: s.47F(1) (D. Chester, MP) <s.47F(1) @aph.gov.au> on behalf of Chester, Darren (MP) <Darren.Chester.MP@aph.gov.au>
Sent: Thursday, 28 July 2016 2:12 PM
To: Minister Chester
Subject: FW: Inland Rail Alignment Concerns Qld
Attachments: 20160728 Ltr to Minister Chester re Inland Rail.pdf

Importance: High

s.47F(1)
Office of Darren Chester MP
Federal Member for Gippsland
Minister for Infrastructure and Transport
[redacted]
Canberra: 02 6277 7776
#lovegippsland

From: Michelle Reynolds [mailtos.47F(1)r@freightterminals.com.au]
Sent: Thursday, 28 July 2016 2:04 PM
To: Chester, Darren (MP); s.22(1)(a)(ii) @infrastructure.gov.au
Subject: Inland Rail Alignment Concerns Qld
Importance: High

Dear Minister Chester

Firstly, congratulations on your recent election win and we look forward to working with you as Minister for Infrastructure as you deliver the Inland Rail project.

Please see attached regarding our concerns around the alignment for Inland Rail in Queensland.

I look forward to discussing this matter with you as soon as possible and will be visiting Canberra in the coming weeks so it may be pertinent for us to meet and ensure that Inland Rail continues to move forward.

Kind regards
Michelle Reynolds

Michelle Reynolds
Chief Executive Officer
Freight Terminals Pty Ltd

Freight Terminals InterLinkSQ

Phone: s.47F(1) Mob: s.47F(1)
Email: s.47F(1)@freightterminals.com.au
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Please consider the environment before printing this email

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Servicing Australia
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28 July 2016

Hon Darren Chester MP
PO Box 6022
House of Representatives
Parliament House
CANBERRA ACT 2600

Dear Minister Chester

Re: Inland Rail Alignment

It was a pleasure to host you on-site at Charlton with Dr John McVeigh during the recent Federal election campaign. I would like to congratulate you on your re-election and re-appointment as the Minister for Infrastructure.

We very much look forward to working with you over the next term of government to drive the Inland Rail Project to a "point of no return" as you mentioned during your visit.

To that end, it has been very disheartening to us and other regional rail stakeholders to now see the conjecture and confusion over the proposed alignment for Inland Rail in Queensland.

The alignment was set in 2010 after an extensive study period between 2008 and 2010. This process undertook a rigorous assessment of 36 route options in Queensland alone.

The routes currently being proposed by various parties in Queensland over the past few weeks including the utilisation of the existing rail corridor between Inglewood & Warwick and Warwick to Toowoomba and a route from Millmerran to Wyreema West and through to Gowrie past the Brisbane West Wellcamp Airport.

We find it extremely concerning, in the interests of progressing the Inland Rail project as expediently as possible, that routes that have previously been extensively analysed and discounted for travel time, additional capital costs and environmental reasons would now be open for reconsideration.

It sets a dangerous precedent for all sections of the alignment if routes that have previously been discounted for valid and solid reasons are now seen to be reconsidered. Whilst an airport in the Wellcamp area may not have been considered in 2010, neither was the Intermodal precinct and Inland Port that InterLinkSQ is now developing.

A diversion of the previously committed route, upon which InterLinkSQ has based significant private investment, via the Airport would neither add to the freight (given that the rail and air freight of this region are very different products and commodities) and therefore, would not add to the business case for inland rail and would, according to the 2010 Alignment Study and Working Papers increase capital construction costs substantially.

We believe there is a misconception by the general public that the current ARTC consultation process is around the location of the general corridor alignment and not, as we have been led to believe, merely around the alignment of the track within the previously defined corridor.

This confusion is leading to significant public and investor uncertainty around the alignment which is having a very real and negative impact on investor confidence required for businesses who will feed into the success of Inland Rail.

Therefore, we call on you, as Minister for Infrastructure, to provide public certainty and clarity to business by confirming:

a) the alignment of Inland Rail will be consistent with the confirmed alignment defined in the 2015 Business Case and supported by Infrastructure Australia;
b) changes to the corridor location will only occur where there is a sound economic or engineering reason to do so; and
c) that neither the Federal Government nor ARTC will be revisiting alignments previously discounted via the route identification process undertaken by ARTC between 2008 and 2010.

By making this statement you provide the confidence for private industry to continue their investment in projects that will drive the success of Inland Rail.

InterLinkSQ has made significant investment on the basis of clear public statements about the reliance upon the 2010 alignment. It is the only fully zoned and approved (environmental, cultural heritage and council planning applications all finalised) Rail Precinct in the Toowoomba Region. Construction on the enabling infrastructure is already underway, as you saw on your visit, and construction on the terminal and surrounding industrial precinct will commence at the end of this year.

This terminal, that will be operational by early 2018 (albeit on the current Qld Rail network) is the driving force behind growing the rail freight industry in South-West and South-East Queensland and will deliver a real and operating rail freight business for transition to the Inland Rail when it is operational in the coming years.

We look forward to your ongoing support and working with you and your government to deliver jobs and economic growth to our region and this great nation through the successful construction and operation of the Inland Rail.

Yours faithfully

Michelle Reynolds
CEO
Freight Terminals *(proponents for InterLinkSQ Intermodal)*

CC: *Minister Jackie Trad – Queensland Minister for Infrastructure*
Dr John McVeigh MP – Federal Member for Groom

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Monday, 1 August 2016 12:52 PM
To: MRDAK Mike; Carmody Shane
Cc: s.22(1)(a)(ii) ; FOULDS Alex
Subject: RE: Inland Rail alignment [SEC=UNCLASSIFIED]

Mike- quick update on three matters in train:

Inland Rail/Toowoomba airport
I spoke to ARTC this morning. s.47F(1) indicated John Wagner has provided him with a map of the proposed alternative alignment (which is different to both the ARTC alignment and that proposed via Warwick), which he will bring with him tomorrow. Would you like ARTC to be part of the hook up with him?

s.47F(1) also indicated he was non-committal on how long a review of the proposed alignment would take- a high level review of feasibility could be 3-4 weeks. We will discuss tomorrow at the steering committee- while we don't want to set a precedent for opening up the alignment, it may be appropriate to look at this given the airport is new.

Backbencher briefing
I've been working out availability from ARTC- due to industrial action this week they won't be available at Executive level as the relevant people will be assisting in operations, however s.47F(1) may be available. I'm discussing with MO.

s.22(1)(a)(ii)

Regards

Richard

From: MRDAK Mike
Sent: Saturday, 30 July 2016 2:47 PM
To: WOOD Richard ; Carmody Shane
Subject: FW: Inland Rail alignment [SEC=UNCLASSIFIED]

UNCLASSIFIED
Richard and shane. For our discussion this afternoon. Mike

UNCLASSIFIED

Sent with Good (www.good.com)

-----Original Message-----
From: s.47F(1) [s.47F(1) @wagner.com.au]
Sent: Friday, July 29, 2016 10:36 AM AUS Eastern Standard Time
To: MRDAK Mike
Cc: John Wagner
Subject: Inland Rail alignment

Sent on behalf of John Wagner

Mike

How are things going in your world?

I met up with s.47F(1) from ARTC last week in relation to the inland rail alignment through Toowoomba.

When the study was undertaken in 2008-10 an international airport at Toowoomba was not a consideration as it was not even thought of at that time.

Six years later it is now a reality and we expect to have scheduled freighter services out of Wellcamp by the end of the year.

We have also announced the first powdered milk factory in Queensland at the Wellcamp business park adjacent to the airport and it will start exporting 30 million tins of infant formula in March 2017.

We also have an approved and serviced container terminal also adjacent to the airport.

We have done some high level analysis of the route and we believe that diverting via the airport would actually shorten the current planned route and future proof the alignment for future passenger services if ever they were to come from Brisbane and the Airport is a logical stopping point if this were to happen.

If it was of a commercial interest to ARTC and their customers we would commit to building a complete intermodal facility to be opened when the line was completed.

We currently own and operate two rail spurs in Townsville so we have some experience in this field.

Also we own one of the largest rail ballast deposits in the region adjacent to the airport and currently have the rail ballast contract for QR from our quarry at Amby so once again we have extensive experience in this regard.

Simon thought it would take about 3 weeks to relook at a diversion via Wellcamp if he was given the go ahead to have a look at it.

We would welcome the opportunity to come down and talk to you and Minister Chester at a time that was convenient.

Best Regards

John Wagner
Chairman Wagner Global Services

339 Anzac Avenue, Toowoomba QLD 4350
PO Box 151 Drayton North QLD 4350
Ph: s.47F(1) | Mobile: s.47F(1) | Fax: +61(0)7 4637 7778
Web: www.wagner.com.au | Email: s.47F(1) @wagner.com.au

s.22(1)(a)(ii)

From: MRDAK Mike
Sent: Sunday, 7 August 2016 7:52 PM
To: 'Denis Wagner'; John Wagner
Cc: WOOD Richard; s.47F(1) @ARTC.com.au; s.47F(1) @ARTC.com.au
Subject: RE: Inland Rail alignment [SEC=UNCLASSIFIED]

Denis – thanks. We will do some further analysis of the options and come back to you on next steps

Regards
mike

From: Denis Wagner [mailto s.47F(1) @wagner.com.au]
Sent: Sunday, 7 August 2016 7:45 PM
To: MRDAK Mike <s.22(1)(a)(ii)@infrastructure.gov.au>; John Wagner <s.47F(1) @wagner.com.au>
Cc: WOOD Richard <s.22(1)(a)(ii) @infrastructure.gov.au>; s.47F(1) @ARTC.com.au; s.47F(1) @ARTC.com.au
Subject: RE: Inland Rail alignment [SEC=UNCLASSIFIED]

Mike
I caught up with s.47F(1) and s.47F(1) last Friday to discuss the alignment for the rail.
I think we are all clear that our interest is to have the alignment run past the Wellcamp airport, regardless which route is ultimately accepted as the best route overall. s.47F(1) had a drawing showing an alignment that did come very close to the airport but we are not totally sure of the origin of the drawing.
A couple of things came out of the meeting.
It could be very feasible to veer off the alignment that is currently recommended around Mt Tyson or Purrawunda and then have a fairly direct route to Gowrie past Wellcamp Airport.
s.47F(1) mentioned that an intermodal siding should be 1.6 km long to service the expected traffic and possibly need to be increased to 3.2 km long. We should be able to handle at least 2 km at Wellcamp and it may be possible for the 3.2km depending on the direction of the line as it nears the airport.
I did mention to s.47F(1) and s.47F(1) the possibility of an events centre, which is currently under investigation at Wellcamp. If this development were to proceed it may well increase passenger traffic to Wellcamp by 100's of thousands of people each year in the future.

Is there anything further we can do to assist with progressing the investigation of a route past the Wellcamp airport

Regards

Denis Wagner

From: MRDAK Mike [mailto s.22(1)(a)(ii)@infrastructure.gov.au]
Sent: Friday, 29 July 2016 6:01 PM
To: John Wagner
Cc: s.47F(1) ; WOOD Richard; Denis Wagner
Subject: RE: Inland Rail alignment [SEC=UNCLASSIFIED]

John – sorry Tuesday am I am caught up with one of my other ministers. Could do a phone call between 12.30 and 1.30pm Tuesday if that works for you. We could then discuss next steps.

Mike

From: John Wagner [mailtos.47F(1) @wagner.com.au]
Sent: Friday, 29 July 2016 5:54 PM
To: MRDAK Mike <s.22(1)(a)(ii)@infrastructure.gov.au>
Cc: s.47F(1) <s.47F(1) @wagner.com.au>; WOOD Richard <s.22(1)(a)(ii) @infrastructure.gov.au>; Denis Wagner <s.47F(1) @wagner.com.au>
Subject: Re: Inland Rail alignment [SEC=UNCLASSIFIED]

Mike

How would Tuesday am suit?

Cheers

John Wagner
Chairman
Wagners Global Services
s.47F(1)

On 29 Jul 2016, at 5:43 PM, MRDAK Mike <s.22(1)(a)(ii)@infrastructure.gov.au> wrote:

> John – yes would be very pleased to discuss.
>
> We are meeting s.47F(1) and the ARTC senior team next week to consider issues arising from work to date and the next stages of the work required.
>
> Let me know what works best for you in terms of meeting/discussion – we can do a phone hook up to start if that assists or set up a meeting.
>
> Regards
> Mike
>
> **From:** s.47F(1) [mailtos.47F(1) @wagner.com.au]
> **Sent:** Friday, 29 July 2016 10:37 AM
> **To:** MRDAK Mike <s.22(1)(a)(ii)@infrastructure.gov.au>
> **Cc:** John Wagner <s.47F(1) @wagner.com.au>
> **Subject:** Inland Rail alignment
>
> Sent on behalf of John Wagner
>
> Mike
>
> How are things going in your world?
>
> I met up with s.47F(1) from ARTC last week in relation to the inland rail alignment through Toowoomba.
>
> When the study was undertaken in 2008-10 an international airport at Toowoomba was not a consideration as it was not even thought of at that time.
>
> Six years later it is now a reality and we expect to have scheduled freighter services out of Wellcamp by the end of the year.

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s.47F(1) thought it would take about 3 weeks to relook at a diversion via Wellcamp if he was given the go ahead to have a look at it.

We would welcome the opportunity to come down and talk to you and Minister Chester at a time that was convenient.

Best Regards

John Wagner
Chairman Wagner Global Services
<image001.png>
339 Anzac Avenue, Toowoomba QLD 4350
PO Box 151 Drayton North QLD 4350
Ph: s.47F(1) Mobile: s.47F(1) Fax: +61(0)7 4637 7778
Web: www.wagner.com.au | Email: s.47F(1) @wagner.com.au

Document 11

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Wednesday, 31 August 2016 3:38 PM
To: s.22(1)(a)(ii) ; Inlandrail; s.22(1)(a)(ii) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Subject: FW: Comparison of Inland Rail - comparison of 2010 route with Warwick option [SEC=UNCLASSIFIED]
Attachments: Inland Rail – Comparison of 2010 route and Warwick option v1 1 Aug 2016.pdf; Inland Rail – comparison of 2010 route and Warwick option.pptx

---

From: s.47F(1) [mailto:s.47F(1 @ARTC.com.au]
Sent: Monday, 1 August 2016 1:48 PM
To: WOOD Richard
Cc: s.47F(1) ; s.47F(1) ; s.47F(1)
Subject: Comparison of Inland Rail - comparison of 2010 route with Warwick option

Richard,

Further to the discussion at the PCG meeting on 22 July, attached is a draft report comparing Inland Rail's route from Inglewood to Gowrie with alternative routes via Warwick.

Attached also is a PowerPoint presentation based on the draft report.

It may be noted that the proposal received in the last few days, for a route from Cambooya to Gowrie (approximately 30 km) running past Wellcamp airport, corresponds in general terms to the section of route DD08, referred to in the draft report, from Wyreema West to Gowrie. It appears that the new proposal has a slightly longer section of greenfield construction starting at Cambooya which is 8 km south of Wyreema and 7km north of Watts.

Regards,

s.47F(1)

.

s.47F(1)
Senior Project Advisor, Inland Rail
Major Projects

ARTC

P. s.47F(1)
M. s.47F(1)
E. s.47F(1 @ARTC.com.au

Australian Rail Track Corporation
Level 8, 45 Clarence Street
Sydney NSW 2000

artc.com.au

Document 12

ARTC InlandRail

The Australian Government's priority freight rail project

Inland Rail – Comparison of 2010 route and Warwick option

AUGUST 2016

Document 12

ARTC InlandRail

Document Control

Client:	Australian Rail Track Corporation
Project:	Inland Rail
Document title:	Inland Rail – Comparison of 2010 route and Warwick option
Date issued:	01.08.2016
Revision:	1.0
Prepared by:	s.47F(1) , Senior Project Advisor Inland Rail
Purpose:	To document the analysis of the Inland Rail route option from Inglewood via Warwick to Gowrie contained in the 2010 study, in comparison with the route from Inglewood via Millmerran to Gowrie.
Endorsed by:	
Approved by:	s.47F(1)
Date approved:	
Issued to:	Programme Control Group
Filename:	Inland Rail – Comparison of 2010 route and Warwick option v1.docx
Status	Draft for DIRD review
Further work	

Revision history

REVISION	DATE ISSUED	TO	DESCRIPTION
1.0	01.08.16	PCG	Draft for review
2.0			
3.0			
3.1			

TABLE OF CONTENTS

TABLES

FIGURES

1. INTRODUCTION

The objective is to document the analysis of the Inland Rail route option from Inglewood via Warwick to Gowrie contained in the 2010 study, in comparison with the route from Inglewood via Millmerran to Gowrie. The Warwick route is currently being termed the "Southern Connector" and closely matches one of the routes investigated by the 2010 study. At that time the "Southern Connector" route now proposed was among a number of alternatives considered.

A key reference document is Working Paper No. 2, Review of Route Options, from the Melbourne-Brisbane Inland Rail Alignment Study, now referred to as the 2010 study. A number of clarifications to Working Paper No. 2 are given in the box at the foot of this page.

In addition, work undertaken for the 2010 study has provided cost information for a route via Warwick which can be compared with the cost of Inland rail's route via Millmerran.

Two relevant maps are attached. Figure 2 is from Working Paper No. 2 (where it is on page 102 of printed copies). Figure 3 is a map showing the three routes discussed in this paper.

1.1. Two route options – via Millmerran and via Warwick

36 potential routes from Moree North (Camurra) to Acacia Ridge were analysed in the 2010 study and are documented Working Paper 2 on pages 101 onwards. The routes varied in length between 480km and over 600km.

The route adopted by the 2010 study between Inglewood and Gowrie runs via Millmerran, Brookstead and Mount Tyson to reach the QR Western line west of Gowrie. This route is a mixture of greenfield and sections of mostly non-operational QR corridor. The adopted Inland Rail Route is designated route DD02 in the 2010 Study and shown as option 1 in Figure 3

The "Southern Connector" route runs from Inglewood via Karara, Warwick (with a cut-off avoiding going into and out of that town), Clifton, Wyreema, then west of Wellcamp Airport to again reach the QR Western line west of Gowrie. With the exception of the Warwick cut-off and the section from Wyreema West to Gowrie which would both be greenfield, the remainder of this route follows an operational QR corridor.

Figure 1 Clarifications to 2010 study working paper No.2, Review of route options

Clarifications to 2010 study Working Paper No. 2, Review of Route Options

A number of points in this working paper have been clarified with the person who led the technical consulting team in the 2010 study. Route segments D10A, D10B, D11A and D11B, and routes DD08 and DD10 all incorporate a bypass of Warwick. The location "Warwick" in bold type on the maps on pages 102 to 106 shows the western end of the bypass; the town of Warwick is shown in lighter type, to the south-east. Route DD08 incorporates segments D10B, D11B and D12B (refer to table 5-19 on page 120); the identification of these segments is not clear in table 5-16 on page 107. In table 5-19 segment D11A Warwick-Clifton should be shown as "hilly and curvy"; it has grades of 1:60 and curves of 200 m radius. Finally, in the same table segment D17C should be shown as Wyreema West (rather than Wyreema) to Gowrie.

The route previously analysed which closely matches the "Southern Connector" is DD08; see option 2 in Figure 3. Route DD08 appears to match the route described in the letter from Southern Downs Council, but the key difference between route DD08 and the route proposed by Southern Downs Council is that DD08 uses the existing corridor but

builds a new track on an improved alignment with substantial deviations to meet Inland Rail standards and improve transit time. The Southern Connector proposes to upgrade the track within the existing corridor on the existing alignment; this proposal fails to recognise the extent to which the existing alignment falls short of Inland Rail standards. The operating QR alignment does not meet the Inland Rail service offering for speed, grade or axle loads and would require the construction of a new alignment in many areas.

Reasons to depart from the existing corridor, listed in the 2010 study, include:

- Flattening of vertical grades from up to 1:50 to 1:100
- Easing of sharp curves from 200m radius to greater than 800m radius
- Construction of new formation and structures beside the existing operational track; existing QR track and structures are rated at 15.75t / axle, Inland Rail requires 30t / axle
- Construction of new heavy rail, concrete sleeper dual gauge track

The Warwick alignment has more vertical climbs for trains which contribute to a longer transit time and result in increased fuel use.

The following table shows the difference in distance and travel time between the Inland Rail route, DD08 and Southern Downs Council "Southern Connector".

Table 1 Distance and travel time between Inland Rail route, DD08 and Southern Downs Council "Southern Connector"

ROUTE SECTION - MOREE TO BRISBANE	TRANSIT TIME	DISTANCE
Inland Rail Route DD02 Moree to Brisbane via North Star, Yelarbon, Inglewood, Millmerran, Cecilvale, Yargullen, Oakey, Gowrie, Gatton, Grandchester, Kagaru Figure 2- (D01, D05, D06, D07, D08, D14, D15, D16, D24, D25, D26 and D28) Figure 3 **- Option 1**	6:04 hrs	487km
Route DD08 Moree to Brisbane via North Star, Yelarbon, Inglewood, Warwick, Clifton, Watts, Wyreema West, Gowrie, Gatton, Grandchester, Kagaru Figure 2- (D01, D05, D06, D10B, D11B, D12B, D19, D17C, D24, D25, D26 and D28) Figure 3**- Option 2**	6:50 hrs	513km
Southern Connector Moree to Brisbane via North Star, Yelarbon, Inglewood, Warwick, Clifton, Watts, Wyreema West, Gowrie, Gatton, Grandchester, Kagaru Figure 2- (D01, D05, D06, D10A, D11A, D12A, D19, D17C, D24, D25, D26 and D28) Figure 3 **- Option 3**	9:00 hrs	515km

The transit time shown above for the Southern Connector has been calculated by combining the times for the relevant sections documented in Working Paper 2. These are transit times for the existing sharply curved, steeply graded alignment, together with a new greenfield section from Wyreema West to Gowrie.

1.2. Cost comparison

Work undertaken for the 2010 study has provided a cost estimate for route DD08 – the route via Warwick, upgraded to Inland Rail standards – which can be compared with the cost estimate for Inland Rail's route via Millmerran.

For the two routes from Inglewood to Gowrie the comparison is as follows:

- Inland Rail route via Millmerran $936.8 million
- Route DD08 via Warwick $1,391.6 million [1]

It will be seen that the route via Warwick would be, in round figures, $450 million more expensive than the route via Millmerran.

2. CONCLUSION REACHED BY THE 2010 STUDY

Route DD08 (and the similar DD10 via the existing line through the Toowoomba CBD) was dismissed in Working Paper 2 (at the middle of page 115) with the statement "a route from Warwick to Clifton then up through Watts [between Clifton and Wyreema] to Gowrie, for an eventual range crossing is possible, but would be the longest route and most indirect way to traverse the total route". As a result Appendix E to the IRAS Final Report, on Route Development, made no reference to this route option and it was not included in cost comparisons.

3. CONCLUSION OF THIS REVIEW

Drawing on the data in Working Paper 2 from the 2010 study, it is possible to calculate that the Southern Connector route, making use of the existing Queensland rail alignment (where available) from Inglewood via Warwick to Gowrie, would have a transit time almost three hours longer than the Inland Rail route via Millmerran. Even with substantial deviations to achieve Inland Rail's alignment standards, the Warwick route would be 26km longer, would add 46 minutes to transit time and would cost approximately $450 million more than the route via Millmerran.

[1] These prices are Base Estimate prices and exclude risk (possibly up to 30%) and are indicative budget estimates only (pre-concept). The prices exclude land purchase costs. Estimates incorporate current Inland Rail rates and prices, and exclude escalation. For the Warwick route, rates have considered the provisional quantities and nature of the terrain as indicated in the 2010 model pricing spreadsheet.

Figure 2 Area overview plan from 2010 Study Working Paper No. 2

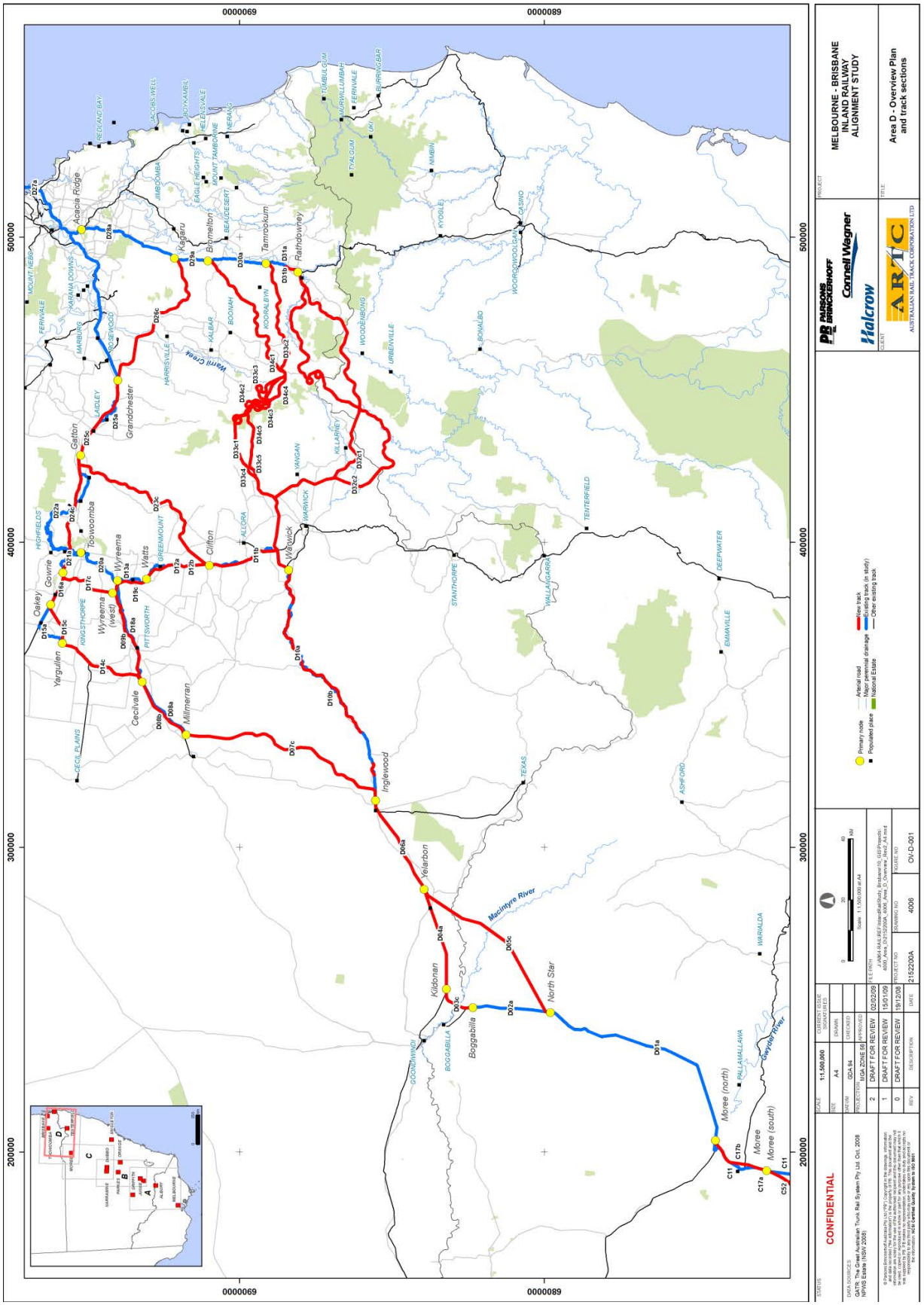


Figure 3 Alternative routes from Inglewood to Gowrie

Document 13

Australian Government

ARTC

INLAND RAIL – COMPARISON OF 2010 ROUTE AND WARWICK OPTION

InlandRail

s.47F(1) , SENIOR PROJECT ADVISOR

OBJECTIVE

- To document the analysis of the Inland Rail route option from Inglewood via Warwick to Gowrie, compared with the route adopted by the 2010 study, from Inglewood via Millmerran to Gowrie.

Route options were analysed and reported in Working Paper No. 2 from the Melbourne-Brisbane Inland Rail Alignment Study, now referred to as the 2010 study.

The Warwick route is currently being termed the “Southern Connector” by Southern Downs Regional Council. It closely matches one of the routes investigated by the 2010 study. The Southern Connector route was among many alternatives considered in that study.

ROUTE OPTIONS VIA MILLMERRAN AND WARWICK

- 36 potential routes from Moree North (Camurra) to Acacia Ridge were analysed in the 2010 study and are documented in Working Paper 2. They varied in length from 480km to more than 600km.

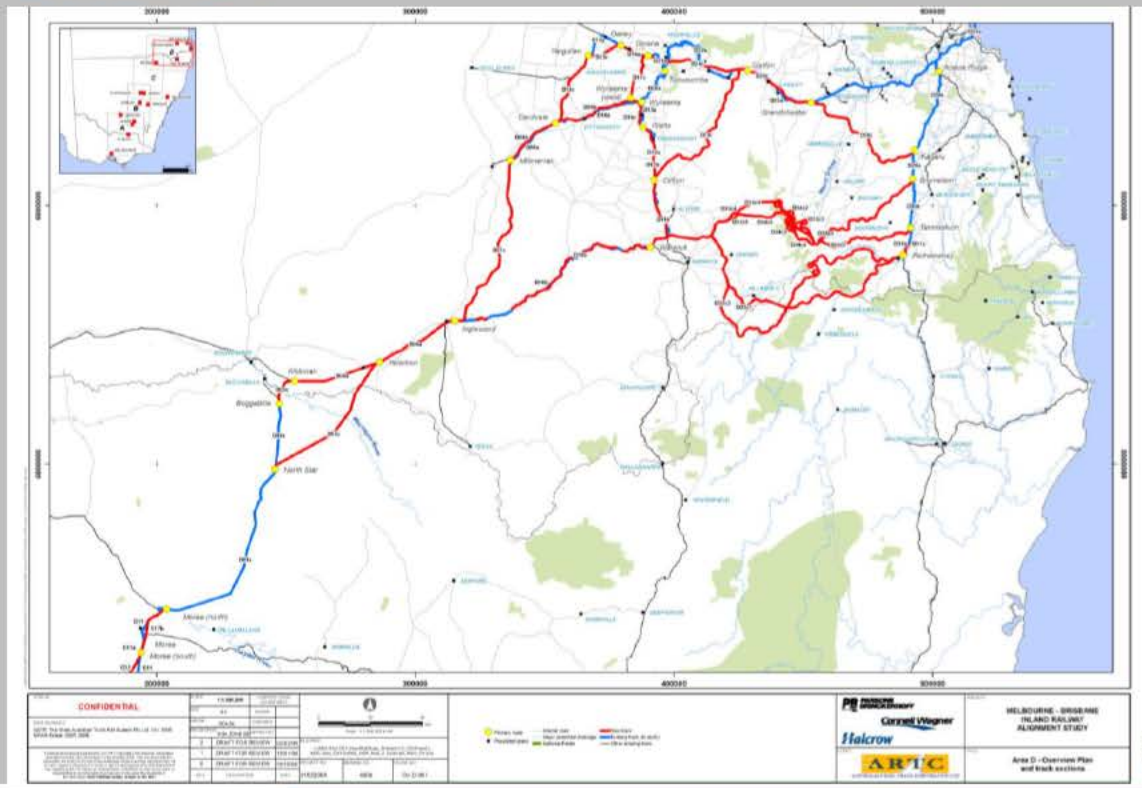
- The route adopted by the 2010 study between Inglewood and Gowrie runs via Millmerran, Brookstead and Mount Tyson to reach the Queensland Rai western line west of Gowrie. This route is a mixture of greenfield and sections of mostly non-operational QR corridor. The adopted Inland Rail Route was designated route DD02 in the 2010 Study.

- The "Southern Connector" route runs from Inglewood via Karara, Warwick (with a cut-off avoiding going into and out of that town), Clifton, Wyreema, then west of Wellcamp Airport to again reach the QR Western line west of Gowrie.

- With the exception of the Warwick cut-off and the section from Wyreema West to Gowrie which would both be greenfield, the remainder of this route follows an operational QR corridor.

InlandRail

INLAND RAIL ROUTES FROM MOREE TO BRISBANE EXAMINED IN THE 2010 STUDY



Source: Inland Rail Alignment Study Working Paper No. 2

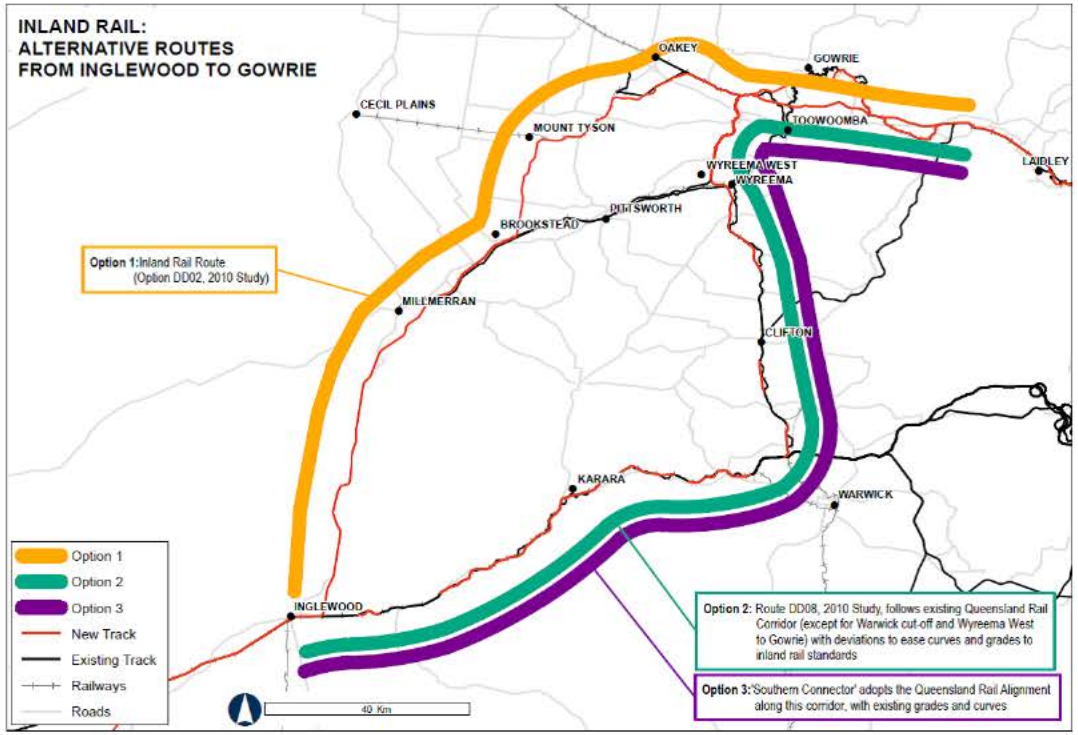
ARTC InlandRail

SOUTHERN CONNECTOR ROUTE

- The route previously analysed which closely matches the Southern Connector is DD08.
- The key difference between route DD08 and the Southern Connector is that DD08 uses the existing corridor but builds a new track on an improved alignment with substantial deviations to meet Inland Rail standards and improve transit time.
- The Southern Connector proposes to upgrade the track within the existing corridor on the existing alignment; this fails to recognise the extent to which the existing alignment falls short of Inland Rail standards. The operating QR alignment does not meet the Inland Rail service offering for speed, grade or axle loads.
- Reasons to depart from the existing corridor include:
    - Flattening of vertical grades from up to 1:50 to 1:100
    - Easing of sharp curves from 200m radius to greater than 800m radius
    - Construction of new formation and structures beside the existing operational track; existing QR track and structures are rated at 15.75t/axle, Inland Rail requires 30t/axle
    - Construction of new heavy rail, concrete sleeper dual gauge track
- The Warwick alignment has more vertical climbs for trains which contribute to a longer transit time and increased fuel use.

InlandRail

ALTERNATIVE ROUTES FROM INGLEWOOD TO GOWRIE



ARTC InlandRail

InlandRail

COMPARISON OF DISTANCES AND TRAVEL TIMES

Route Section: Moree to Brisbane	Transit Time	Distance
Inland Rail Route DD02 – via Millmerran Moree to Brisbane via North Star, Yelarbon, Inglewood, Millmerran, Cecilvale, Yargullen, Oakey, Gowrie, Gatton, Grandchester, Kagaru	6:04 hrs	487km
Route DD08 – via Warwick with upgrading Moree to Brisbane via North Star, Yelarbon, Inglewood, Warwick, Clifton, Watts, Wyreema West, Gowrie, Gatton, Grandchester, Kagaru	6:50 hrs	513km
Southern Connector – via Warwick following existing corridor Moree to Brisbane via North Star, Yelarbon, Inglewood, Warwick, Clifton, Watts, Wyreema West, Gowrie, Gatton, Grandchester, Kagaru	9:00 hrs	515km

The transit time for the Southern Connector is for the existing alignment with its sharp curves and steep grades, together with a new greenfield section from Wyreema West to Gowrie.

COSTS

Work undertaken for the 2010 study has enabled a cost comparison of the two routes – Inland Rail via Millmerran and the Warwick route upgraded to Inland Rail standards.

For the two routes from Inglewood to Gowrie the comparison is as follows:

- Inland Rail route via Millmerran $936.8 million
- Route DD08 via Warwick $1,391.6 million

The route via Warwick would be, in round figures, $450 million more expensive than the route via Millmerran.

Costs are indicative budget estimates only for comparative purposes. They reflect 2016 pricing.

CONCLUSION REACHED BY THE 2010 STUDY

- Route DD08 (and the similar DD10 via the existing line through the Toowoomba CBD) was dismissed in Working Paper 2 with the statement “a route from Warwick to Clifton then up through Watts [between Clifton and Wyreema] to Gowrie, for an eventual range crossing is possible, but would be the longest route and most indirect way to traverse the total route”.

- As a result Appendix E to the IRAS Final Report, on Route Development, made no reference to this route option and it was not included in cost comparisons.

CONCLUSION OF THIS REVIEW

- Drawing on the data in Working Paper 2 from the 2010 study, it is possible to calculate that the Southern Connector route, making use of the existing Queensland rail alignment (where available) from Inglewood via Warwick to Gowrie, would have a transit time almost three hours longer than the Inland Rail route via Millmerran.

- Even with substantial deviations to achieve Inland Rail's alignment standards, the Warwick route would be 26km longer, would add 46 minutes to transit time and would cost approximately $450 million more than the route via Millmerran.

Document 14

LEWIS Sarah

From: WOOD Richard
Sent: Monday, 8 August 2016 4:40 PM
To: s.22(1)(a)(ii) ; s.22(1)(a)(ii); s.22(1)(a)(ii); s.22(1)(a)(ii) ; s.22(1)(a)(ii) (s.22(1)(a)(ii)@infrastructure.gov.au); s.22(1)(a)(ii)
Subject: FW: Options maps for Toowoomba to Border [SEC=UNCLASSIFIED]
Attachments: Alignment options Toowoomba to NSW Border.doc; MBIR_LL_Hydro_A4P_revF.jpg

FYI and for file

From: s.47F(1) [mailto:s.47F(1) @tmr.qld.gov.au]
Sent: Monday, 8 August 2016 2:38 PM
To: WOOD Richard
Subject: Options maps for Toowoomba to Border

Richard

Sorry for not getting back sooner had troubles with getting the maps originally as they were I reports. I have two maps on the options the one I showed you which is a flood/hydrology one and another map which has the three main options that are raised (and their sub options) which we use to highlight to senior management noting that 36 options were originally considered.

It would be good to catch up again when you are up in this way.

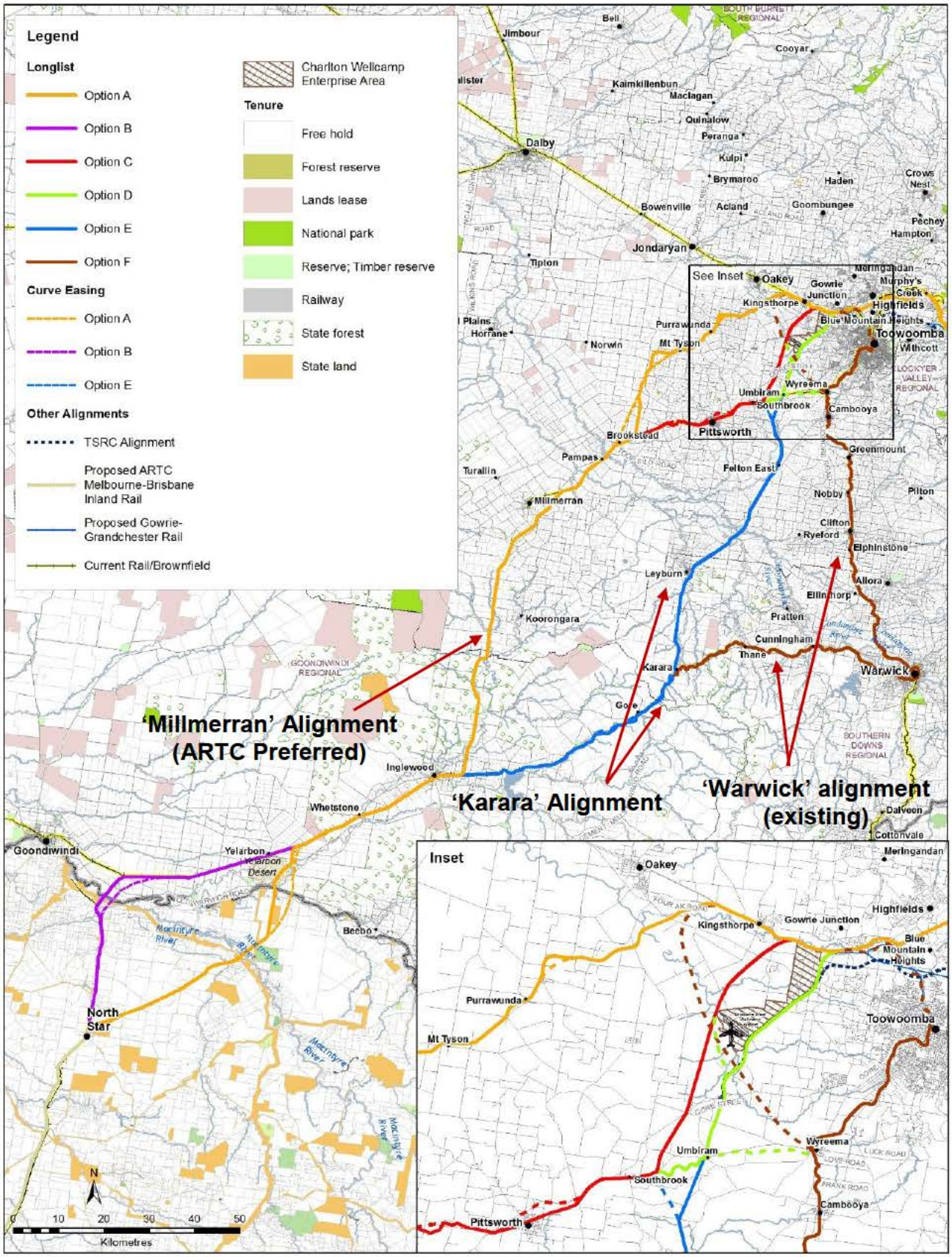
s.47F(1)

s.47F(1)
Director Planning Programs
Policy, Planning and Investment Branch | Department of Transport and Main Roads
Floor 3 | Brisbane - Terrica Place | 140 Creek Street | Brisbane Qld 4000
GPO Box 213 | Brisbane Qld

t s.47F(1) | **m** s.47F(1)
e s.47F(1) @tmr.qld.gov.au
W: www.tmr.qld.gov.au

Map showing Toowoomba to NSW Border Alignment options

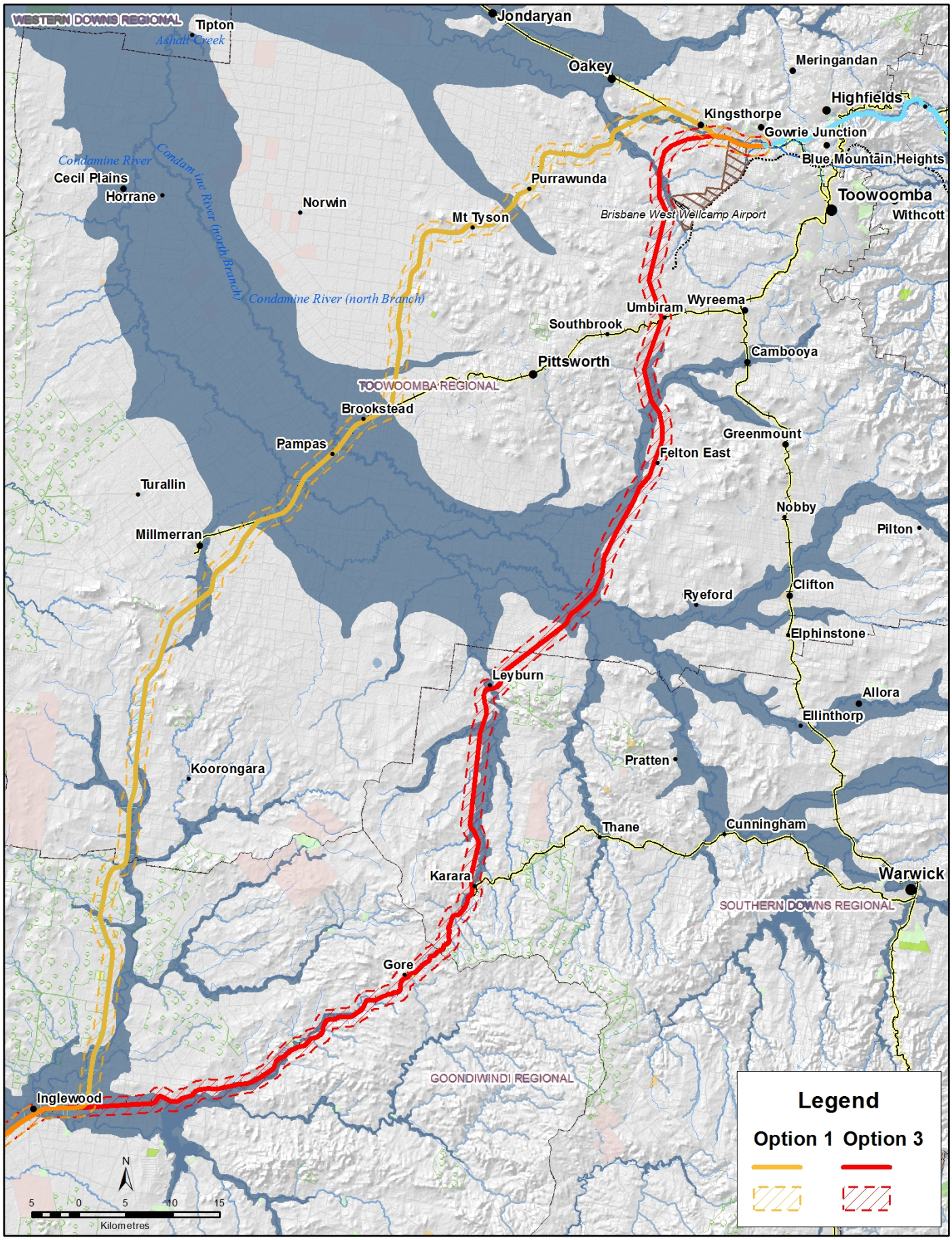
MBIR OPTIONS - LONGLIST



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-001 REVISION E CREATED BY rm4880 DATE 26/06/2015 Time: 1:42:36 PM	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	Queensland Government
COORDINATE SYSTEM GCS GDA 1994 PAGE SIZE A3 SCALE 1:750,000	SOURCE Bing Maps, QLD Govt	Copyright SMEC Australia Pty Ltd. All Rights Reserved.	CONSULTANT SMEC Australia

Path: R:\PROJECTS\30031383\Products\MXD\RevE\30031383_MBIR_LL_A3L_revE.mxd

Document 16



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-101 REVISION F CREATED BY EH11799 DATE 14/12/2015 Time: 5:03:01 PM	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	Queensland Government
COORDINATE SYSTEM GDA 1994 MGA Zone 56 PAGE SIZE A4 SCALE 1:500,000	SOURCE Bing Maps, QLD Govt		CONSULTANT SMEC Australia

Path: R:\PROJECTS\30031383\Products\MXD\30031383_MBIR_LL_Hydro_A4P_revF.mxd

Document 17

Australian Government
Department of Infrastructure and Regional Development

MINISTERIAL CORRESPONDENCE

Office of the Hon Darren Chester MP

PDR: MC16-004122
Due at MPS:
8 / 09 / 2016

OFFICE ADVICE

TIMEFRAME

- ☑ Standard (10 days)
- ☐ Urgent (5 days)
- ☐ Other:

ACTION

Reply:

- ☑ Minister
- ☐ Chief of Staff
- ☐ Department

Refer:

- ☐ State / territory Minister (Chief of Staff reply):
- ☐ Commonwealth Minister (MPS reply):

Other:

- ☐ Brief
- ☐ Department to determine appropriate action
- ☐ File – for information only
- ☐ Standard words

COMMENTS/INSTRUCTIONS

RECEIVED MPS
16 AUG 2016

Adviser: MH
Date: 16 / 8 / 2016
☐ Call DLO to discuss

DEPARTMENT ADMINISTRATION

Referred to adviser

BC	(MH)	SC
MD	RC	

Date referred: 15 / 8 / 2016
DLO: (AT) SP

Referred to division

A&A	LG&T	STP
Corp	OTS	WSU
(II)	P&R	

☐ Please seek input from other division/agency:

Other information

☐ Referred from:

☐ Relates to PDMS item/s:

Document 17

s.22(1)(a)(ii)

From: s.47F(1) (D. Chester, MP) <s.47F(1) @aph.gov.au> on behalf of Chester, Darren (MP) <Darren.Chester.MP@aph.gov.au>
Sent: Friday, 12 August 2016 2:13 PM
To: Minister Chester
Subject: FW: Inland Rail - Southern Downs Connector
Attachments: Minister for Infrastructure and Transport re Inland Rail - Southern Downs Connector.pdf

s.47F(1)
Diary Manager/Electorate Officer
Office of Darren Chester MP
Federal Member for Gippsland
Minister for Infrastructure and Transport
ph s.47F(1)
www.darrenchester.com
Canberra: 02 6277 7776
#lovegippsland

From: s.47F(1) [mailto:s.47F(1) @sdrc.qld.gov.au]
Sent: Friday, 12 August 2016 1:15 PM
To: Chester, Darren (MP)
Subject: Inland Rail - Southern Downs Connector

Dear Minister

Please find attached a letter from Mayor Tracy Dobie in relation to the Inland Rail Project and the Southern Downs Connector.

Regards

s.47F(1)
PA TO MAYOR & CEO
Southern Downs Regional Council
t 1300 MY SDRC (1300 697 372)
f 07 4661 0333
s.47F(1) @sdrc.qld.gov.au
www.sdrc.qld.gov.au | Follow us on Facebook
Get involved, get the MySDRC App!

Southern Downs
REGIONAL COUNCIL

Document 17

Southern Downs
REGIONAL COUNCIL

Please address all communications to:
The Chief Executive Officer
Southern Downs
Regional Council
PO Box 26
Warwick Qld 4370

mail@sdrc.qld.gov.au
www.sdrc.qld.gov.au

abn 59 786 792 651

Warwick Office
64 Fitzroy Street
Warwick Qld 4370

Stanthorpe Office
61 Marsh Street
Stanthorpe Qld 4380

t **1300 MY SDRC**
(1300 697 372)

f **07 4661 0333**

Our Ref: TD:MES

12 August 2016

The Hon Darren Chester MP
Minister for Infrastructure and Transport
PO Box 6022
House of Representatives
Parliament House
CANBERRA ACT 2600

Dear Minister

Re: Inland Rail – Southern Downs Connector

As Mayor of the Southern Downs Regional Council I believe that we need to be proactive in our approach to managing the future and no more so than with the proposed Inland Rail route. This is an important project that has the potential to bring enormous economic benefit for all of Australia as well as selected regions that are proactive enough to realise and take advantage of the opportunities. You may recall I raised this issue with you when you visited the Southern Downs prior to the Federal Election.

I was disappointed to find, via Reference A postscript, that the Australian Rail Track Corporation (ARTC) has been advised by the Federal Government to adhere to the 2010 Inland Rail alignment, even though there have been significant new developments in the last six years, not least of which is Wellcamp Airport.

The Southern Downs Regional Council formally requests that the Federal Government consider not supporting the current proposed route of the Inland Rail from Inglewood via Millmerran to Toowoomba and instead support the proposed Southern Downs Connector from Inglewood via Warwick to Toowoomba.

- The route Inglewood-Millmerran-Toowoomba has high risk, high cost, and has a severe impact on prime agricultural land.
- The Southern Downs Regional Council's proposed option of Inglewood-Warwick-Toowoomba makes use of existing rail corridor and would have significant savings in land acquisition costs.
- A Southern Downs connection would service Wellcamp Airport and the proposed Interlink SQ. The current route via the proposed Interlink SQ fails to take into account that the Wellcamp Airport is operational and intermodal connectivity via both locations makes more sense.
- ARTC has not adequately investigated the Inglewood-Warwick-Toowoomba route because it was not included as a Route Option in Reference B:
    - How can ARTC or the Federal Government claim the Inland Rail is following the optimum route?
    - How can ARTC claim the proposed route was discounted as being $450m more expensive and three hours slower when it was not assessed as a Route Option in the 2010 Study at Reference B?

- Once the Inland Rail is commissioned, the State Government will be under no obligation to maintain the existing South West Rail Line from Toowoomba to Thallon via Warwick. ARTC (via Reference A) is obligated to provide a connection for this South West Rail Line to the Inland Rail near to the proposed tunnel entry but advised that is no guarantee this line will remain open.

- Southern Downs' strong contribution to the Australian economy would be significantly diminished by the Federal and State Governments abandoning the region's rail connectivity through faulty decision making without due consideration of the facts.

The Southern Downs region, and more specifically Warwick, is a logistics hub. Wickhams Freighters, Hardy's Haulage and Frasers Transport are just three, of a number of firms, involved in the movement of large components of freight to destinations locally and interstate.

John Dee, Grove Juice and GrainX generate large quantities of agricultural produce for distribution across the state, interstate and overseas as do the fruit and vegetable growers located in Stanthorpe in the south of the municipality.

Big W continues to operate one of Australia's largest distribution centres in Warwick and at present there are a number of other businesses seeking to establish in Warwick to obtain a competitive advantage from Warwick's strategic location.

Evidence of the strategic importance of Warwick is that GrainX moves approximately 3,000 containers a year and Big W the equivalent of 4,000 a year. This is a significant volume of container freight, and it should be noted that GrainX was the biggest container exporter of any Grain Plant operator in Queensland at the end of 2015.

It is noted that whilst Toowoomba refers to its proposed Interlink Hub as the only obvious choice in intermodal distribution, the Southern Downs region already has approved the Hendon Intermodal Facility as part of the East West Road and Rail Project. This encompasses a private rail corridor which would link to the existing Queensland Rail network, and also link to the Inland Rail should the route come through the Southern Downs.

In the Southern Downs region the leading sectors by value in 2014/15 were Transport, Postal and Warehousing ($191.2 million) and Agriculture ($182.7 million). From 2009-2015 the Transport, Postal and Warehousing Sector of the Southern Downs has grown by 107.6%. Based on this data it is clear that Warwick and the Southern Downs make a significant contribution to the freight and logistics infrastructure of Queensland, as well as being a major producer and processor of agricultural output.

With the above in mind, the Southern Downs Regional Council formally requests that the State Government consider not supporting the current proposed route of the Inland Rail from Inglewood via Millmerran to Toowoomba and instead support the proposed Southern Downs Connector from Inglewood via Warwick to Toowoomba.

On the current proposed route, a new corridor needs to be acquired between Inglewood and Millmerran. The length of this route is 63 kilometres and Southern Downs Regional Council believes that there will be some physical challenges associated with this route. In addition there is a proposed 52 kilometres of new line, to be constructed through mainly laser levelled, flood irrigated, prime agricultural cropping land, with much of this area being black soil. Southern Downs Regional Council believes that any proposed route should avoid highly productive agricultural land wherever possible.

As an alternative to the proposed route, Southern Downs Regional Council is proposing the 4.5 kilometre Southern Downs Connector, which reduces the overall route distance by 20 kilometres and by-passes the residential area of Warwick. A route reduction of 20 kilometres has the potential to reduce construction costs by as much as $400million, based on construction being estimated at $20million per kilometre.

The use of the existing rail corridor is the key to managing the costs and scale of the project. Using the existing corridor will provide businesses involved in transport and warehousing as well as import and export customers the opportunity of an exceptional distribution point from rail onto major highway networks which connect in the Southern Downs. It is submitted that the alteration of the route to proceed via the Southern Downs Connector utilises much of the existing rail corridor, which will require upgrading and some straightening to achieve the engineering standards for the Inland Rail, but does not require new track to be constructed through prime agricultural land.

The proposed route of the Southern Downs Connector would also service the new Wellcamp International Airport, a facility that was not even proposed when the original studies were undertaken for the Inland Rail. Wellcamp Airport is a welcome addition to the region and will become an integral component of the freight and logistics chain in Queensland. Wellcamp Airport has been designated as a "strategic airport" in the State Planning Policy.

In addition to the freight component, proximity of rail to the airport may allow at some stage for passenger access via rail for domestic and international flights. It is noted that the opportunity for a rail connection to an airport is most sought after by the operators of other airports around Australia.

It is envisaged that connectivity to the Port of Brisbane will be enhanced, servicing the existing and proposed freight distribution facilities and services in Warwick. These are forecast to increase over the next decade in relation to levels of investment and the diversity of services supplied.

Yours faithfully

Tracy Dobie
Mayor

Cc:

Hon Barnaby Joyce MP, Deputy Prime Minister
Senator Fiona Nash, Minister for Regional Development
Hon David Littleproud, MP
Senator Matthew Canavan, Minister for Resources and Northern Australia

References:

A. Meeting with s.47F(1) and s.47F(1) of Australian Rail Track Corporation (ARTC) 4 August 2016
B. ARTC, Melbourne-Brisbane Inland Rail Alignment Study, Working Paper No 2, Review of Route Options
C. ARTC, Melbourne-Brisbane Inland Rail Alignment Final Report, July 2010
D. Meeting with Mr Richard Wood, Department of Infrastructure and Regional Development 22 June 2016
E. Meetings with Hon Darren Chester MP, Senator Fiona Nash, Senator Matthew Canavan and David Littleproud MP

Melbourne-Brisbane Inland Railway

Inland Rail Steering Committee – DRAFT Summary of Outcomes

Meeting: 11:00am – 12:30pm, Friday 19 August 2016

Participants:
Shane Carmody, Deputy Secretary and Chair, Department of Infrastructure and Regional Development
Mark Thomann, Executive Director Infrastructure Investment
Richard Wood General Manager, Department of Infrastructure and Regional Development
s.22(1)(a)(ii) Director, Department of Infrastructure and Regional Development
John Fullerton, Chief Executive Officer and Managing Director, Australian Rail Track Corporation (ARTC)
s.47F(1), Executive General Manager Interstate, ARTC
s.47F(1), Programme Director, ARTC
s.47F(1), Executive General Manager – Strategy and Corporate Development
s.47F(1), Executive General Manager - Interstate, ARTC

Secretariat: s.22(1)(a)(ii) Department of Infrastructure and Regional Development

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
1	s.22(1)(a)(ii)			
2				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
3				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
4				
5				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
6	s.22(1)(a)(ii)			
7	Preconstruction activities	s.47F(1) updated the Committee on the EOI tender, which has been delayed so as to align with market testing process. ARTC noted that every week's delay provides a cost risk. s.47F(1) noted alignment issues around Toowoomba (e.g. Wellcamp Airport) and recommended that the 2010 alignment be cleared with Government so as to close off these issues, with any consideration of alignment changes to be informed by: - Effect - Cost implications - Environmental impacts and - Constructability	ARTC to provide principles for considering alignment changes to the project control group for consideration.	

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
8	Stakeholders	Mr Wood noted the Minister's meeting with the Members for Groom, Parkes and Maranoa. The MPs informed the Minister that the community felt it was not involved in the 2010 alignment, and hasn't been 'brought along' with the process. Mr Wood also noted that two of the MPs (Mr Mcveigh and Mr Littleproud) would appreciate a briefing from ARTC. ARTC and Infrastructure will work on a communications strategy, including possibly using an eminent person as main engager. Mark Thomann referenced the WestConnex project and Pacific Highway as two projects that could be informative.	ARTC and Infrastructure to finalise the new communications strategy ARTC to meet with Mr Mcveigh and Mr Littleproud.	[TBD]
9	s.22(1)(a)(ii)			
10				

Australian Government
Department of Infrastructure and Regional Development

Brief for Infrastructure for ARTC Monthly Meeting – Monday 22 August 2016

1. Welcome and Apologies

- There are no apologies for this meeting.

2. Review / Acceptance of Minutes

- We recommend you accept the minutes from the last meeting on 22 July 2016.

3. Review of Action Items

s.22(1)(a)(ii)

- **3.4 Letter from Southern Downs Regional Council.** You will need to close off this item.

s.22(1)(a)(ii)

Australian Government

Department of Infrastructure and Regional Development

s.22(1)(a)(ii)

[redacted]

Australian Government
Department of Infrastructure and Regional Development

Alignment Issues Including Toowoomba, Warwick and Wellcamp

- ARTC wish to continue discussions on alignment issues in Queensland around continued community concern that the proposed alignment will impact productive agricultural land. This is compounded by a continued push for the Warwick route.
- You may like to update the group on the Minister's meeting with the three backbenchers on 16 August 2016, and raise the Minister's request to appoint an independent advisor with an expanded role in stakeholder engagement.
    - The Department will closely engage with ARTC, including in considering ARTC's updated communications and engagement strategy (expected in September 2016) and a workshop with ARTC's Executive General Manager of Corporate Affairs, s.47F(1) .

s.22(1)(a)(ii)

Australian Government

BUILDING OUR FUTURE +

Inland Rail Programme Control Group Meeting

Meeting No. 2016-08

Date/Time: Monday 22 August 2016 (11:00am-1:00pm)

Venue: Department of Infrastructure and Regional Development
Flynn Room, 111 Alinga Street, Canberra, ACT.

Participants:

Department of Infrastructure and Regional Development (DIRD)	**ARTC**	
Richard Wood (RW)	s.47F(1)	- Chairman
s.22(1)(a)(ii)	s.47F(1)	
s.22(1)(a)(ii)	s.47F(1)	
s.22(1)(a)(ii)	s.47F(1)	- Secretary
s.22(1)(a)(ii)		
s.22(1)(a)(ii)		

Minutes & action list

Ref	Item	Detail	Action by	When
1.	s.22(1)(a)(ii)			
1.1				
2.				
2.1				
3.				
3.1				
3.2				

Ref	Item	Detail	Action by	When
3.3	s.22(1)(a)(ii)			
3.4	Alignment Issues / Community Consultation	RW mentioned that Minister Chester has met with local MPs from Parkes (Mark Coulton), Maranoa (David Littleproud), and Groom (John McVeigh) to discuss the Inland Rail alignment.	Noted	
		s.22(1 explained there had been 260 successful community consultations, meetings and workshops concerning the Programme staged between January 2016 and July 2016.		
		Details of ARTC community consultation were provided in the Phase 1 Concept Assessment Consultation Outcomes Report submitted to the PCG on 1 August 2016. Further community activities are planned as a part of Continuity Works.		
		(POSTSCRIPT: Further details regarding the timing of meetings and future consultations were provided separately to participants on 23 August 2016).	Noted	Closed
		ARTC presented a draft paper outlining the process and criteria going forward to assess future refinement of the existing Inland Rail alignment.		
		(ACTION: DIRD to prepare advice to Minister)	DIRD	ASAP
		ARTC tabled a sample of a report documenting the detailed 2010 IRAS analysis and will prepare similar reports for all 'hot spots' along the alignment.		
		(**ACTION:** ARTC to prepare alignment review reports)	ARTC	Sept
3.5	Wellcamp Alignment Study	The proposal to vary existing rail alignment to provide a connection to Wellcamp Airport was reviewed. A cost estimate to prepare concept design costing $198K was presented.	DIRD (RW/s.22(1)(a	Sept
		(ACTION: DIRD to confirm whether ARTC should proceed with Wellcamp concept design)		
		(**POSTRCTIPT:** ARTC's letter dated 6 September 2016 seeking confirmation to proceed with Wellcamp Alignment Study. Funding by way of release under PPR03 risk contingency)		
3.6	Letter from Southern Downs Regional Council	Letter presented in June 2016 PCG dated 16 June questioning why Warwick was not on Inland Rail's preferred alignment. ARTC provided input towards a DIRD response. In addition, s.47F(1) met with Mayor Dobie in Brisbane on 4 August 2016	Noted	

Ref	Item	Detail	Action by	When
		(**ACTION:** DIRD to respond to Southern Downs Regional Council letter.)	DIRD (RW/s.22(1)(a	Sept
3.7	Letter from Minister for Northern Australia	In addition to the letter from the Southern Downs Regional Council (Item 3.4), DIRD advised it had received a letter from the Minister for Northern Australia (Minister Canavan) regarding Inland Rail. (**ACTION:** DIRD to determine/seek ARTC input prior to preparing response)	DIRD (RW)	Sept
3.8	s.22(1)(a)(ii)			
3.9				
4.				
4.1				
4.2				
5.				

Ref	Item	Detail	Action by	When
5.1	s.22(1)(a)(ii)			
5.2				
5.3				
6.				
6.1				
7.				
7.1				
7.2				
8.				
8.1				

Document 21

s.22(1)(a)(ii)

From: John Fullerton <s.47F(1) @artc.com.au>
Sent: Tuesday, 23 August 2016 6:01 PM
To: WOOD Richard
Subject: FW: Letter to Mr Fullerton
Attachments: Letter 16.08.23 John Fullerton.pdf

fyi

John Fullerton
CEO And Managing Director
Office of CEO

ARTC

P. s.47F(1)
M. s.47F(1)
E. s.47F(1) @artc.com.au

Australian Rail Track Corporation
11 Sir Donald Bradman Drive
Keswick Terminal SA 5035

artc.com.au

From: s.47F(1)
Sent: Tuesday, 23 August 2016 5:55 PM
To: John Fullerton
Subject: FW: Letter to Mr Fullerton

John,

Forwarded for your review and please let me know what action you would like taken to prepare a response.

s.47F(1)

s.47F(1)
Executive Assistant
Office of CEO

ARTC

P. s.47F(1)
M. s.47F(1)
E. s.47F(1) @ARTC.com.au

Australian Rail Track Corporation
11 Sir Donald Bradman Drive
Keswick Terminal SA 5035

artc.com.au

From: s.47F(1) [mailto s.47F(1) @tsbe.com.au]
Sent: Tuesday, 23 August 2016 5:02 PM
To: s.47F(1)
Subject: Letter to Mr Fullerton

Dear Mr Fullerton

Please find attached a letter from Shane Charles from TSBE.

Regards
s.47F(1)

s.47F(1)
Executive Assistant
P s.47F(1) | **M** s.47F(1)
E s.47F(1) @tsbe.com.au | **W** www.tsbe.com.au
Post PO Box 658, Toowoomba, QLD 4350
Visit 137 Herries Street, Toowoomba, QLD 4350


History is only made once
Last economy tickets selling now from $5800
Bookings close
Midnight 30 September 2016
TSBE
ACCESSCHINA
OCTOBER 2016

Document 22

TSBE
Toowoomba and Surat Basin Enterprise

PO Box 658,
137 Herries Street,
Toowoomba QLD 4350
P +61 7 4639 4600
F +61 7 4639 3416
W www.tsbe.com.au
ABN 85 155 004 523

23 August 2016

John Fullerton
Chief Executive Officer and Managing Director of ARTC
Via email: s.47F(1) @artc.com.au

Dear Mr Fullerton,

Recently, following some commentary in the media by local politicians, TSBE called a meeting of local politicians, and significant project owners. Those attending included, amongst others:

- Mayor Paul Antonio
- David Littleproud MP
- John McVeigh MP
- Pat Weir MP
- John Wagner, Wagner Group of Companies
- Michelle Reynolds, Interlink SQ

The purpose of this meeting was to ensure that all local leaders gave the same story when it comes to Inland Rail. As you are aware, we are all, (to varying degrees) being lobbied by Martin Albrecht of NTR, and many are interested in eventual track alignment, etc. What became apparent is that there are a few issues on which we would like further information. As such, the group resolved to write to you and ask that you meet with the group at your convenience to discuss some issues. In particular:

1. Track alignment and project timelines. The group as a whole thought it important to ensure that passenger rail to the Brisbane West Wellcamp Airport was important in some capacity. Given that the airport was not even contemplated when the original track alignment studies were done, is it possible to now contemplate that in terms of a corridor.

2. Stakeholder engagement. The group was concerned that poor stakeholder management has led to unhelpful local media and public concern. The group would like to express their concerns to you about this, and also to hear what ARTC have done in this regard to date.

3. Given that Southern Downs Regional Council has a number of new councillors and Mayor, and a new federal politicians, Mr Littleproud requested that they be given some specific feedback around the use of the Warwick line rather than taking the track through Millmerran. I understand he was also going to make contact with you direct to discuss this.

I am happy to discuss aspects of this further with you should you require more detail. I look forward to hearing from you.

Yours faithfully,

Shane Charles
Executive Chairman
TSBE

Document 23

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Friday, 26 August 2016 1:02 PM
To: s.22(1)(a)(ii)
Cc: THOMANN Mark; s.22(1)(a)(ii) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii) Carmody Shane
Subject: FW: Presentation to Paul Antonio / John McVeigh [SEC=UNCLASSIFIED]
Attachments: 160808_Y2G_Engagement Slides for Briefing.pptx; G2H presentation slides 250816AB.pptx; Detailed Inland Rail stakeholder consultation meetings september 2015 - July 2016 .pdf

Hi s.22(1)(a)(

Further to our call, I mentioned ARTC are in Toowoomba today. A note on the meeting is below, along with some background.

As discussed, we have a draft media release (for the Minister) on the opening of the Toowoomba shopfront for Inland Rail, which we will look to integrate into a broader consultation release.

We are also doing some work on a broader stakeholder plan and will be discussing with ARCT over the next week or so, as they have a new senior Inland Rail communications person starting next week.

I will explore informally what the Queensland report on the alternative alignment says in comparison to the ARTC report.

s.47C(1)

Regards

Richard

From: s.47F(1) [mailto:s.47F(1)@ARTC.com.au]
Sent: Friday, 26 August 2016 12:30 PM
To: WOOD Richard
Cc: s.47F(1) ; s.47F(1) ; s.47F(1)
Subject: Presentation to Paul Antonio / John McVeigh

Richard

As discussed the meeting went well with Paul Antonio and members from his stakeholder team plus reps from John McVeigh's office this morning

I've attached the material on the consultation stats that I presented, I did not hand out any material.

I also did an overall presentation to them on the project which went down well. They were keen to see the Toowoomba office up and running and would like to be part of the opening !

Paul, is very keen to understand if we are proceeding with looking at an alternative route passed the airport. The response was as discussed , waiting on instruction. He was vocal around the fact any route to the airport should not interfere with the planed inter link terminal.

Regards,

s.47F(1)
Programme Director Inland Rail
Interstate Network

ARTC

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Australian Rail Track Corporation
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Brisbane QLD 4000

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INLAND RAIL ENGAGEMENT PLAN

YELARBON TO GOWRIE

CONCEPT ASSESSMENT PHASE
FEBRUARY – JULY 2016

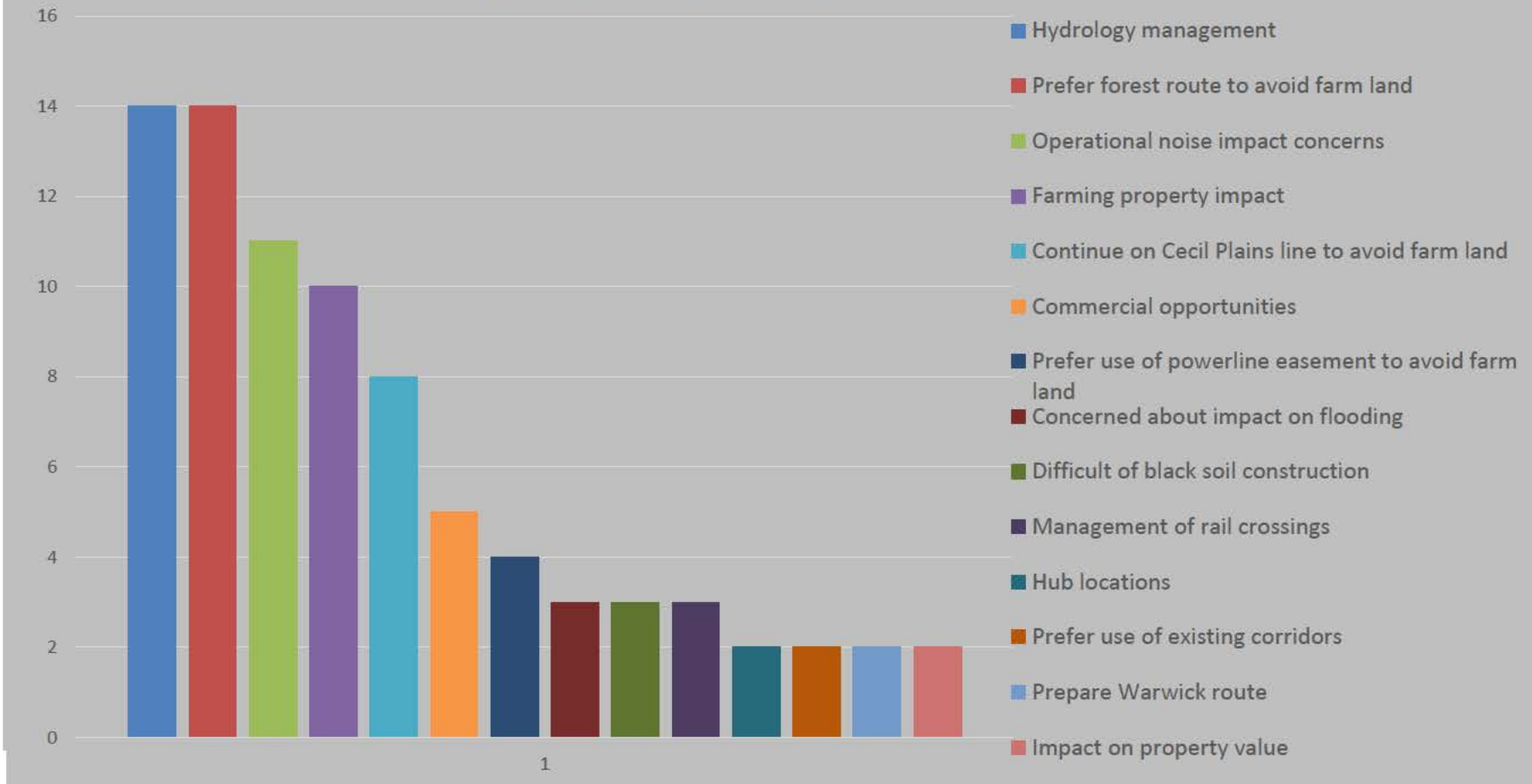
InlandRail

ENGAGEMENT ACTIVITIES – WHAT WE DID

ARTC InlandRail

InlandRail

KEY COMMUNITY ISSUES FROM CONCEPT PHASE



ARTC InlandRail

Document 25

s.22(1)(a)(ii)

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Sent: Monday, 29 August 2016 9:58 AM
To: WOOD Richard
Subject: FW: SMEC report
Attachments: Options Analysis Report - Toowoomba to the Border FINAL - 20150701 - E.pdf

FYI, ARTC were issued this report by DTMR sometime back

Regards,

s.47F(1)
Programme Director Inland Rail
Interstate Network

ARTC

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Document 26

SMEC
Local People. Global Experience.

MBIR Options Analysis Project

Issues Identification and Alignment Refinement of the ARTC Inland Rail Alignment between Toowoomba and the NSW Border

Final Report

1st July 2015

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EXECUTIVE SUMMARY

The Department of Transport and Main Roads (TMR) in conjunction with the Department of State Development (DSD) and Queensland Rail (QR) have been working collaboratively with the Australian Rail Track Corporation (ARTC) to provide advice in relation to the proposed route for the Melbourne to Brisbane Inland Rail (MBIR) project. The work has focussed on the ARTC Melbourne to Brisbane Inland Rail freight route as proposed in 2010, including examining feasible alternative route options that may offer better outcomes for both Queensland and the MBIR itself.

This Issues Identification and Alignment Refinement Report ("the report") is focussed on a refinement of the proposed MBIR alignment between North Star (just south of the NSW border) and Gowrie Junction ("Gowrie"), in Queensland.

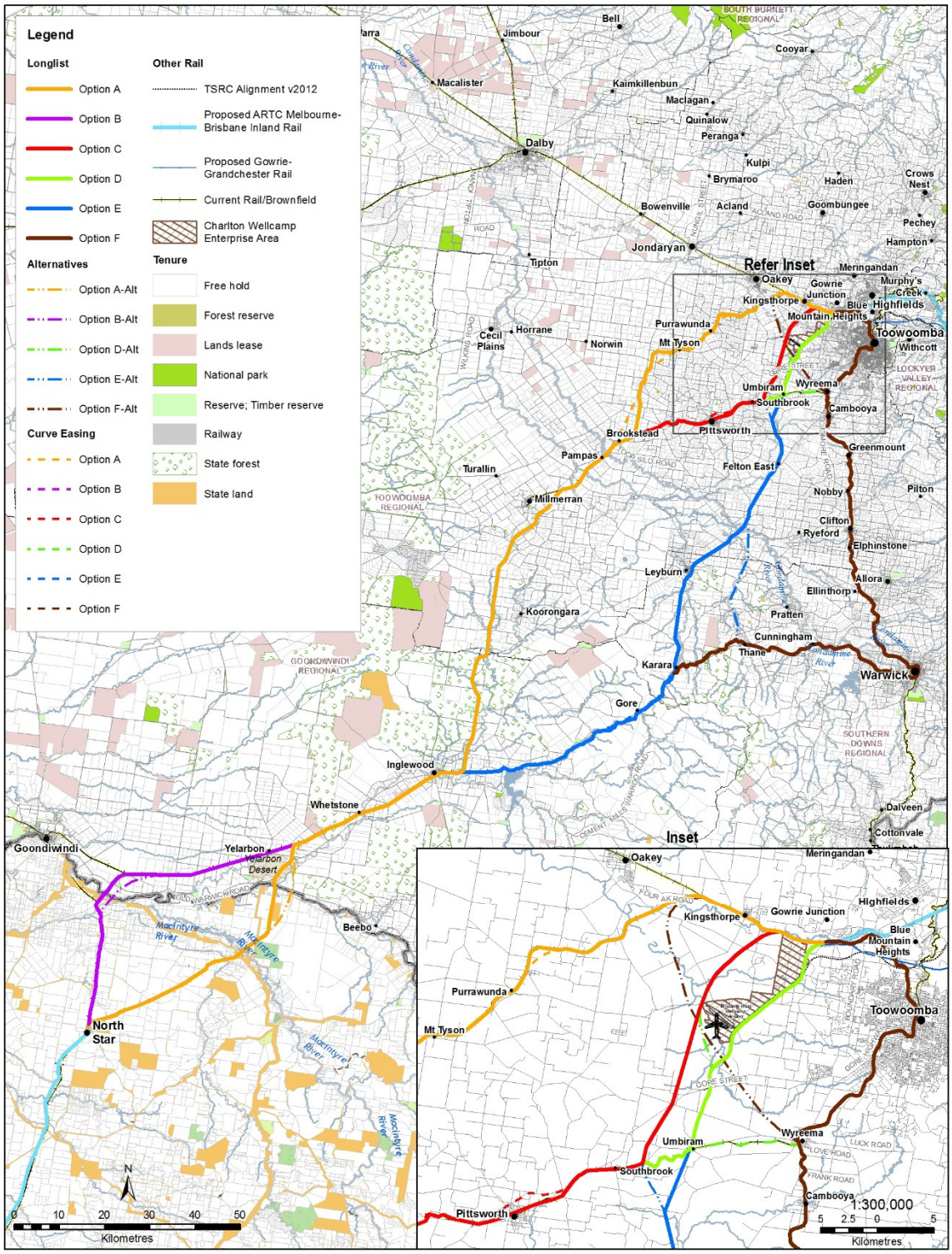
While the ARTC recommended a preferred alignment in their 2010 report, a variety of alternative alignments and deviations were also considered at the time. These, together with deviations identified by TMR and QR as far back as 1996/97, form the basis of this study. Each of the alignment options (including possible alternatives) have been re-considered and assessed against a list of known constraints and assembled as a "Long List" labelled Options A through to Option F. Environmental approval requirements and risks have been identified at the strategic level, with a focus on the Queensland approvals pathway and processes.

Table 1: Alignment Options (Long List)

Option	Description	Comment
A	North Star to Gowrie via Millmerran and Mt Tyson	Main ARTC alignment option for the project. Some minor refinements to this option are identified, but with specific consideration of the Yelarbon desert section.
B	North Star to Yelarbon via Boggabilla	This option is an alternative to the southern extent of Option A, from North Star via Boggabilla to Yelarbon.
C	Brookstead to Gowrie via Pittsworth	This option is an alternative to the northern section of Option A, from Brookstead through Pittsworth and Southbrook to Gowrie, running to west of Charlton Wellcamp.
D	Umbiram to Gowrie	This option provides an alternative to the northern end of Option C, running to the east of Charlton Wellcamp, and can connect to Option C or Option E at Umbiram.
E	Inglewood to Umbiram via Karara (optionally Thane)	This option is an alternative to the central part of Option A. It starts further south than Option C, at Inglewood and runs to Umbiram via Karara (optionally Thane).
F	Karara to Gowrie via west Warwick and Wyreema	Option F provides an alternative to Option E Commencing at Karara it largely follows the existing line towards Warwick, but by-passing it (Wheatvale to Deuchar), and then to Toowoomba, heading west at Wyreema to avoid passing through the centre of the town.

Some specific additional consideration has been given to Option A (ARTC 2010 alignment) south of Yelarbon to avoid the Yelarbon Desert. As opposed to simply aligning Option A further east, Option B brings the alignment closer to Goondiwindi. This may offer some further advantages in having the line closer to the grain sources near Goondiwindi.

MBIR OPTIONS - LONGLIST



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-001 REVISION E CREATED BY EH11799 DATE 1/07/2015 Time: 5:27:49 PM	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	Queensland Government CONSULTANT SMEC Australia
COORDINATE SYSTEM GCS GDA 1994 PAGE SIZE A3 SCALE 1:750,000	SOURCE Bing Maps, QLD Govt	Copyright SMEC Australia Pty Ltd. All Rights Reserved.	

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In developing the Short List, the report has examined a number of major constraints, including the alignment performance, flooding impacts, geotechnical conditions, environmental and land use impacts, service utility impacts, land use and property impacts, community impacts, stakeholder sentiments, and current and future economic opportunities. In addition, the study has reviewed the need for supplementary infrastructure such as the need to replace existing bridge structures and build new bridges. The derived Short List of alignment options has been taken forward as Options 1 through to Option 4. These options represent the most feasible rail alignments between North Star and Gowrie.

Table 2: Long List to Short List Conversion

Long List	Route Description	Short List
Option A (ARTC 2010 alignment)	North Star to Gowrie via Millmerran and Oakey (Gowrie Creek)	Option 1
Option A Option C	North Star to Brookstead Brookstead to Gowrie via Pittsworth and Southbrook	Option 2
Option A Option E Option D	North Star to Inglewood Inglewood to Umbiram Umbiram to Gowrie	Option 3
Option A Option E Option F Option E-Alt Option E Option D	North Star to Inglewood Inglewood to Karara Karara to Thane Thane to Felton South Karara to Umbiram Umbiram to Gowrie	Option 3-Alt
Option A Option E Option F	North Star to Inglewood Inglewood to Karara Karara to Gowrie via West Warwick	Option 4

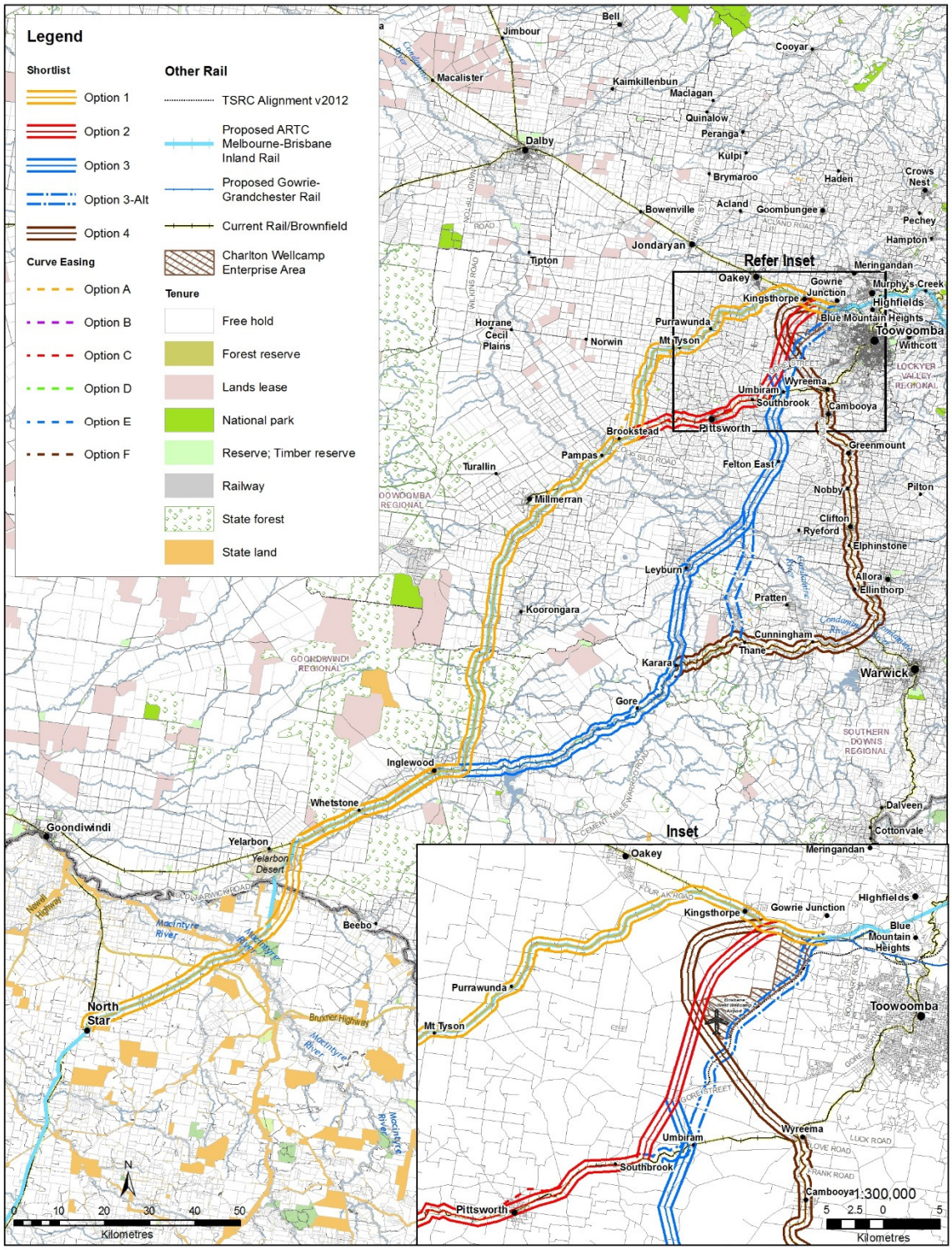
A strategic comparative cost estimates has been prepared for each of the Short Listed options. The results of this assessment is shown in Table 3 below.

Table 3- Strategic Comparative Cost Estimates (2014 dollars)

Option	Description	Cost Estimate ($m)
1	North Star to Gowrie via Millmerran and Mt Tyson – ARTC 2010 alignment	3.07
2	North Star to Gowrie via Brookstead and Pittsworth	2.97
3	North Star to Gowrie via Karara and Umbiram	2.97
4	North Star to Gowrie via west Warwick and Wyreema	5.73

From a cost estimate point of view, Option 4 is the most expensive. However, the cost estimates for Option 1, Option 2 and Option 3 were more closely aligned and could not be used a means to rule out any other options from further consideration.

MBIR OPTIONS - SHORTLIST



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-002 REVISION E	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	
PAGE SIZE A3 SCALE 1:750,000	SOURCE Bing Maps, QLD Govt	Copyright SMEC Australia Pty Ltd. All Rights Reserved.	CONSULTANT SMEC Australia

The need for an alignment that runs west of Brisbane West Wellcamp Airport was another consideration in support of the ongoing economic activity for the region. The work done to date suggests that the most promising alternative is Option 3 North Star to Gowrie via Karara and Umbiram. However further investigations into agricultural, environmental and stakeholder aspects and well as future design development to optimise earthworks and bridge structures will be required to confirm this to be the case.

Based on the desktop investigations and comparative evaluation work that has been undertaken as part of this study to determine a possible alternative MBIR alignment, the following conclusions can be drawn:

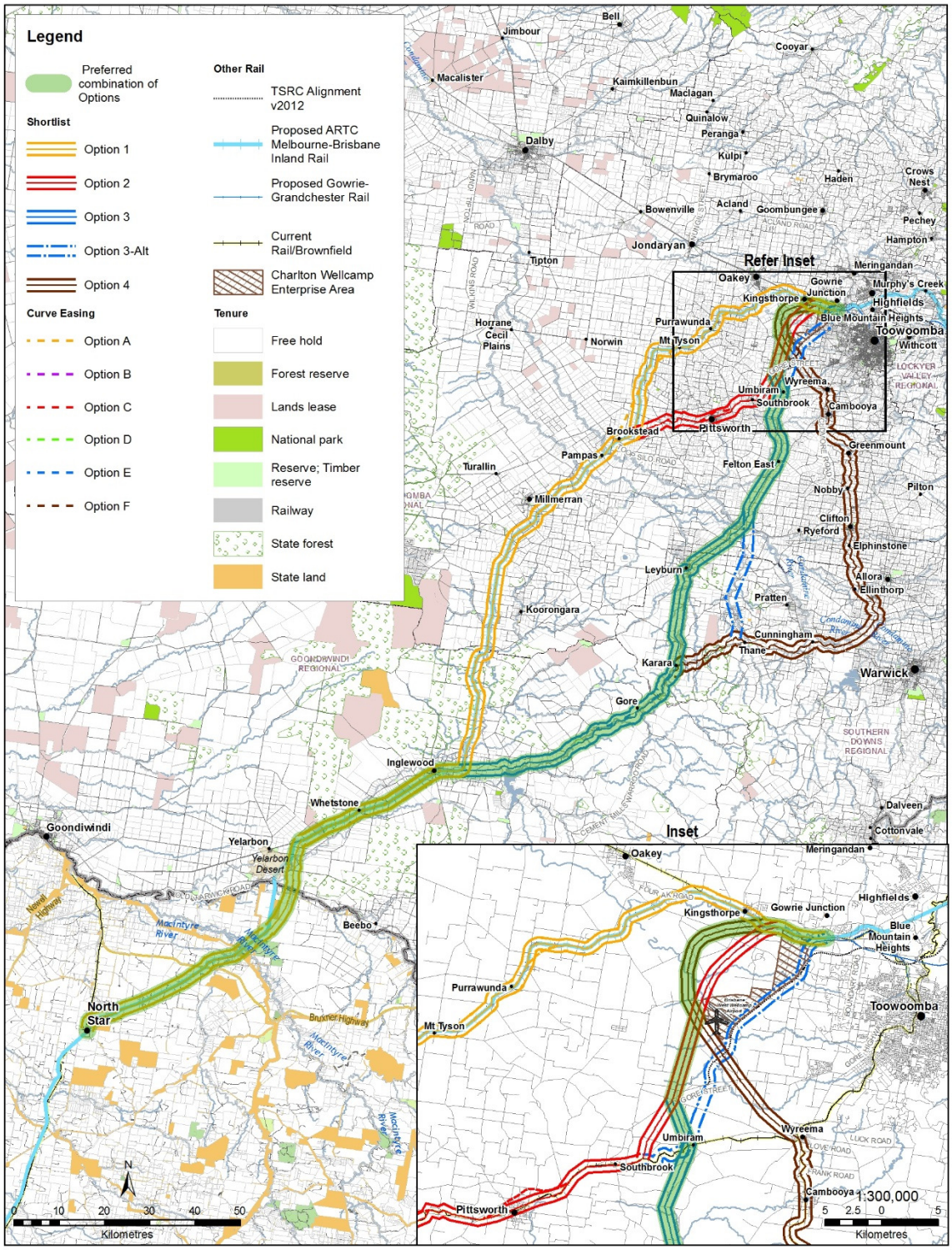
- The preferred alignment is likely to be a combination of options given the extent of the project and the range of factors that may influence the design. To this end, the preferred combination of options is:
    - North Star-Yelarbon-Inglewood-Karara (Option 1)
    - Karara-Leyburn-Felton east- Umbiram (Option 3)
    - Umbiram - west of Brisbane West Wellcamp Airport (Option 2)
    - Brisbane West Wellcamp Airport - Kingsthorpe – Gowrie (Option 4)

Key benefits noted with this combination of options include:

- **The total alignment** is marginally shorter than the ARTC 2010 alignment from North Star to Gowrie (239km vs. 247km), and has shorter section running times (2hrs 56 min vs. 3hrs 5min) based on ARTC 2010 assessment methodology
- **The Option 1 section** alignment provides good access to the grain markets with existing storage facilities along the alignment at Yelarbon, Millmerran, and Brookstead. In addition, the connection of South Western Line to Option A at Yelarbon provides access to existing grain storage facilities (GrainCorp & AWB) at Goondiwindi Toobeah, Bungunya, Talwood and Thallon. Option 1 adopts a minor deviation to the east to skirt the eastern extent of the Yelarbon Desert. Some discrete areas of remnant vegetation are retained along major waterway corridors.
- **The Option 3 section** has less exposure to flooding with respect to the Condamine floodplain where the ARTC alignment traverses some 20km and Option 3 some 10km. Option 3 also has reduced exposure to expansive black soils and a lesser impact on the agricultural land associated with the floodplain. Option 3 appears to have better access to transport links including New England/ Cunningham Highways, and proximity to existing and potential future economic activity centres, including Woolworths FDC at Warwick.

  There is also possible feasible alternative alignment (Option 3-Alt) via Thane - Felton South - Umbiram and then to the west of the industrial hub at Charlton Wellcamp, joining the Western Line to the west of Gowrie may further improve the preferred combination of options still further.
- **The Option 2 section in combination with the Option 4 section** running west of the Brisbane West Wellcamp Airport and joining the western line near Kingsthorpe would allow the MBIR to pass near the airport and also provide for straight path access into terminal in the Charlton Wellcamp area. This could facilitate access to possible future passenger and freight facilities near the airport and more particularly the planned Charlton Wellcamp intermodal terminal precinct.

MBIR OPTIONS - PREFERRED COMBINATION OF OPTIONS



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-003 REVISION E	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	SMEC
PAGE SIZE A3 SCALE 1:750,000	SOURCE Bing Maps, QLD Govt	Copyright SMEC Australia Pty Ltd. All Rights Reserved. Queensland Government	CONSULTANT SMEC Australia

1. INTRODUCTION

1.1. Project Background

The Melbourne to Brisbane Inland Rail (MBIR) Alignment Study (the study) was announced by the Minister for Infrastructure, Transport, Regional Development and Local Government, the Hon Anthony Albanese MP on 28 March 2008. The study would determine the optimum alignment as well as the economic benefits and likely commercial success of a new standard gauge inland railway between Melbourne and Brisbane. It would provide both the Government and the private sector with information that would help guide future investment decisions, including likely demand and the estimated construction cost of the line, and a range of possible private financing options.

Figure 1 - Melbourne to Brisbane Inland Rail Corridor

The March 2008 announcement for this study stated that in developing a detailed route alignment, it would generally follow the far western sub-corridor identified by the previous North-South Rail Corridor Study.

The MBIR is the Federal Government's number one freight rail priority. The Department of Transport and Main Roads (TMR) in conjunction with the Department of State Development (DSD) and Queensland Rail (QR) have been working collaboratively with the Australian Rail Track Corporation (ARTC) to provide advice in relation to the proposed route for the MBIR project.

Agreement of any fundamental operational criteria at an early stage, consistent with the vision for the MBIR system, is essential for informing and developing the infrastructure that will support the vision. The finalisation of the preferred option is important to be able to move forward with the key civil infrastructure engineering and rail systems elements and the preparation of the necessary inputs with regard to operational suitability. Long lead time activities such as dealing with the social and environmental impacts of the project need to be examined alongside core constructability issues that affect cost, risk and programme.

The Federal Government has allocated $300 million (2014/15 – 2017/18) to progress the project, and has formed an Implementation Group to confirm the alignment, prioritise an order of works (to

commence during the current Federal Government term) and consider funding and financing arrangements.

1.2. Project Objectives

The study team has acknowledged the strategic nature of this undertaking, being essentially a technical scoping review focussing on Issues Identification and Alignment Refinement of the ARTC Inland Rail Alignment between Toowoomba and the NSW Border section of the MBIR. Making the case for change does not need to erase any links with the past and so the focus has been on how to best facilitate the integration of the new rail sections with the existing Sydney to Brisbane interstate line.

The report supports the principles and initiatives that successive Governments have advocated, backed by the development of a range of viable options that captures opportunities for cost effective delivery and identifies issues and risks that have the potential to influence the outcome. The focus has at all times remained on providing sound advice based on a level playing field in support of the development of the future Business Case.

This Issues Identification and Alignment Refinement Report considers alternatives to the preferred alignment proposed in the ARTC 2010 study between North Star in New South Wales and Gowrie in Queensland. The report includes alternative alignments and deviations reviewed by ARTC at the time and new ones not previously proposed. This study has also examined the potential for optimising economic benefits through identifying corridor location based on local current and future economic opportunities including Brisbane West Wellcamp Airport, Charlton Wellcamp industrial area, Warwick urban centre and Woolworths FDC, cotton and grain storage facilities within the study area including west of Goondiwindi and at Millmerran and Brookstead, while maintaining the overall performance of the alignment as part of a national freight route.

Of note is that the purpose of this study is not to seek to propose any major realignment of the MBIR, but rather to review the potential issues with the currently preferred alignment such as traversing the Condamine and Dumaresq River floodplains, mitigating any potential environmental impacts on the Yelarbon Desert, avoiding protected vegetation and protected areas, minimising the impacts on agricultural land, rural communities, and reducing the number of interfaces with roads and major waterways.

The specific objective of this project is to undertake sufficient additional analysis and planning work to be able to:

a) Assess potential issues affecting the alignments between the NSW border (North Star) and Gowrie and provide advice to Queensland Government;

b) Identify opportunities for alternative alignments and deviations to minimise/avoid issues, improve performance and take advantage to better integrate with existing transport system and current and future economic opportunities;

c) Propose alignment refinements to mitigate/avoid issues and take advantage of opportunities identified;

d) Provide advice on costs and non-cost performance measures of alignment refinements, and staging options;

e) Prepare graphical information and documentation in support of the above.

Ultimately, the aim of the project was to enable decisions to be made based on sound, reliable information, tested for feasibility; affordability and deliverability to provide confidence to ultimately secure the necessary government commitment to take the proposal through to delivery. The study

team has recognised the potential for major infrastructure projects to define, support and catalyse significant third party investment from land use and transport strategies, to studies of development potential of key sites, and the design and delivery of rail infrastructure. The selection of a preferred route is therefore more complex than just finding the most cost effective alternative.

1.3. Abbreviations

Table 4: Abbreviations

	Definition
ARTC	Australian Rail Track Corporation
BF	Brownfield, existing railway corridor
CAD	Computer Aided Design
DSD	Department of State Development
GIS	Geographic Information System
GF	Greenfield, new railway corridor
LIDAR	Light Detection and Ranging
Mtpa	Million Tonnes per Annum
MBIR	Melbourne to Brisbane Inland Rail
NG	Narrow Gauge, 1067mm
QR	Queensland Rail
RE	Regional Ecosystem
SG	Standard Gauge, 1435mm
TEC	Threatened Ecological Community
TEU	Twenty Foot Equivalent Unit, Shipping Container
TMR	Department of Transport and Main Roads
TSRC	Toowoomba Second Range Crossing

1.4. Methodology and Approach

In recent years, a number of largely independent studies have been carried out which affect the Queensland rail network, such as the Gowrie to Grandchester Rail Study and the Melbourne to Brisbane Inland Rail Study. The purpose of this study will be to review the section between Toowoomba and the NSW border and identify deficiencies in the proposed solutions due to poor alignment optimisation, changes in the demand or design / operating requirements of the projects, or conflicts/redundancy due to parallel overlapping projects and seek alternative alignments.

The study team have also recognised the opportunity for new and enhanced connections to the heavy rail line. These new connections will become spines of activity and enterprise, supporting the case for the establishment of the MBIR rail corridor itself.

As has been the case with the more complex section covering the Great Dividing Range, there is potentially significant scope to refine the design. It appears there are quite few significant issues to understand and address. These include the Condamine River floodplain, the Dumaresq River floodplain, the Yelarbon Desert, the potential impact on agricultural land and the interfaces with the road system.

In order to review the proposed rail alignments, the study team has reviewed the original scope and specifications which formed the basis for the design work which followed. Only by understanding the original drivers for the project can an independent and fair assessment of the alternative alignment options be carried out.

Typical aspects of the rail alignment which were reviewed include:

- Location and layout of interfaces / connection to Queensland Rail's existing network. This includes not only the track and civil engineering, but the impact on existing signalling infrastructure and train control;
- Horizontal alignment constraints such as tight radius curves, which limit speed or increase track maintenance requirements;
- Vertical alignment constraints such as steep gradients which could affect speed and energy efficiency of the rolling stock;
- Junction design and the impact on rail operations and speed;
- Impact of the proposed alignment on cut and fill due to route topography;
- Flood modelling and potential impact of the new alignment on existing flooding and adjacent properties;
- Geotechnical constraints such as soft soils, hard rock or variable poor ground;
- Environmental issues associated with the rail alignment;
- Cultural Heritage impacts.

In addition, where opportunities were identified during the review, the study team prepared a high level alignment design to demonstrate how the existing alignment could be improved upon. The work has focussed on the ARTC Melbourne to Brisbane Inland Rail route as proposed in 2010 and included an examination of a number of feasible alternative route options that may provide better outcomes for both Queensland, and the ARTC.

The following tasks have been undertaken as part of this Issues Identification and Alignment Refinement process:

a) Review, compile and update available CAD and GIS data;

b) Review ARTC alignment;

c) Identify significant issues;

d) Identify alignment opportunities;

e) Identify and assess alignment refinements to mitigate/avoid issues and take advantage of opportunities;

f) Prepare strategic comparative cost estimate;

g) Provide high level staging advice;

h) Update LIDAR information;

i) Prepare commentary on alignment comparisons;

j) Workshop presentation.

The work will be delivered two phases in accordance with the brief. The methodology consisted of the following tasks that were grouped into the following two core phases:

1.4.1. Phase 1 - Strategic level comparison of alignment options

- Review of previous studies carried out as part of the ARTC study of 2010, TMR SBR3, TMR MBIR Options Analysis;
- Assessment and advice on issues related to the current alignment;
- Identification, assessment and advice on opportunities for alignment modifications or alternative options;
- Comparative costings and other non-cost measures for comparing alternative alignment options;
- Recommend the preferred alignments for more detailed assessment;
- Propose broad staging options for future development;
- Workshop presentation.

1.4.2. Phase 2 – Refinement of preferred alignment/s

- Refined and more detailed documentation, assessment and advice on issues related to the preferred alignment;
- Refine the preferred design alignment option to address any outstanding issues;
- Update strategic costing and other non-cost measures for the preferred alignment;
- Develop proposed staging options for future development;
- Final Integrated Report.

On completion of the combined Phase 1 and Phase 2 reports, the consultant will prepare a Final Integrated Report containing all of the maps, graphical information and documentation prepared during the study to assist the TMR in project briefings, understanding the issues and the future consultation task.

1.5. Assumptions and Limitations

The study area covered by this investigation extends from the New South Wales Border to Toowoomba, covering a corridor in the order of 200km long and almost 200km wide.

Whilst the options considered in this assessment have generally been defined through previous investigations, this is an extremely large study area. Investigations have therefore been focussed on feature that would differentiate the various alignments rather than compare.

The following assumptions and limitations apply to this review:

- Desktop level review of available information supplied by TMR, QR (Corridor Strategy Unit) and/or in the public domain;
- Limited to scope of works commissioned;
- Consultation and stakeholder engagement limited to review of documents provided by TMR;
- Costs presented are intended to be strategic comparative estimates only and should not be interpreted as project costs;

- Transit time estimates do not include additional time for passing loops, crew changes, etc. and so should only be considered as strategic comparative estimates.

This study is a spatial constraints driven investigation. To comprehensively identify the potential economic drivers and benefits that could be derived from an alternate alignment, further analysis of the identified shortlisted routes, combined with ongoing freight and economic investigations should be completed, in parallel with environmental studies and stakeholder engagement.

1.6. Key References

- Melbourne-Brisbane Inland Rail Alignment Study Final Report July 2010, ARTC
- National Trunk Railway – The Complete Solution, 2014, NTR
- Melbourne-Brisbane Inland Rail Engineering Technical Services, Basis of Design Report, 26 November 2014, PB
- Melbourne-Brisbane Inland Rail Engineering Technical Services, Concept of Operations, 15 December 2014, PB
- Melbourne-Brisbane Inland Rail Engineering Technical Services, Concept of Maintenance, 26 November 2014, PB
- QR Network Schematics, Network South, NAG-046, Issue 11 – updated December 2014.
- GIS data sets, various, TMR, March 2015
- Concept alignments, various, TMR March 2015
- Concept alignments, various, QR March 2015
- QR Southbrook Report 1996

2. INFRASTRUCTURE CONSIDERATIONS

2.1. General Approach

The proposed standard gauge Melbourne to Brisbane Inland Railway comprises a 1,731 kilometre long route between Melbourne and Acacia Ridge in Brisbane. The alignment uses existing track for 706 km (41%), upgraded track for 426 km (25%) and new track for 599 km (34%). The project is expected to attract largely inter-capital container freight and coal.

The proposed alignment options considered in this study are a mix of greenfield (GF) and brownfield (BF) sites. The BF sections include the upgrade of existing operational and non-operational rail lines. This may involve a number of approaches depending on the physical and operational constraints of a site including the upgrade of the existing rail line, construction of new line adjacent to the existing line within the same corridor and the construction of a new line adjacent to the existing line outside the existing corridor.

Due to the difficulties associated with the upgrading of aging BF narrow gauge (NG) rail corridors, a premium of between 2 and 6 times the cost of GF rail construction has been assumed, depending on terrain and infrastructure constraints. This differs to the assessment in the ARTC 2010 report which assumed a 25% premium for GF rail construction.

2.2. Adopted Design Criteria

The design criteria listed in Table 5 have been adopted for development of alignments for MBIR in Queensland. Given the strategic nature of this options assessment, detailed geometric design has not been undertaken however, each option has been assessed regarding the feasibility of achieving suitable grade and horizontal curve radii.

Table 5: Design Performance Specifications

Attribute	Specification
Reference Train	
Intermodal	30 tonne axle load, 1800m* length (initial), 2.7hp/Tonne p/W ratio. Vertical as per ARTC plate F for double stacking (7.2m above rail)
Coal/Bulk	30 tonne axle load, 1800m* length (initial), 2.7hp/Tonne p/W ratio.
Operational Specification	
Gauge	Double track, dual standard/narrow gauge
Clearance	Double stacking (7.2m above rail)
Maximum train length	1,800m* (To be confirmed for future allowances)
Braking curve	G40 for intermodal reference train
Desirable Design Standards	
Design speed	80km/h Coal, 110km/h Intermodal, 160km passenger
Maximum grade	1:100 maximum (Compensated) desirable, 1:50 maximum (compensated) for difficult terrain. 1:200 maximum at arrival or departure points at loops

Attribute	Specification
Curve radius	Tangent track desirable, 800m radii minimum to be achieved
Cant	2/3 Equilibrium
Corridor width	40m minimum
Transition lengths	Match speed (Cant Gradient not to exceed 1 in 2500)
Cant Gradient	Max cant Gradient of 1 in 400
Rail	60kg/m
Concrete sleepers	Rated at 30 tonne axle load
Sleeper spacing	600mm (1,666/km)
Turnouts	Tangential Dual Gauge
Crossing loops	1800m (clearance point to clearance point) plus signalling overlap
Future Proofing	
Train Length	To provide for future extension of maximum train length to 3600m
New Structures	Capable of 30 tonne axle load @80km/h
Crossing Loops	Loops designed and located to allow for future extension for 3600m trains
Additional	
Flood immunity	Track Q100, Tunnel Q2000
Design life for Structures	100 years
Operations	Passenger and Freight Corridor
Electrification	Not provided for

Ref: In part from the ARTC Inland Rail Performance Specification (February 2015)

3. PHASE 1 - STRATEGIC LEVEL COMPARISON OF ALIGNMENT OPTIONS

3.1. Preparation of the Long List

A number of alignments have been proposed between North Star and Gowrie. While the majority of these were included in the ARTC 2010 report, some additional alignments have been proposed. Five suggested alternatives with some minor deviations were identified for further study.

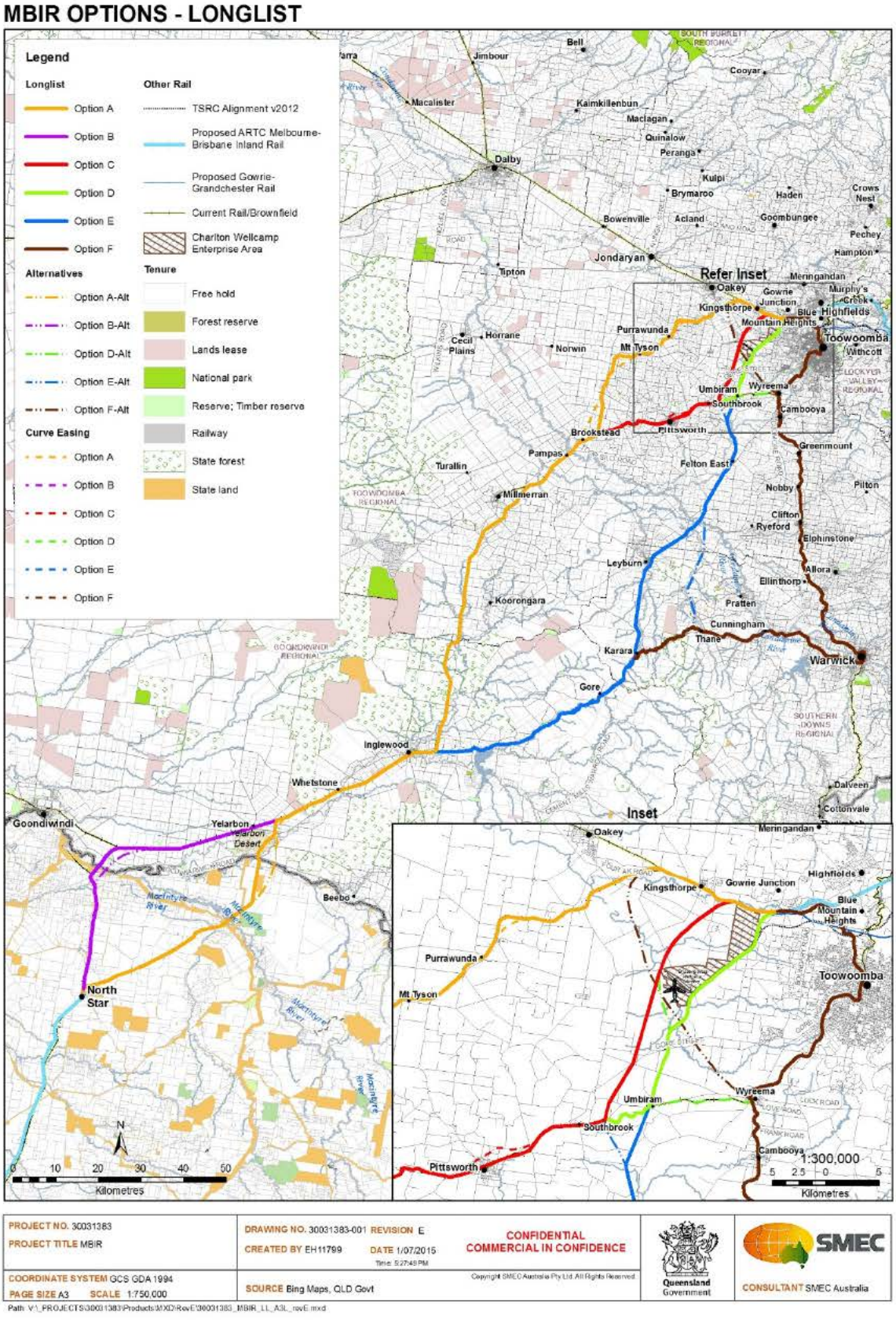
The most significant deviations have been proposed to address flooding and unfavourable ground conditions and seek to take greater advantage of potential transport and economic opportunities. Minor adjustments have been proposed mainly to address localised curvature and grades issues noted by dotted lines in Figure 2 below.

Table 6: Alignment Options (Long List)

Option	Description	Comment
A	North Star to Gowrie via Millmerran and Mt Tyson	Main ARTC alignment option for the project. Some minor refinements to this option are identified, but with specific consideration of the Yelarbon desert section.
B	North Star to Yelarbon via Boggabilla	This option is an alternative to the southern extent of Option A, from North Star via Boggabilla to Yelarbon.
C	Brookstead to Gowrie via Pittsworth	This option is an alternative to the northern section of Option A, from Brookstead through Pittsworth and Southbrook to Gowrie, running to west of Charlton Wellcamp.
D	Umbiram to Gowrie	This option provides an alternative to the northern end of Option C, running to the east of Charlton Wellcamp, and can connect to Option C or Option E at Umbiram.
E	Inglewood to Umbiram via Karara (optionally Thane)	This option is an alternative to the central part of Option A. It starts further south than Option C, at Inglewood and runs to Umbiram via Karara (optionally Thane).
F	Karara to Gowrie via west Warwick and Wyreema	Option F provides an alternative to Option E Commencing at Karara it largely follows the existing line towards Warwick, but by-passing it (Wheatvale to Deuchar), and then to Toowoomba, heading west at Wyreema to avoid passing through the centre of the town.

This report considers the above Long List of options at a strategic level and assumes that for the preferred alignment, adjustments to address localised curvature and grades issues will be undertaken as a matter of course in order to achieve compliance with the adopted design standards and operating principles.

Figure 2 - Long List of Alignment Options



3.2. Strategic Level Comparison of Alignment Options

Each alignment refinement has been reviewed from the perspective of the following constraints in the context of the section between North Star and Gowrie:

- Alignment Performance;
- Hydrological/Floodplain (flood inundation);
- Geotechnical (terrain and ground conditions);
- Environment and Heritage Constraints;
- Agriculture and Land Use Constraints;
- Major Infrastructure requirements;
- Stakeholder and Community Sentiments.

3.2.1. Alignment Performance

Table 7 provides an overview of the key issues for the Long List of options considered in this assessment, Option A through to Option F. These options are also illustrated in Appendix B.

Table 7: Key Issues Associated with Long List Options

Aspect	Metric (where data is available)	Assumptions and limitations
Grade	Section ruling grade	Data taken from ARTC 2010 report Appendix D table 5-3, QR Network Schematics
Route Lengths	Route length in km	Data taken from GIS and ARTC 2010 report Appendix D table 5-3, QR Network Schematics
Line Speed	Benchmarked section running times: • 88 km/h (Relatively straight and flat sections) • 63km/h (Sections that are hilly, curved or both)	Data taken from ARTC 2010 report Appendix D , section 2.1.1 and table 5-3
Transit Time	Transit time in minutes	Data taken from ARTC 2010 report Appendix D, section 2.1 and table 5-3
Brownfield (BF) /Greenfield (GF)	Extent of upgrade of existing operation and non-operational rail corridors vs. new alignments. Current assessment of NG BF construction suggests that it is between 2 and 6 times more expensive than GF construction depending on terrain, and infrastructure and operational constraints.	Extents of BF and GF taken from GIS and ARTC 2010 report Appendix D table 5-3, QR Network Schematics

Option A

This option achieves a ruling grade of 1:100 or better in all sections with exception of North Star to Yelarbon (1:99) and Yelarbon to Inglewood (1:96). A nominal line speed of 88km/h is achieved in all sections over the route except Inglewood to Millmerran (63km/h). Route length is approx. 247km and total transit time estimated to be 3hrs, 5min. BF = 82km, GF =

165km. Option A also offers the potential for a few refinements along the route. Curve easing in the vicinity of Brookstead (more akin to the NTR alignment) and Mt Tyson (curve easing) have been identified in Figure 2. There is also the potential to re-route the alignment in the vicinity of Yelarbon a little further east to avoid the eastern edge of the Yelarbon Desert.

Option B

This option runs from North Star to Yelarbon via Boggabilla joining the South Western Line near Kildonan. It achieves a ruling grade of 1:100 or better in all sections. A nominal line speed of 88km/h is achieved in all sections over the route. Route length is approx. 73km and transit time estimated to be 31min. BF=60km (of which 26km upgrade of derelict SG Boggabilla line and 34km is upgrade and dual gauging of operational NG South Western line Kildonan to Yelarbon), GF=13km.

Option C

This alignment follows the Millmerran branch line from Brookstead to Southbrook before heading north north-east on a new alignment running to the west of the Charlton Wellcamp industrial hub. It achieves a ruling grade of 1:100 or better in all sections. A nominal line speed of 63km/h is achieved in all sections over the route. Route length is approx. 56km and transit time estimated to be 53min. BF=33km (NG Millmerran branch line), GF=23m.

Option D

This alignment is similar to the GF section of Option C but passes to the east rather than the west of the Charlton Wellcamp industrial hub. It achieves a ruling grade of 1:100 or better in all sections. A nominal line speed of 63km/h is achieved in all sections over the route. Route length is approx. 23km and transit time estimated to be 16min. BF=0km, GF=23km.

Of particular note is the impact that this alignment has on the Brisbane West Wellcamp Airport. The alignment passes directly under the aircraft take-off/landing flight path, there are a number of significant road crossings to contend with and access to the Charlton Wellcamp area will be difficult. With the new airport terminal having been constructed on the west side of the airport, there exists no future opportunity to provide a rail link to the airport for passengers.

Option E

This alignment commences just west of Inglewood re-using the South Western Line before heading north at Karara towards Umbiram on a new alignment. A nominal line speed of 63km/h is achieved Inglewood to Karara and 88km/h Karara to Gowrie. Route length is approx. 146km and transit time estimated to be 115min. BF=53km (NG South Western Line), GF=93km.

This option also includes a possible deviation (Thane to Felton) to the east of the proposed alignment.

Option F

This alignment continues of the South Western Line beyond Karara, continuing on to Warwick, Toowoomba and Gowrie. The alignment bypasses Warwick town and Toowoomba. It achieves a ruling grade of 1:100 or better in all sections. A nominal line speed of 63km/h is achieved Karara to Wyreema and 88km/h Wyreema to Gowrie. Route length is approx. 143km and transit time estimated to be 124min. BF=105km (NG South Western Line), GF=38km.

Further comparative alignment information is provided in the Dashboard Assessment Spreadsheet Appendix A and Constrains Map Appendix B.

3.2.2. Hydrological Review

Table 8 provides an overview of the key issues identified as part of the hydraulic review for each alignment option, Option A through to Option F.

Table 8: Hydraulic Review of Long List Options

Aspect	Metric (where data is available)	Assumptions and limitations
Major Waterway crossings	Number of	Data taken from GIS layers
Floodplain Extent	Estimated Width (in km)	Data taken from GIS layers and QLD floodplain assessment overlay
Likelihood of impacting residential properties	(High, medium, low). Cannot be accurately measured at this stage	Data taken from GIS layers and QLD floodplain assessment overlay

Option A

This option crosses at least nine major waterways:

- Macintyre River;
- Cattle Creek;
- Canning Creek;
- Condamine River (main and north branch);
- Fourteen Mile Creek;
- Linthorpe Creek;
- Westbrook Creek;
- Gowrie Creek (multiple crossings).

The southern part of the alignment runs parallel to the Bringalily / Canning Creek floodplains before entering Inglewood which sits within the Macintyre Brook floodplain. The northern section of the alignment runs nearly parallel to Gowrie Creek, crosses Westbrook Creek and the Condamine River (main and northern branches).

All the above crossings would be exposed to rapid flow areas while the stretches of railway intruding the floodplains would be exposed to flood prone land, especially at the Condamine River floodplain which is flat and wide (about 20km).

Option B

This option crosses Macintyre Brook west of Yelarbon, where it would also be exposed to rapid flow areas/flood prone land, but no other major waterway. The Macintyre Brook crossing will be smaller than for Option A, but the alignment will border the Brook floodplain. Everywhere else conditions are similar than for Option A.

Option C

This option commences at the northern extent of the Condamine River floodplain (main branch) at Brookstead, heads east and then north near Southbrook. It then crosses

Westbrook Creek and Dry Creek before deviating east and running nearly parallel to Gowrie Creek until Kingsthorpe. The northern branch of the Condamine River is avoided. The Condamine River crossing would be smaller than for Option A.

Option D

This option heads north from Umbiram and crosses Westbrook Creek, Spring Creek and Dry Creek before entering Gowrie. The creek crossings along this options would be smaller than those for Options A and C.

Option E

This option starts at Inglewood runs semi-parallel to Chain of Ponds Creek, south of Karara several small waterways cross the alignment. North of Karara the alignment crosses Upper Canal Creek, Washpool Creek and Sandy Creek, and Canal Creek at Leyburn, Thanes Creek, Condamine River and Hodgson Creek before entering Umbiram. Although there are several crossing along this alignment, they tend to be smaller than those for Options A and C.

Option F

This option starts at Karara and heading eastwards crosses Upper Canal creek and Thanes Creek before deviating north, and crossing

- Splityard Creek;
- Campbell Gully;
- Condamine River;
- Glengallan Creek;
- Dalrymple Creek;
- Spring Creek at Clifton;
- Kings Creek;
- Hodgson Creek;
- Rosenthal Creek.

Apart from the Glengallan Creek / Condamine River crossings, all other crossings along this alignment tend to be smaller than those for Options A, Option C and Option D.

Further information is provided in the Dashboard Assessment Spreadsheet Appendix A and is illustrated in the Constrains Map Appendix B.

3.2.3. Geotechnical Review

Mapping shows the geology of the corridor to the west of the Toowoomba Range escarpments as Main Range Volcanics, dominated by basalt flows. However, investigations reveal considerable variations, which result in materials with differences in properties. Of significance to rail construction is that those differences include water content, hardness, load-bearing capacity, angle of repose, erodibility, and susceptibility to rotational failure.

The Main Range Volcanics are principally Tertiary basaltic materials and they occur along the crest of the Toowoomba Range and as caps on some ridges to the east. The unit is derived of basalt flows and some inter-bedded airfall tuff.

Option A

This option will have major waterways crossings at Macintyre River and Dumaresq River in the Qld - NSW border, Cattle Creek, Canning Creek, Condamine River (main and north branch), Fourteen Mile Creek, Linthorpe Creek, Westbrook Creek and Gowrie Creek (multiple crossings). Most of these crossings will require bridges. Bridges are likely to be founded on piles, which in some cases may require deep piles, i.e. Condamine River.

Additionally this option traverses the Macintyre Brook floodplain for approx. 3.6 km; and near Whetstone, the Dumaresq River / Macintyre Brook (near the confluence) floodplain is approx. 3.6 km. it's envisaged that soils at the floodplains may be expansive. The Condamine River floodplain for approximately 30 km. other floodplains are present along this option such as Canning Creek floodplain for approximately 4 km.

Large cuttings may be required along Millmerran Inglewood Road and south of Heckendorf Road; and south of Mt Tyson these cutting are expected to be undertaken in Sedimentary rocks and possibly volcanic rocks. Cuttings in the order of 15 metres may be required between Oakey Pittsworth Road and Oakey Biddeston Road.

Along this option, large sections of expansive soils (black soils) Millmerran north and between Condamine River and Toowoomba will be encountered.

It's likely that this option will be short of fill material, thus requiring the development of borrow areas.

Option B

This option is an alternative to the southern extent of Option A, from North Star to Yelarbon via Boggabilla.

This option reduces the number of major waterways crossings crossing only the Macintyre River; however, it has greater exposure to the Macintyre River and the Brigalow Creek floodplains.

The option runs entirely on embankments which are likely to be over floodplains between the Macintyre River and the Brigalow Creek. These floodplains are likely to comprise Black expansive soils along the entire length of the option B. Large portions of this alignment may require ground treatment on expansive soils.

It's likely that this option will be short of fill material, thus requiring the development of borrow areas.

Option C

This option is an alternative to the northern section of Option A, from Brookstead through Pittsworth to Gowrie Street.

Option C crosses the following major waterways: Westbrook Creek, Six Mile Gully and Dry Creek. Bridges at Six Mile Gully and Westbrook Creek may have deep pile foundations.

Large embankments are envisaged between Umbiram and Gowrie. These embankments will be located mostly in gullies and creeks and between cuttings.

Additionally floodplains are encountered between north of Yarranlea Station and Brookstead, and at Four Mile Gully, for approximately 2.8 km.

Large cuts are expected within this option, especially north of Umbiram and between Four Mile Gully and Gowrie to. Cuttings in the order of 20 metres may be required. Cuts will be in

weathered basalts and other volcanic rocks. It is envisaged that blasting may be required for the deeper cuttings. This option has less cuttings than option D.

Most of the northern section of the alignment will be located in expansive soils between Brookstead and north of Yarranlea Station and then between Six Mile Gully and Gowrie.

This option is very likely to be unbalanced generating a large spoil materials from the cuttings

Option D

This option provides an alternative to the northern end of Option C and can connect to Option C or E at Umbiram.

The only major waterway crossing along this option is Westbrook Creek. This option doesn't present major floodplains, however deep piles may be required for the bridge foundations.

Large cuts are expected within this option, especially between Umbiram to Gowrie. Cuttings in the order of 20 metres may be required just (south of Gowrie). Cuts will be in weathered basalts and other volcanic rocks. For those deeper cuts blasting is envisaged to be required.

Most of the northern section of the alignment will be located in expansive soils between the Brisbane West Airport and Gowrie. Additionally small sections underlain by alluvial material, along the valleys are likely to contain black soils.

Option E

This option E commences at Inglewood and runs via Karara to Umbiram.

Major waterways crossed: Chain of Ponds Creek (along multiple crossings), Middle Creek, Sandy Creek, Canal Creek, Thanes Creek, Condamine River and Hodgson Creek. Floodplains are encountered at the Hodgson Creek crossing and the Condamine River. These are extensive floodplains with multiple abandoned channels and meanders.

Embankments along the Condamine River valley and from Inglewood to Greysholm and the Hodgson Creek valley are expected to be generally in the order of 4-5 metres.

Cuts are expected within this option between Greysholm and Karara and, were the alignment crosses metasedimentary rocks, possibly deeply weathered, some blasting may be required. These cuts are generally expected to be small, mostly in the order of 1 to 2 metres; however a 200-300 metres long section may require a cut of some 15 metres.

Additionally, between north of the Hodgson Creek crossing and Umbiram cuts are likely to be up to 15 metres in height and it's envisaged that these cuttings will be undertaken in weathered basalts and other volcanic rocks. Thus blasting may be required.

Expansive soils are expected in the alluvial materials south of north of the Hodgson Creek crossing and Umbiram / Condamine River valley. Ground treatment of black soils may be required in the northern portion of the alignment.

This option is likely to be balanced, however long cartage of material may be required.

Option F

Option F provides an alternative between the eastern end of Option A and Option E, at Karara. It largely follows the existing line to Toowoomba with deviations at West Warwick (Wheatvale) and Wyreema.

The following major waterways are crossed along this option: Thanes Creek, Condamine River, Glengallan Creek, Dalrymple Creek, Spring Creek, Kings Creek and Hodgson Creek.

Bridges will be required at all major creeks and rivers systems. These bridges may require deep piles, e.g. Condamine River and Hodgson Creek.

The following floodplains are encountered along this option: Dalrymple Creek floodplain for 2.6 km; Glengallan Creek floodplain, 3.2 km at crossing, this floodplain is very likely to be affected by the Condamine River flood events; Condamine River floodplain 2.5 km wide along this option; Kings Creek floodplain near Clifton approximately 4 km; Hodgson Creek at Cambooya approximately 2 km.

Large cuts may be required within this option where realignment of the existing South Western Line is undertaken to increase line speed, especially between Karara and Cunningham. Cuttings in order of 15 metres may be required. These cuts are envisaged to be in weathered metasedimentary rocks and granitoids. Blasting is likely to be required. Cuttings are also required north of Cunningham but these are likely to be shallower. High cuts are also likely to be required between Deuchar and Toowoomba. These northern cuts will be on weathered basalts and other volcanic rocks. Blasting along the cuttings in the northern portion is likely.

Large embankments may be required along the section between Karara and Cunningham, where realignment of the existing South Western Line is undertaken to increase line speed. Between Deuchar, Hendon Station and Ellinthorp, most of the alignment will be constructed in embankment over expansive soils. Additionally other embankments will be located in gullies and between cuttings.

Expansive soils are expected all alluvial and residual soils between Cunningham and Deuchar, including the Hodgson Creek / Condamine River valley.

In terms of earthworks, it is envisaged that this option is likely to be balanced, however long cartage of material may be required. Ground treatment of black soils may be required in the northern portion of the alignment.

Refer Dashboard Assessment Spreadsheet Appendix A and Constrains Map Appendix B

3.2.4. Environment and Heritage Constraints Identification

A 200 metre wide corridor (100 metres either side of a nominal centreline) has been assumed for the purpose of this spatial environmental and heritage review. In some cases this may result in the overstatement of effects, as the minimum corridor width adopted is 40 meters. However the wider corridor has been defined to accommodate embankments and cuttings, in the absence of detailed information about alignment design.

In many locations, options are aligned to existing rail corridors, which are adjacent to National Parks, State Forests, or other areas of protected vegetation. In some places it will not be possible to constrain the new railway to the existing corridor and therefore curve easing, cuttings, and relocation of roads may generate further spatial impacts to these areas.

Aspects considered in this desktop review are summarised in Table 7.

Table 9: Environmental and Heritage Aspects

Aspect	Metric (where data is available)	Assumptions and Limitations
Flora, fauna and habitats	Extent of regional ecosystem (RE) traversed or threatened ecological community (TEC) Extent of essential habitat traversed Bioregional corridors	This is a spatial review based on Qld government datasets and database searches. Detailed flora and fauna surveys will be required to verify ecological communities mapped and presence of endangered,

Aspect	Metric (where data is available)	Assumptions and Limitations
		vulnerable, or near threatened flora and fauna species. This review considers corridor wide impacts, and does not factor in aspects such as edge effects, noise, light, dust or disruption to populations and dispersal patterns.
Protected areas	Extent of potential impact or proximity to protected areas	Review based on Qld Government and New South Wales datasets and database searches.
Waterway crossings	Number and type of waterway crossings from an ecological perspective	Based on the Queensland Department of Agriculture Forestry and Fisheries waterway barrier works spatial layer, as a proxy for the likely ecological significance of waterways.
Proximity to dwellings, sensitive receptors, communities, land uses(noise, vibration, visual amenity)	Distance metric- apply at 500m measure as an indicative measure	Counts of dwellings and other sensitive receptors (schools, hospitals, etc) have not been undertaken at the broad scale review stage. This metric is adopted as a proxy, as it is not practical or feasible to conduct noise modelling, as insufficient design data is available.
Statutory approval considerations	Complexity of issues relevant to the local area and challenges for achieving statutory approvals, in the context of the wider project approvals framework	This aspect considers the statutory approvals relevant to the particular section under review,
Environmental Management Requirements (i.e. fauna crossings, rehabilitation, noise mitigation, visual amenity treatments)	Estimated requirements for environmental management and mitigation to address approvals requirements and or stakeholder concerns (e.g. rehabilitation, noise barriers, offsets)	This aspect considers the potential extent of mitigation likely to be required to address environmental impacts, e.g. noise treatments, visual screening, waterway rehabilitation and offsets. This is a high level qualitative indicator, to help compare between corridors/routes. Flora and fauna surveys, offsets assessments and infrastructure design will be required to verify and quantify these assumptions.
Indigenous cultural heritage	Places, sites and features mapped, and extent of previously undisturbed areas (including waterway crossings) where unmapped cultural heritage may exist	Land use classifications were adopted as a proxy indicator for the degree of previous disturbance, which has been used to characterise the potential cultural heritage risks along corridor segments. Cultural heritage assessments and consultation with the recognised Traditional Owners/ Aboriginal Parties will be required to verify assessments under this theme.

Aspect	Metric (where data is available)	Assumptions and Limitations
Non-indigenous cultural heritage	Places, sites and features recorded on National, State and Local Registers	Searches of the Qld heritage register, the Australian Heritage Register and Local government heritage registers have been used to inform the corridor review. Consultation with local government and community in future stages may identify further features and places requiring consideration in this assessment.

Environmental issues identified through the above reviews and research is described below, with further information provided in Appendix A (Long List option comparison).

This environmental and heritage review has necessarily been at a broad scale, more detailed investigations will be required to quantify environmental, social and heritage impacts and management requirements. Greenhouse gas and emissions have also been considered in this assessment, however these were not considered to be a key differentiator from an operational perspective, as all options will deliver benefits as compared to road freight or utilising the existing lower speed alignment.

Option A

North Star to Yelarbon

Option A commences in North Star in New South Wales. It passes in close proximity to the Dthinna Dthinnawan Nature Reserve and National Park (formerly Bebo State Forest). This option crosses riparian vegetation and a significant proportion of a state wide ecological corridor, associated with the Dumaresq River. Option A also would likely impact the area known as the 'Yelarbon Desert', an area of spinifex grasses (*Tilodia* sp.) associated with highly alkaline soils however, a proposed deviation to the east skirts the eastern extent of the desert.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Yelarbon to Inglewood

This section is common to all options, and follows the existing south western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing south western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Several locally significant heritage features were identified in searches of the Goondiwindi Regional Council Heritage Study, including the railway bridge over Macintyre Brook and the Inglewood Railway Station.

This section passes through the township of Inglewood. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Inglewood to Brookstead

Option A follows the Millmerran Inglewood Road through Bringalily State Forest (Least Concern RE) and a Statewide Ecological Corridor. Beyond Bringalily State Forest, remnant riparian vegetation is associated with Grasstree Creek and the Condamine River, near Yandilla. This is also mapped as both state and regional ecological corridor.

Brookstead to Gowrie

Option A traverses patches of least concern RE between Aubigny and Oakey Crosshill Road, before re-joining the western line. Majority of ecological and habitat values are concentrated in the southern segments of Option A.

Option B

North Star to Yelarbon

Option B also commences in North Star in New South Wales, travelling north through native vegetation and agricultural areas. It crosses a state wide ecological corridor associated with the Macintyre River, and an area of wetlands and groundwater dependent ecosystems to the South of Kurumbul.

Yelarbon to Inglewood

As for Option A, This section is common to all options, and follows the existing south-western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing South-Western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Several locally significant heritage features were identified in searches of the Goondiwindi Regional Council Heritage Study, including the railway bridge over Macintyre Brook and the Inglewood Railway Station.

This section passes through the township of Inglewood. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Option C

Brookstead to Southbrook

Option C intersects or passes numerous small patches of Least Concern RE, surrounded by predominantly cropping areas.

Southbrook to Gowrie

Option C intersects or passes numerous small patches of predominantly Least Concern RE, surrounded by cropping areas. One small area of Endangered RE 11.3.21 is intersected west of the Brisbane West Wellcamp Airport area.

Option D

Umbiram to Gowrie

Option D is a greenfield corridor, intersecting small patches of Least Concern regional ecosystem, surrounded by predominantly cropping areas.

Option E

Inglewood to Karara

Option E follows the existing south-western rail corridor through mapped RE (Endangered and Of Concern) and crosses a state ecological corridor near the locality of Gore, and passes the eastern tip of Durikai State Forest (does not intersect). Whilst the alignment follows the corridor, it may not be possible to avoid impacts.

Karara to Umbiram

Option E traverses patches of Of Concern / Endangered RE, as well as a regionally significant ecological corridor in the vicinity of Leyburn, which it then follows to the north. It then crosses a further state and regional corridor which follows the Condamine River. Continuing north, this option traverses numerous small patches of Least Concern RE, surrounded by a mix of cropping and grazing areas.

Option F

Karara to West Warwick

Option F is a predominantly brownfield option, which passes through Durikai State Forest, following the existing corridor for the South Western rail line. Regional ecosystems within the State Forest area include Of Concern and Of Concern / Endangered. The option traverses a small patch of Of Concern RE, associated with the Condamine River.

West Warwick to Wyreema

Option F follows the existing southern line rail corridor, weaving between small patches of Of Concern regional ecosystem, and crosses a regional ecological corridor. It also traverses an area with potential groundwater dependent ecosystems and or surface expression, between Ellinthorp and Clifton. It also crosses an east-west regional ecological corridor, between Nobby and Greenmount, whilst threading between remnant vegetation.

Wyreema to Gowrie

Option F takes a greenfield alignment between Wyreema and Gowrie, directly intersecting Least Concern and Of Concern Regional Ecosystems, which from a land use perspective appear to correlate with grazing uses.

3.2.5. Agricultural Land Use Constraints

The area of investigation nominated for this study traverses a significant portion of the Darling Downs Region, which includes Goondiwindi, Toowoomba and the Southern Downs Regional Local Government Areas. The *Darling Downs Regional Plan* (October 2013) establishes the strategic intent for the wider region, including the identification of Priority Agricultural Areas. The northern part of the study area is broadly contained within the Priority Agricultural Area mapping.

The areas mapped as Priority Agricultural Areas generally correlate to areas mapped as 'strategic cropping land', which are areas now managed under the *Regional Planning Interests Act 2014*. As this project is not a resources project, this Act does not apply, and the term 'strategic cropping land' is not directly relevant.

The *Queensland State Planning Policy* (SPP, July 2014) establishes the framework for protecting the State's agricultural resources from conflicting land uses. The SPP requires plan making or the designation of land for Community Infrastructure to have regard to the strategic economic significance of 'important agricultural areas' and protect Agricultural Land Classification Class A and Class B, for sustainable agricultural use.

As part of the spatial constraints analysis, a review of areas mapped as 'Important Agricultural Areas' and Agricultural land Class A and Class B has been undertaken.

At the project wide level, and based on current design assumptions, all options considered in this assessment will have a significant local impact on agricultural land uses. This may be attributed to direct loss of farm area, property severance, access or farm infrastructure severance (e.g. dams, irrigation networks), or disruption of overland flow. Options that traverse floodplains (which generally are coincident with agricultural areas) will require either embankment or viaduct to achieve the desired level of flood immunity, which will influence flow paths, velocities, and soil conservation. Therefore options that avoid significant engineering to achieve flood immunity for the infrastructure are considered likely to have a greater impact on agriculture, with effects not just within the corridor or immediately adjacent.

Whilst this review of options is spatial in nature, it will be important in future stages to examine the economic benefits of improved access to non-road based freight for primary producers in this region. It will also be important to factor in the value of property improvements, and impacts to farm infrastructure a corridor of this nature will have on farm viability and function. These potentially positive and negative aspects have not been captured in this review, and will also require stakeholder engagement.

Datasets reviewed include Strategic Cropping Land, Agricultural Land Class A and B, Important Agricultural Areas, and mapped land use provided by the Queensland Government as part of the Queensland Globe datasets.

Option A

This option traverses large sections of Important Agricultural Areas, and Agricultural Land Class A. It traverses areas mapped as grazing-native until north of Bringalily State Forest, where it enters large tracts of cropping and irrigated cropping associated with the broad crossing of the Condamine River. This option passes through cropping and irrigated cropping areas for approximately 150km of its length. This option has the greatest impact on cropping areas mapped as 'irrigated cropping' in land use datasets.

Option B

This option traverses cropping and irrigated cropping, particularly in the Macintyre River floodplain. This option passes through cropping and irrigated cropping areas for approximately 60km (its full length). Within Queensland the option is almost entirely within an area mapped as Important Agricultural Area.

Option C

This option crosses approximately 50% of its length through grazing- native vegetation, and 50% cropping, with only a small section of mapped irrigated cropping traversed south of Kingsthorpe. The entire option is within an area mapped as Important Agricultural Area.

Option D

This option crosses approximately 30% of its length through grazing- native vegetation, and 60% cropping, and the entire option is within an area mapped as Important Agricultural Area.

Option E

From Inglewood to Leyburn this option traverses areas predominantly mapped as grazing-native vegetation. The option crosses a small section of irrigated crop land associated with the crossing of the Condamine floodplain, then continuing north traverses a mix of cropping and grazing- native vegetation. The northern half of the option (beyond Leyburn) is within mapped Important Agricultural Areas.

Option F

This option passes through predominantly grazing – native vegetation, from Karara to the Condamine River as it follows the existing railway. This option requires a new crossing of irrigated cropping to the west of Warwick airport, associated with the confluence of the Condamine River and Glengallan Creek. Continuing north, the option crosses irrigated cropping areas associated with Dalrymple Creek, and skirts areas of cropping and irrigated cropping along the existing railway, before deviating to the west and traversing a mix of grazing- native vegetation and cropping, with two areas of irrigated cropping intersected south of Kingsthorpe. Approximately 80% of this option passes through cropping and irrigated cropping, though the majority of this is via brownfield corridor.

3.2.6. Major Infrastructure Requirements

An assessment to identify significant infrastructure requirements has been undertaken for accommodating a corridor required for a two track standard gauge rail system. In the absence of detailed information about alignment design, focus has largely been on identification of major cost items, such as significant roads, pipelines and power easements. This assessment has been used in the Hydrological Floodplain Assessment (see section 4.3) and in the preparation of the Strategic Cost Estimates contained in Appendix E.

Option A

Initial assessment suggests that Option A crosses the following infrastructure:

Table 10: Option A crossings of existing key roads

Item	Road	Location
1	Bruxner Highway	Greenfield alignment – between North Star and Yelarbon
2	Cunningham Highway	Greenfield alignment – near Yelarbon
3	Cunningham Highway	QR South Western Line, ch 154.230km
4	Inglewood – Texas Road	QR South Western Line, ch 117.340km
5	Cunningham Highway	Greenfield alignment – east of Inglewood
6	Millmerran-Inglewood Road	Greenfield alignment – south of Millmerran
7	Millmerran-Leyburn Road	Greenfield alignment – east of Yandilla
8	Gore Highway	QR South Western Line, ch 45.780km
9	Warrego Highway	Greenfield alignment – south of Oakey

Table 11: Option A crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd

2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited

Option B

Initial assessment suggests that Option A crosses the following infrastructure:

Table 12: Option B crossings of existing key roads

Item	Road	Location
1	Edward Street	Approx. 8km north of North Star
2	Edward Street	Near Junction with Bruxner Highway

Table 13: Option B crossings of pipelines and power easements

Item	Asset	Location	Owner
1	None identified	N/A	N/A

Option C

Initial assessment suggests that Option A crosses the following infrastructure:

Table 14: Option C crossings of existing key roads

Item	Road	Location
1	Gore Highway	QR South Western Line, ch 29.340
2	Millmerran-Toowoomba Road	QR South Western Line, ch 23.060
3	Umbiram Road	Greenfield alignment – between Southbrook and Umbiram
4	Gore Highway	Greenfield alignment – west of Westbrook
5	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 15: Option C crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Option D

Initial assessment suggests that Option A crosses the following infrastructure:

Table 16: Option D crossings of existing key roads

Item	Road	Location
1	Gore Highway	Greenfield alignment – west of Westbrook
2	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 17: Option D crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Option E

Initial assessment suggests that Option A crosses the following infrastructure:

Table 18: Option E crossings of existing key roads

Item	Road	Location
1	Cunningham Highway	QR South Western Line, near Yuraraba Yuraraba
2	Umbiram Road	Greenfield alignment – between Umbiram and Wyreema

Table 19: Option E crossings of pipelines and power easements

Item	Asset	Location	Owner
1	None identified	N/A	N/A

Option F

Initial assessment suggests that Option A crosses the following infrastructure:

Table 20: Option F crossings of existing key roads

Item	Road	Location
1	Cunningham Highway	QR South Western Line, near Yuraraba Yuraraba
2	Toowoomba Karara Road	QR South Western Line, Ch 57.650km

Item	Road	Location
3	Clifton-Leyburn Road/ Opportunity Drive	QR Southern Line, ch 214.430km
4	Toowoomba Karara Road	QR South Western Line, ch 185.360km
5	Umbiram Road	Greenfield alignment – between Umbiram and Wyreema
6	Gore Highway	Greenfield alignment – west of Westbrook
7	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 21: Option F crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Refer to Dashboard Assessment Spreadsheet Appendix A and Constraints Map Appendix B

3.2.7. Stakeholder and Community Sentiments

As no targeted stakeholder engagement has occurred as part of the option reviews, so it is not possible to assign any community or stakeholder values with a particular option or area.

Submissions received from stakeholders during consultation on the ARTC alignment (Option A) provided commentary on the overall design standards, economic benefits and drivers, and integration with planned or proposed economic hubs. Submissions were also received from Gowrie community members, raising concerns noise, safety dust and vibration. However, whilst informative, these only provided stakeholder perspectives for a small part of the study area. The following assumptions around stakeholder types and interests will therefore require further analysis and progression during subsequent stages of investigation.

Generally, key stakeholders with an interest in the local project impacts, location and design outcomes are expected to include:

- Local residents of rural townships and the urban areas of Toowoomba;
- Agricultural landowners and operators;
- Aboriginal parties recognised under the Queensland Aboriginal Cultural Heritage Act;
- Logistics and freight businesses;
- Tourism and recreational operators;
- Political representatives;

- Business groups;
- Agricultural groups;
- Community and environmental groups;
- State government agencies including (but not limited to) the Department of Agriculture Forestry, Department of State Development, Department of Environment and Heritage Protection, Department of Aboriginal and Torres Strait Islander Partnerships, Department of Natural Resources and Mines;
- Local government including Moree Plains, Gwydir and Inverell Councils in New South Wales, and Goondiwindi, Southern Downs and Toowoomba Regional Councils in Queensland;
- Holders of resource permits (exploratory and production).

Key issues likely to require management through planning and design include:

- Noise, vibration, air quality and emissions;
- Visual amenity;
- Traversing floodplains whilst minimising agricultural and environmental impacts;
- Impacts to farm improvements and farm viability issues;
- Supporting economic growth and development but not at the cost of local businesses;
- Corridor purpose (i.e. freight only vs mixed use);
- Property access;
- Hydrology issues (i.e. overland flow, damming impacts, etc.)

ARTC have consulted the following stakeholders regarding Option A to date:

- Asciano;
- Assoc. Prof Philip Laird;
- Australian Logistics Council;
- Border Regional Organisation of Councils (BROC)
- CBH Group;
- Coonamble Shire Council;
- FK Gardner & Sons Group;
- Freight Terminals;
- Gowrie Junction Progress Association;
- Jason Chavasse (Resident of Gowrie Junction);
- Macquarie 2100;
- Margaret Hetherington (Resident of Gowrie Junction);
- Melbourne to Brisbane Inland Rail Alliance;
- Mirvac;

- New Hope Group;
- National Trunk Rail (NTR) no 1 & 2;
- Port of Brisbane;
- Queensland Resource Council;
- Rail Tram and Bus Union;
- Toowoomba and Surat Basin Enterprise;
- Southern Downs Regional Council.

Key issues raised by the stakeholders include:

- Freight Terminal location - related to need;
- Impact on local roads;
- Pricing/subsidies to assist modal shift;
- 32TAL, line speed/transit time, double stacking;
- Charlton Wellcamp - opportunity for high yield and high value products needing fast transit times to Asia;
- Section based approach – staging;
- Concern over level of consultation to date;
- Potential to generate a similar situation to that of the American mid-west- and that the economics of manufacturing will change, with regional opportunities created;
- Grain would be transferred north to the domestic market in the Darling Downs and other regions into Qld;
- Infrastructure: dual gauge rail is essential - feeder networks: Dual gauge from Yelarbon to Gowrie;
- Potential to generate a similar situation to that of the American mid-west- and that the economics of manufacturing will change, with regional opportunities created;
- Grain would be transferred north to the domestic market in the Darling Downs and other regions into Qld;
- Charlton Wellcamp - opportunity for high yield and high value products needing fast transit times to Asia.

3.3. Comparative Summary Assessment

Option A was taken as the base case since this is the preferred alignment in the ARTC 2010 study. All other alignments are compared against this one for each of the criteria. The outcome of this comparison is detailed in the Dashboard spreadsheet (Appendix A).

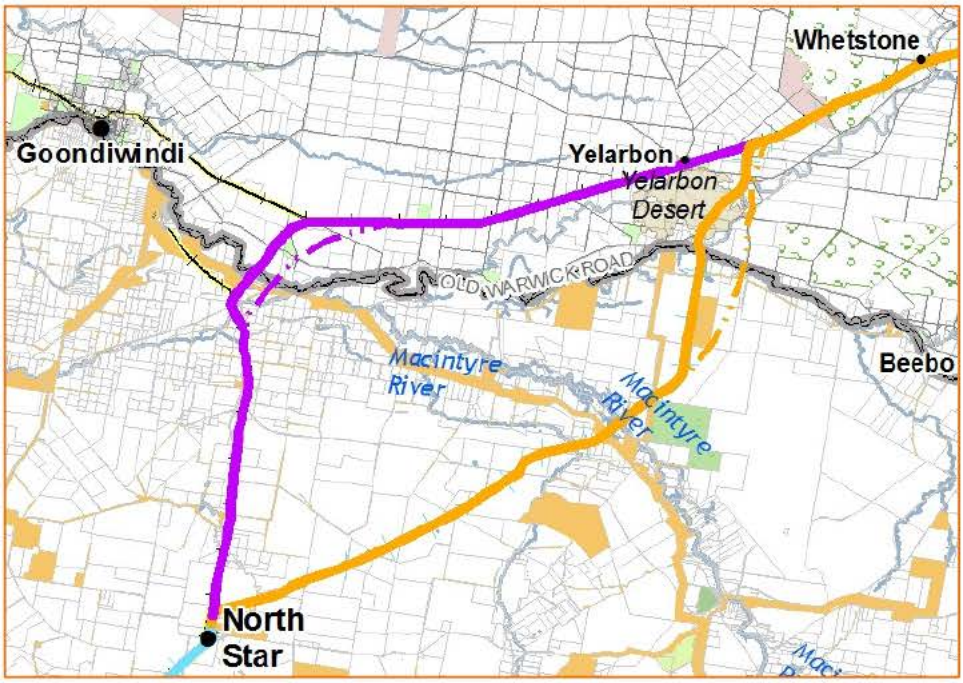
In summary, each alignment refinement has been assessed against a number of key constraints and the ability to take advantage of potential opportunities whilst maintaining the performance requirement of the MBIR. Each alternative was assessed against the nominated criteria and preferred alignment deviations that could form part of a corridor taken forward for further assessment.

Option A

- Option A is the base case and is taken forward to the next phase (as Option 1) as a comparator.
- Option A provides good access to grain market with existing storage facilities along the alignment at Yelarbon, Millmerran, and Brookstead. In addition, the connection of South Western Line to Option A at Yelarbon provides access to existing grain storage facilities (GrainCorp & AWB) at Goondiwindi Toobeah, Bungunya, Talwood and Thallon.
- Currently between 5 and 15 ('000 TEU's) cotton are carried by rail from Goondiwindi to Port of Brisbane via the South Western Line. The development of increased intermodal terminal capacity, in the right location could serve to increase the modal share of cotton by rail.
- While the alignment passes in close proximity to Commodore Mine the coal from this mine only feeds the Millmerran Power Station.
- Option A uses the existing Western line from west of Kingsthorpe through to Gowrie and it doing so passes close to the location of the proposed intermodal terminal at Charlton Wellcamp.
- Option A alignment passes in close proximity to the following major road transport links:
  - Gore Highway (A39, links Goondiwindi to Toowoomba, Goondiwindi is linked to the south by the Newell Highway, A39);
  - Cunningham Highway (A42 & A15, links Goondiwindi to Warwick and then Warwick to Brisbane, Goondiwindi is linked to the south by the Newell Highway, A39);
  - Warrego Highway (A2, links Toowoomba to Brisbane).
- Environmental impacts in the vicinity of the Yelarbon Desert ecosystem can be avoided with a minor deviation to the east.

Option B as compared to Option A

- Option B was compared with North Star to Yelarbon section of Option A.
- Option B runs about 45km closer to Goondiwindi. However, the alignment is about 13km longer and the transit time is about 8min greater at 3hrs, 13min.
- Option B alignment passes in close proximity to the Gore Highway (A39, links Goondiwindi to Toowoomba, Goondiwindi is linked to the south by the Newell Highway, A39).
- Option B makes greater re-use of BF than Option A.
- Option B also includes a possible deviation to the east of the proposed alignment.

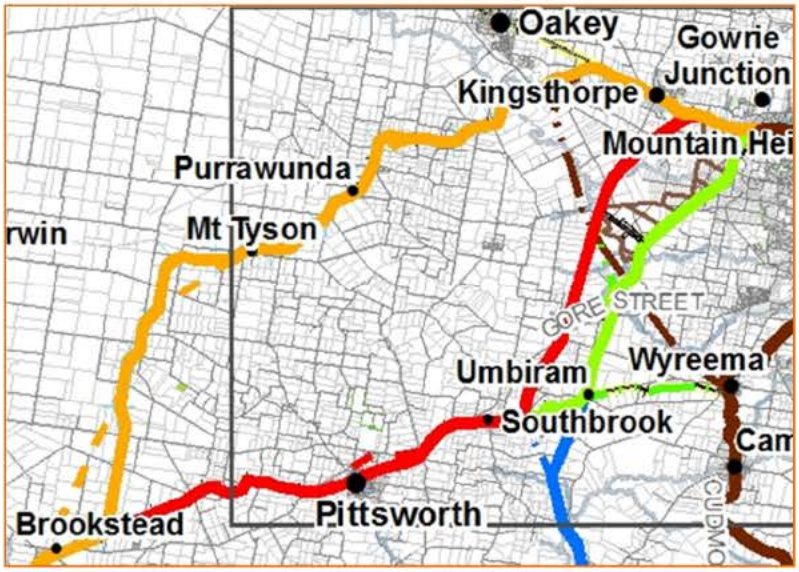


- The Kildonan to Yelarbon section is currently part of the South Western Line. It is an operational line which runs as far as Thallon and includes the GrainCorp storage facilities at Thallon, Talwood, Bungunya and Toobeah. Upgrading an additional section to dual gauge is therefore not expected to provide substantive benefits and would also increase the length of dual gauge track required in the Queensland section of MBIR.
- In addition, the alignment of Option B crosses the Dumaresq River floodplain to the north and has greater exposure to flood events than the Option A alignment.
- This option crosses Macintyre Brook west of Yelarbon, where it would be exposed to rapid flow areas/flood prone land. The Macintyre Brook crossing will be smaller than for Option A but the alignment will border the brook floodplain.
- Option B traverses a similar extent of agricultural land as option A, and also traverses a wetland area south of Kurumbul.
- Both Option A and Option B are likely to traverse environmentally sensitive areas, requiring further detailed investigation (including field survey) to define the environmental impacts and identify avoidance and mitigation strategies in more detail.
- Option B passes through the township of Yelarbon, whilst Option A connects to the existing South Western line to the east of the township.
- Option B could provide access to rail for existing GrainCorp grain storage facilities at Boggabilla currently only accessed by road.
- Option B follows the existing rail corridor for a longer distance than Option A, but may still result in comparative property impacts due to edge effects (rather than severance or whole take).

On the basis of the above assessment, Option B did not appear to offer a significantly better outcome versus Option A and therefore it was not carried forward to Phase 2 of assessment.

Option C as compared to Option A

- Option C was compared with the Millmerran to Gowrie section of Option A.
- Option C passes through Pittsworth and Southbrook before heading north to Gowrie via a route running west of the Brisbane West Wellcamp Airport and industrial hub.



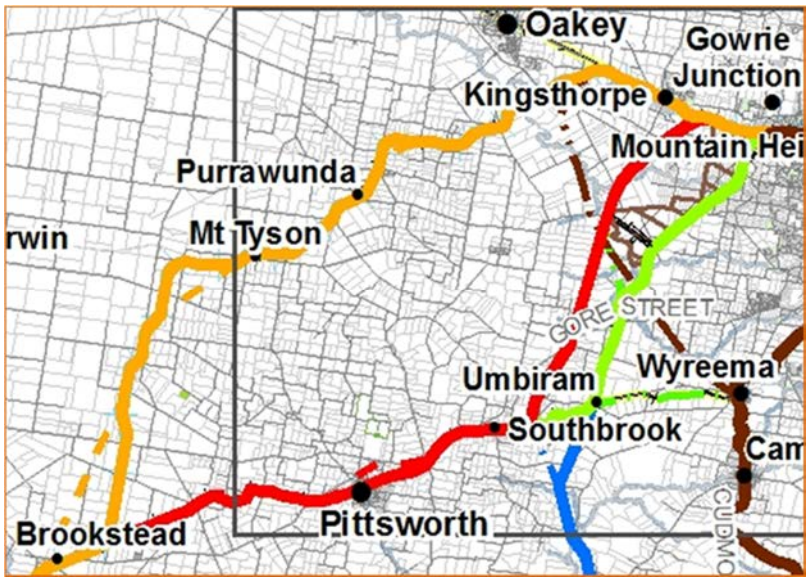
- Option C passes through relatively flat terrain to the west of the airport and, subject to confirming airport flight path height restrictions and making adjustments to the alignment if necessary, may provide a suitable location for a freight intermodal terminal capable taking the initial and ultimate 3km long IR reference train.
- The alignment is about 1km shorter, but the transit time is 9 min greater due to lower line speed at 3hrs, 14min.
- Option C alignment passes in close proximity to the following major road transport links:
  - Gore Highway (A39, links Goondiwindi to Toowoomba, Goondiwindi is linked to the south by the Newell Highway, A39);
  - Warrego Highway (A2, links Toowoomba to Brisbane);
- Option C makes greater re-use of BF than Option A.
- Whilst option C traverses significantly less irrigated cropping land than Option A, it traverses a mix of cropping and grazing lands. Agricultural impacts will be unavoidable with either option, however, the nature and intensity of uses associated with irrigated cropping would need to be compared in detail against the grazing/ cropping impacts.
- Similar to option A, the northern section of Option C runs nearly parallel to Gowrie Creek until Kingsthorpe, where it deviates south and crosses Dry Creek and Westbrook Creek before entering the Condamine River floodplain (main branch) at Brookstead. The northern branch of the Condamine River is avoided.
- Option C offers potentially better access to Charlton Wellcamp industrial precinct (on basis of topography of adjacent on which to establish a multi-modal terminal - reasonably level ground >5km adjacent to railway).

- Option C offers potential opportunities for freight, passenger and industrial activities at or near the Brisbane West Wellcamp Airport.
- Option C offers potential to bypass Kingsthorpe Township and thereby reduce the associated social impact.
- Impacts to ecological values (patches of Least Concern RE) are comparative for both options.
- The Condamine River crossing would be marginally smaller in Option C versus Option A.

Whilst Option C may offer better access for rail freight to Charlton Wellcamp, in an overall sense it does not appear to offer a better outcome than Option A in terms of the additional transit time of 9min overall. The most northern extent of Option C does however offer some benefit in terms of a western route around the Brisbane West Wellcamp Airport and so has been retained in part and taken forward as Option 2.

Option D as compared to the Millmerran to Gowrie section of Option A

- Option D was considered as a variant to Option C and was compared with the Millmerran to Gowrie section of Option A.



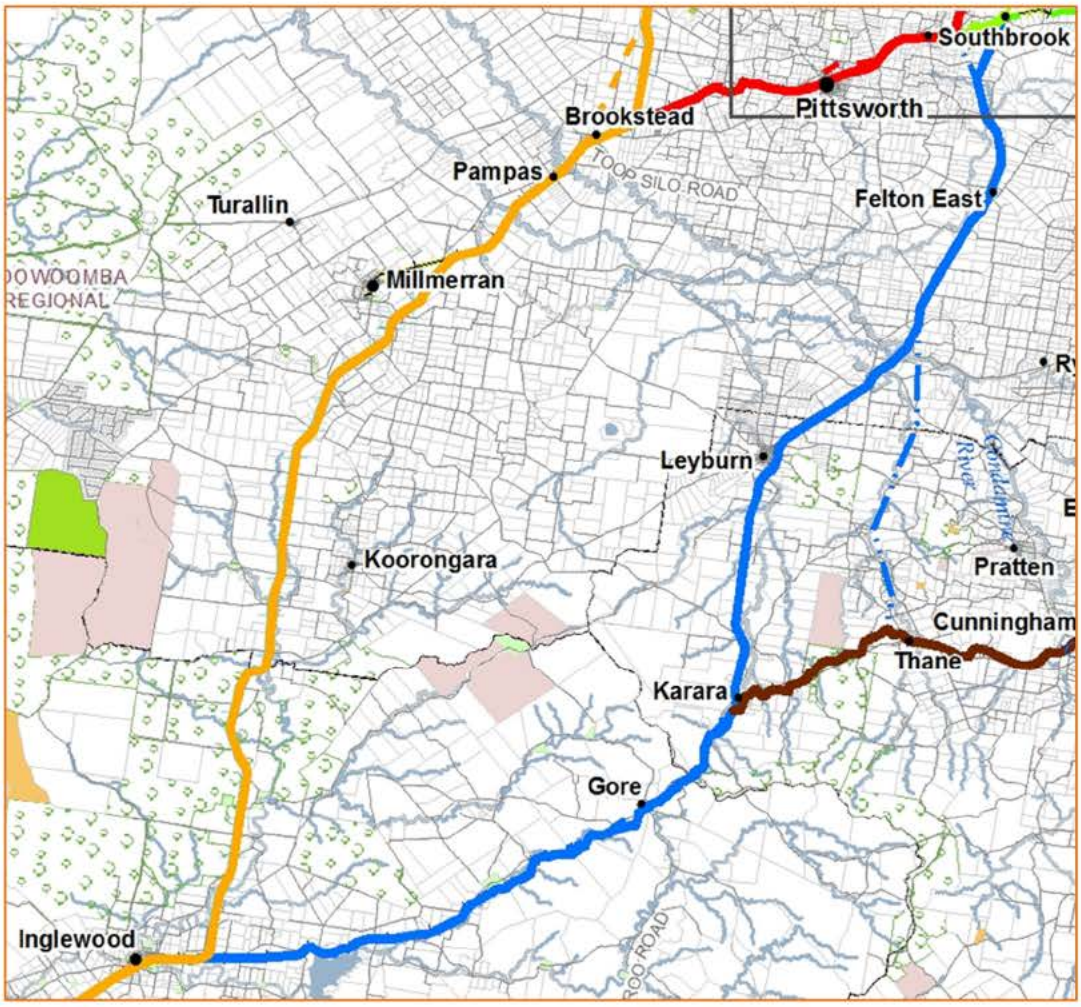
- Option D passes to the east of Charlton Wellcamp through less favourable terrain than Option C. It would join the Western Line east of Charlton. As a result opportunities for an intermodal freight terminal adjacent to the alignment are more limited.
- Option D alignment passes in close proximity to the following major road transport links and where grade separation options are more constrained:
  - Gore Highway (A39, links Goondiwindi to Toowoomba, Goondiwindi is linked to the south by the Newell Highway, A39);
  - Warrego Highway (A2, links Toowoomba to Brisbane);

- The alignment is about 1km shorter, but the transit time is 16 min greater at 3hrs, 21min.
- The alignment is GF with Agricultural and environmental impacts similar to Option C.
- Being very close east of the airport, the alignment passes directly under the aircraft take-off/landing flight path. With the new airport terminal having been constructed on the west side of the airport, there exists no future opportunity to provide a rail link to the airport for passengers.

On the basis of the above assessment Option D was not taken forward for further assessment.

Option E as compared to the Inglewood to Gowrie section of Option A.

- Option E is compared with the Inglewood to Gowrie section of Option A.
- Unlike Option A, Option E does not pass existing grain facilities at Millmerran or Brookstead. However, it passes some 50km closer to Warwick (35 to 45 mins via the Cunningham highway) and hence has greater potential to attract freight from this regional centre with potentially a freight terminal at Karara. Option E alignment also passes close to the Felton group of coal deposits.

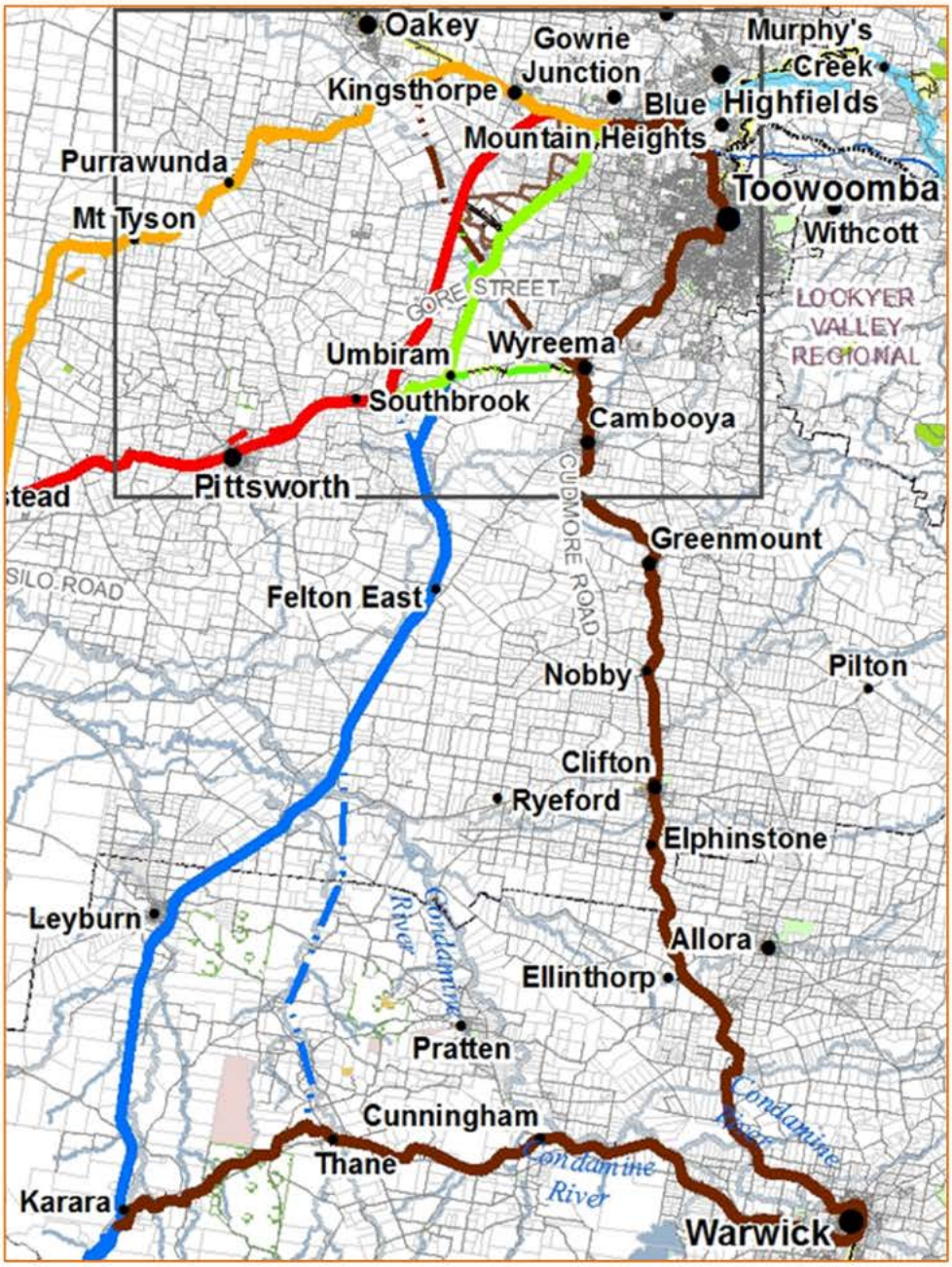


- Option E is 9km shorter and the transit time is 8 min less at 2hrs, 56min.
- Option E also makes greater use of GF than Option A.
- Option E alignment passes in close proximity to the Cunningham Highway (A42 & A15, links Goondiwindi to Warwick and then Warwick to Brisbane, Goondiwindi is linked to the south by the Newell Highway, A39).
- Agricultural impacts are predominantly concentrated in the north, with cropping and some areas of irrigated cropping traversed, though to a lesser extent than for Option A.
- While Option A does not preclude construction of an intermodal terminal, this option has reduced access to existing grain facilities (Millmerran, Brookstead).
- Option A provides improved access to more favourable land for construction of a multi-modal terminal at Charlton Wellcamp.

On the basis of the above assessment Option E was carried forward to Phase 2 for further assessment as in combination with Option A (North Star to Inglewood) and Option C (Umbiram to Gowrie), it provides a potential rail corridor from North Star to Gowrie.

Option F (in combination with Option E, Inglewood to Karara section) as compared to the Inglewood to Gowrie section of Option A.

- Option F was compared with the Inglewood to Gowrie of Option A.
- Option F passes closer to Warwick than Option E and therefore may have greater potential than even Option E to attract freight from this regional centre. In addition, existing grain facilities exist along the alignment north of Warwick at Hendon and Harristown.
- Option F alignment passes in close proximity to the following major road transport links:
  - Cunningham Highway (A42 & A15, links Goondiwindi to Warwick and then Warwick to Brisbane, Goondiwindi is linked to the south by the Newell Highway, A39);
  - New England Highway (A15, links Warwick and Toowoomba, and runs south to Newcastle, NSW);
- Option F is 42km longer and has a transit time 51min greater at 3hrs, 56min.
- Option F makes greater use of BF than Option A.
- Whilst Option F predominantly follows an existing rail corridor, it passes through areas of regional ecosystem and state forest. Environmental impacts are likely to be encountered, particularly where the brownfield rail corridor is geometrically constrained.
- Option F avoids traversing the centre of Warwick and Toowoomba, which was seen to provide a preferable, greenfield (with agricultural impacts) solution.
- Option F impacts on agricultural land, though these are more of the grazing/ cropping type as compared to the cropping / irrigated cropping types associated with the Option A alignment.



- Option F provides a reduced level of access to existing grain facilities (Millmerran, Brookstead), but better access for Horticultural products and Woolworths FDC (Warwick), and to transport links including New England/Cunningham Highways.
- An option to go west of the Charlton Wellcamp and connect with the western line provides and alternative alignment in the north.

On the basis of the above assessment Option F was carried forward to Phase 2 for further assessment as in combination with Option A (North Star to Inglewood) and Option E (Inglewood to Karara), it provides a potential rail corridor from North Star to Gowrie.

Refer to Dashboard Assessment Spreadsheet Appendix A and Constrains Map Appendix B.

4. PHASE 2 – REFINEMENT OF PREFERRED ALIGNMENT/S

4.1. Long List to Short List Conversion

From the Long List of potential alignment refinements a Short List of options to take forward Phase 2 needed to be decided upon. As a result of the deliberations of Phase 1, the following Short List of options was developed for further assessment.

Table 22: Long List to Short List Conversion

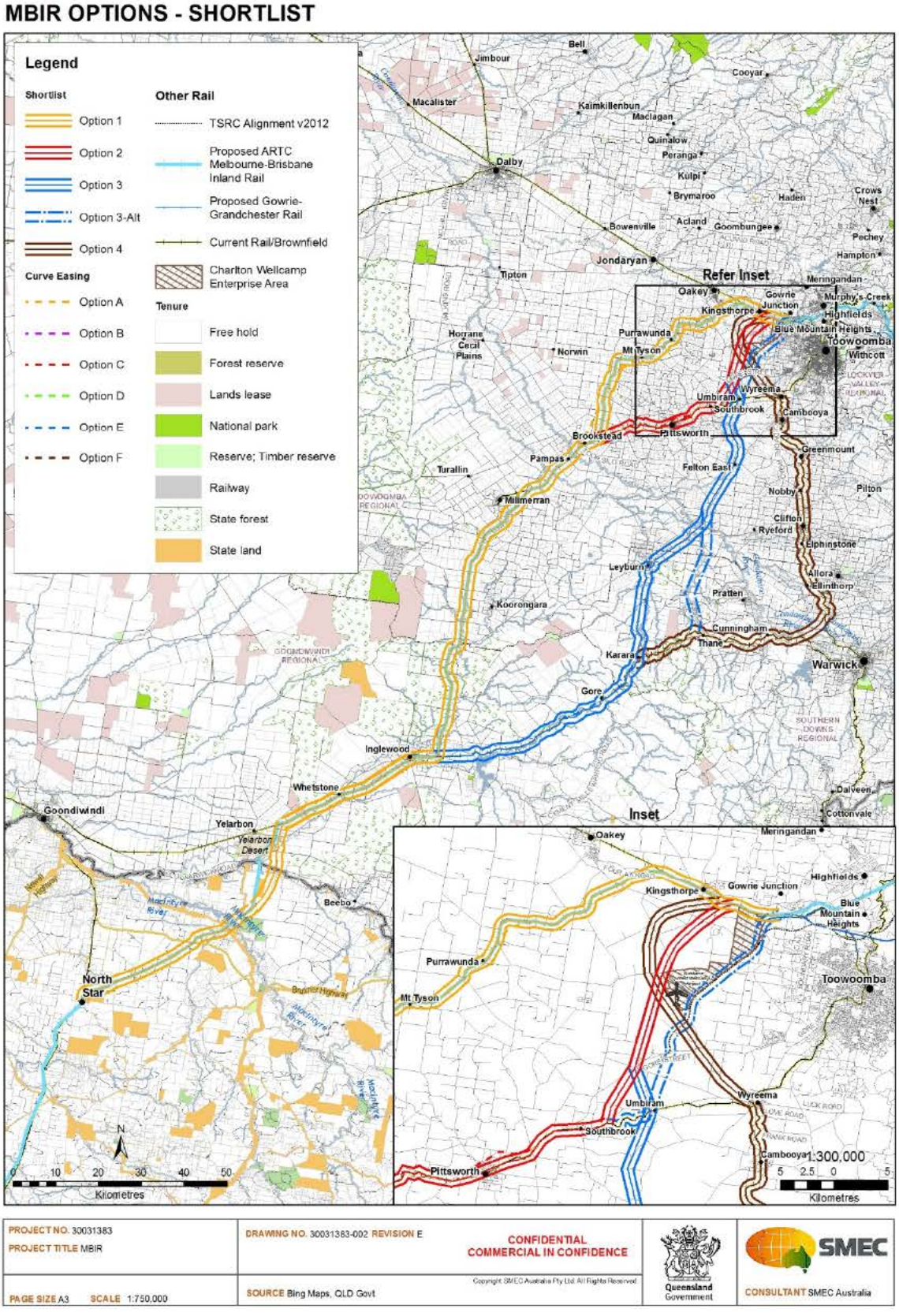
Long List	Route Description	Short List
Option A (ARTC 2010 alignment)	North Star to Gowrie via Millmerran and Oakey (Gowrie Creek)	Option 1
Option A Option C	North Star to Brookstead Brookstead to Gowrie via Pittsworth and Southbrook	Option 2
Option A Option E Option D	North Star to Inglewood Inglewood to Umbiram Umbiram to Gowrie	Option 3
Option A Option E Option F Option E-Alt Option E Option D	North Star to Inglewood Inglewood to Karara Karara to Thane Thane to Felton South Karara to Umbiram Umbiram to Gowrie	Option 3-Alt
Option A Option E Option F	North Star to Inglewood Inglewood to Karara Karara to Gowrie via West Warwick	Option 4

From this point on in the report the alignments are referred to as follows:

- Option 1: Option A North Star to Gowrie via Millmerran and Oakey (Gowrie Creek) (ARTC alignment);
- Option 2: Option A North Star to Brookstead with Option C Brookstead to Gowrie via Pittsworth and Southbrook;
- Option 3: Option A North Star to Inglewood, Option E Inglewood to Umbiram and Option D Umbiram to Gowrie;
- Option 3-Alt: Option 3, but with a small deviation of Karara to Thane, Thane to Felton South;
- Option 4: Option A North Star to Inglewood, Option E Inglewood to Karara and Option F Karara to Gowrie via West Warwick.

These options represent the most feasible rail alignments between North Star and Gowrie.

Figure 3 - Short List of Alignment Options



4.2. Refinement of Preferred Alignment/s

Each alignment refinement has been reviewed from the perspective of the following constraints in the context of the section between North Star and Gowrie:

- Alignment Performance;
- Hydrological/Floodplain (flood inundation);
- Geotechnical (terrain and ground conditions);
- Environment and Heritage Constraints;
- Agriculture and Land Use Constraints;
- Major Infrastructure Requirements;
- Property Impacts.

4.2.1. Alignment Performance

Option 1

This option achieves a ruling grade of 1:100 or better in all sections with exception of North Star to Yelarbon (1:99) and Yelarbon to Inglewood (1:96). A nominal line speed of 88km/h is achieved in all sections over the route except Inglewood to Millmerran (63km/h). Route length is approx. 247km and transit time estimated to be 3hrs, 5min. BF = 82km, GF = 165km.

Option 2

This option achieves a ruling grade of 1:100 or better in all sections with exception of North Star to Yelarbon (1:99) and Yelarbon to Inglewood (1:96). A nominal line speed of 88km/h is achieved in all sections over the route except Inglewood to Millmerran and Brookstead to Southbrook (63km/h). Route length is approx. 246km and transit time estimated to be 3hrs 14min. BF=89km, GF=157m.

Option 3

This option achieves a ruling grade of 1:100 or better in all sections with exception of North Star to Yelarbon (1:99) and Yelarbon to Inglewood (1:96). A nominal line speed of 88km/h is achieved in all sections over the route except Inglewood to Karara (63km/h). Route length is approx. 239km and transit time estimated to be 2hrs, 56min. BF = 86km, GF = 153km.

Option 3 also provides a sub-option via Thane (Option 3- Alt). This alignment will reduce the impact of the project on the town of Leyburn and place the MBIR alignment closer to Warwick. Anecdotal evidence suggests that the grades are flatter along this corridor as compared to the route through Leyburn.

Option 4

This option achieves a ruling grade of 1:100 or better in all sections with exception of North Star to Yelarbon (1:99) and Yelarbon to Inglewood (1:96). A nominal line speed of 88km/h is achieved to Inglewood; 63km/h is achieved for the remainder of the route. Route length is approx. 289km and transit time estimated to be 3 hrs, 56min. BF = 191km, GF = 98km.

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.2. Hydrological Review

The southern part of the alignment runs parallel to the Bringalily / Canning Creek floodplains before entering Inglewood which sits within the Macintyre Brook floodplain. Significant

flooding in the region affects primary producers in the local government area of Goondiwindi Regional Council on a regular basis causing significant damage to major roads such as the Cunningham Highway, between Yelarbon and Goondiwindi.

The northern section of the alignment runs nearly parallel to Gowrie Creek, crosses Westbrook Creek and the Condamine River (main and northern branches). The flood prone nature of this area is therefore of significance when seeking to secure a flood proofed Inland Rail option to take forward to the next stage.

Option 1

This option crosses at least nine major waterways: Macintyre River, Cattle Creek, Canning Creek, Condamine River (main and north branch), Fourteen Mile Creek, Linthorpe Creek, Westbrook Creek and Gowrie Creek (multiple crossings). The southern part of the alignment runs parallel to the Bringalily /Canning Creek floodplains before entering Inglewood which sits within the Macintyre Brook floodplain. The northern section of the alignment runs nearly parallel to Gowrie Creek, crosses Westbrook Creek and the Condamine River (main and northern branches). All the above crossings would be exposed to rapid flow areas while the stretches of railway intruding the floodplains would be exposed to flood prone land, especially at the Condamine River floodplain which is flat and wide (about 20km).

Option 2

This option is the same as Option 1 to Brookstead. Like Option 1 the northern section of the alignment enters the Condamine River floodplain (main branch) at Brookstead and then crosses Westbrook Creek and Dry Creek before deviating east and running nearly parallel to Gowrie Creek until Kingsthorpe. The northern branch of the Condamine River is avoided. The Condamine River crossing would be smaller than for Option 1.

Option 3

This option is the same as Option 1 to Inglewood. It then runs semi-parallel to Chain of Ponds Creek, south of Karara several small waterways cross the alignment. North of Karara the alignment crosses Upper Canal Creek, Washpool Creek and Sandy Creek, and Canal Creek at Leyburn, Thanes Creek, Condamine River and Hodgson Creek before entering Umbiram. From Umbiram it crosses Westbrook Creek, Spring Creek and Dry Creek before entering Gowrie. Although there are several crossing along this alignment, they tend to be smaller than those for Options 1 and 2.

Option 4

This option is the same as Option 1 to Inglewood and then Option 3 to Karara. Continuing eastwards it crosses Upper Canal creek, Lambing Creek, Back Creek, Fossil Creek, Reedy Creek, Thanes Creek, Greymare Creek and Oakey Creek before deviating north, passing to the west of Warwick and crossing Campbell Gully, Condamine River, Splityard Creek, Glengallan Creek, Dalrymple Creek, Spring Creek at Clifton, Kings Creek, Hodgson Creek and Rosenthal Creek. Apart from the Glengallan Creek/ Condamine River crossings, all other crossings along this alignment tend to be smaller than those for Options 1 and 2 and3.

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.3. Geotechnical Review

Option 1

This option will have major waterways crossings at Macintyre River and Dumaresq River in the Qld - NSW border, Cattle Creek, Canning Creek, Condamine River (main and north

branch), Fourteen Mile Creek, Linthorpe Creek, Westbrook Creek and Gowrie Creek (multiple crossings). Most of these crossings will require bridges. Bridges are likely to be founded on piles, which in some cases may require deep piles, i.e. Condamine River.

Additionally this option traverses the Macintyre Brook floodplain for approx. 3.6 km; and near Whetstone, the Dumaresq River / Macintyre Brook (near the confluence) floodplain is approx. 3.6 km. it's envisaged that soils at the floodplains may be expansive. The Condamine River floodplain for approximately 30 km. Other floodplains are present along this option such as Canning Creek floodplain for approximately 4 km.

Large cuttings may be required along Millmerran Inglewood Road and south of Heckendorf Road; and south of Mt Tyson these cutting are expected to be undertaken in Sedimentary rocks and possibly volcanic rocks. Cuttings in the order of 15 metres may be required between Oakey Pittsworth Road and Oakey Biddeston Road.

Along this option, large sections of expansive soils (black soils) Millmerran north and between Condamine River and Toowoomba valley area will be encountered.

It's likely that this option will be short of fill material, thus requiring the development of borrow areas.

Option 2

This option is the same as Option 1 to Brookstead. It then heads west through Pittsworth and Southbrook before heading north to Gowrie Street.

Along this option the following major waterways will be crossed: Westbrook Creek, Six Mile Gully and Dry Creek. Bridges at Six Mile Gully and Westbrook Creek may have deep pile foundations.

Large embankments are envisaged between Umbiram and Gowrie. These embankments will be located mostly in gullies and creeks and between cuttings.

Additionally floodplains are encountered between north of Yarranlea Station and Brookstead, and at Four Mile Gully, for approximately 2.8 km.

Large cuts are expected within this option, especially north of Umbiram and between Four Mile Gully and Gowrie to. Cuttings up to 30 metres are likely. Cuts will be in weathered basalts and other volcanic rocks. It is envisaged that blasting may be required for the deeper cuttings. This option has less cuttings than option D.

Most of the northern section of the alignment will be located in expansive soils between Brookstead and north of Yarranlea Station and then between Six Mile Gully and Gowrie.

This option is very likely to be unbalanced generating a large spoil materials from the cuttings

Option 3

This option is the same as Option 1 to Inglewood and then runs via Karara to Umbiram.

Major waterways crossed: Chain of Ponds Creek (along multiple crossings), Middle Creek, Sandy Creek, Canal Creek, Thanes Creek, Condamine River and Hodgson Creek. Floodplains are encountered at the Hodgson Creek crossing and the Condamine River presents an extensive floodplain with multiple abandoned channels and meanders.

Embankments along the Condamine River valley and from Inglewood to Greysholm and the Hodgson Creek valley are expected to be generally in the order of 4-5 metres. .

Cuts are expected within this option between Greysholm and Karara and, were the alignment crosses metasedimentary rocks, possibly deeply weathered, some blasting may be required.

These cuts are generally expected to be small, mostly in the order of 1 to 2 metres, however a 200-300 metres long section may require a cut of some 15 metres.

Additionally, between north of the Hodgson Creek crossing and Umbiram cuts are likely to be up to 15 metres in height and it's envisaged that these cuttings will be undertaken in weathered basalts and other volcanic rocks. Thus blasting may be required.

Expansive soils are expected in the alluvial materials south of north of the Hodgson Creek crossing and Umbiram / Condamine River valley. Ground treatment of black soils may be required in the northern portion of the alignment.

This option is likely to be balanced, however long cartage of material may be required.

Option 4

This option is the same as Option 1 to Inglewood and then Option 3 to Karara. It then largely follows the existing line to Toowoomba with deviations at West Warwick and Wyreema.

The following major waterways are crossed along this option: Thanes Creek, Condamine River, Glengallan Creek, Dalrymple Creek, Spring Creek, Kings Creek and Hodgson Creek.

Bridges will be required at all major creeks and rivers systems. These bridges may require deep piles, i.e. Condamine River and Hodgson Creek.

The following floodplains are encountered along this option: Dalrymple Creek Floodplain for 2.6 km; Glengallan Creek Floodplain, 3.2 km at crossing, this floodplain is very likely to be affected by the Condamine River flood events; Condamine River floodplain 2.5 km wide along this option; Kings Creek floodplain near Clifton approximately 4 km; Hodgson Creek at Cambooya approximately 2 km.

Between Sheppard Station and Hendon Station, most of the alignment will be constructed in embankment over expansive soils. Large embankments are envisaged along the section between Cunningham Station and Karara, where the MBIR is likely to realign the existing South-Western Line to increase the speed of travel. Additionally other embankments will be located in gullies and between cuttings.

Expansive soils are expected all alluvial and residual soils between Cunningham Station and Toowoomba, including the Hodgson Creek / Condamine River valley.

Large cuts may be required within this option where realignment of the existing South-Western Line is undertaken to increase line speed, especially between Karara and Cunningham. Cuttings in order of 15 metres may be required. These cuts are envisaged to be in weathered metasedimentary rocks and granitoids. Blasting is likely to be required. Cuttings are also required north of Cunningham but these are likely to be shallower. High cuts are also likely to be required between Deuchar and Toowoomba. These northern cuts will be on weathered basalts and other volcanic rocks. Blasting along the cuttings in the northern portion is likely.

Large embankments may be required along the section between Karara and Cunningham, where realignment of the existing South-Western Line is undertaken to increase line speed. Between Deuchar and Ellinthorp, most of the alignment will be constructed in embankment over expansive soils. Additionally other embankments will be located in gullies and between cuttings.

Expansive soils are expected all alluvial and residual soils between Cunningham and Deuchar, including the Hodgson Creek / Condamine River valley.

In terms of earthworks, it is envisaged that this option is likely to be balanced, however long cartage of material may be required. Ground treatment of black soils may be required in the northern portion of the alignment.

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.4. Environment and Heritage Constraints

Option 1

Ecological constraints associated with Option 1 are primarily located to the south, with agricultural land uses dominating the north. Option 1 adopts a minor deviation to the east to skirt the eastern extent of the Yelarbon Desert. The deviation also provides a possible better crossing of the floodplain. Some discrete areas of remnant vegetation are retained along major waterway corridors. Option 1 crosses two state significant ecological corridors, and two regionally significant ecological corridors associated with the Condamine River Plains. Option 1 follows Millmerran Inglewood Road through Bringalily State Forest, which is associated with a Statewide Ecological Corridor.

North Star to Yelarbon (common to all options)

Option 1 commences in North Star in New South Wales. It passes in close proximity to the Dthinna Dthinnawan Nature Reserve and National Park (formerly Bebo State Forest). This option crosses riparian vegetation and a significant proportion of a state wide ecological corridor, associated with the Dumaresq River. Option 1 also would likely impact the area known as the 'Yelarbon Desert', an area of spinifex grasses (*Tilodia* sp.) associated with highly alkaline soils however, a proposed deviation to the east skirts the eastern extent of the desert.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Yelarbon to Inglewood (common to all options)

Option 1 follows the existing south western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing South Western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Several locally significant heritage features were identified in searches of the Goondiwindi Regional Council Heritage Study, including the railway bridge over Macintyre Brook and the Inglewood Railway Station.

This section passes through the township of Inglewood. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Inglewood to Brookstead

Option 1 follows the Millmerran Inglewood Road through Bringalily State Forest (Least Concern RE and a statewide ecological corridor. Beyond Bringalily State Forest, remnant riparian vegetation is associated with Grasstree Creek and the Condamine River, near Yandilla. This is also mapped as both state and regional ecological corridor.

Brookstead to Gowrie

Option 1 traverses patches of Least Concern regional ecosystem between Aubigny and Oakey Crosshill Road, before re-joining the western line. Majority of ecological and habitat values are concentrated in the southern segments of Option A.

Option 2

North Star to Yelarbon (common to all options)

Option 2 commences in North Star in New South Wales. It passes in close proximity to the Dthinna Dthinnawan Nature Reserve and National Park (formerly Bebo State Forest). This option crosses riparian vegetation and a significant proportion of a state wide ecological corridor, associated with the Dumaresq River. Option 2 also would likely impact the area known as the 'Yelarbon Desert', an area of spinifex grasses (*Tilodia* sp.) associated with highly alkaline soils however, a proposed deviation to the east skirts the eastern extent of the desert.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Yelarbon to Inglewood (common to all options)

Option 2 follows the existing south western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing South Western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Inglewood to Brookstead

Option 2 follows the Millmerran Inglewood Road through Bringalily State Forest (Least Concern RE and a state-wide ecological corridor. Beyond Bringalily State Forest, remnant riparian vegetation is associated with Grasstree Creek and the Condamine River, near Yandilla. This is also mapped as both state and regional ecological corridor.

Brookstead to Southbrook

Option 2 intersects or passes numerous small patches of Least Concern RE, surrounded by predominantly cropping areas.

Southbrook to Gowrie

Option 2 intersects or passes numerous small patches of predominantly Least Concern RE, surrounded by cropping areas. One small area of Endangered RE 11.3.21 is intersected west of the Brisbane West Wellcamp Airport area.

Option 3

North Star to Yelarbon (common to all options)

Option 3 commences in North Star in New South Wales. It passes in close proximity to the Dthinna Dthinnawan Nature Reserve and National Park (formerly Bebo State Forest). This option crosses riparian vegetation and a significant proportion of a state wide ecological corridor, associated with the Dumaresq River. Option 1 also would likely impact the area known as the 'Yelarbon Desert', an area of spinifex grasses (*Tilodia* sp.) associated with highly

alkaline soils however, a proposed deviation to the east skirts the eastern extent of the desert.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Yelarbon to Inglewood (common to all options)

Option 3 follows the existing south western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing South Western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Inglewood to Karara (common to options 3 & 4)

Option 3 follows the existing south western rail corridor through mapped RE (endangered and Of Concern) and crosses a state ecological corridor near the locality of Gore, and passes the eastern tip of Durikai State Forest (does not intersect). Whilst the alignment follows the corridor, it may not be possible to avoid impacts.

Karara to Umbiram

Option 3 traverses patches of Of Concern/Endangered RE, as well as a regionally significant ecological corridor in the vicinity of Leyburn, which it then follows to the north. It then crosses a further state and regional corridor which follows the Condamine River. Continuing north, this option traverses numerous small patches of Least Concern regional ecosystem, surrounded by a mix of cropping and grazing areas.

Umbiram to Gowrie

Option 3 is a greenfield corridor, intersecting small patches of Least Concern RE, surrounded by predominantly cropping areas.

Option 4

North Star to Yelarbon (common to all options)

Option 4 commences in North Star in New South Wales. It passes in close proximity to the Dthinna Dthinnawan Nature Reserve and National Park (formerly Bebo State Forest). This option crosses riparian vegetation and a significant proportion of a state wide ecological corridor, associated with the Dumaresq River. Option 4 also would likely impact the area known as the 'Yelarbon Desert', an area of spinifex grasses (*Tilodia* sp.) associated with highly alkaline soils however, a proposed deviation to the east skirts the eastern extent of the desert.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Yelarbon to Inglewood (common to all options)

Option 4 follows the existing south western rail corridor, intersecting patches of remnant vegetation, including endangered RE. The existing South Western rail corridor also passes through Whetstone State Forest, containing Least Concern RE, and is associated with a north- south running ecological corridor of state significance. This section also runs parallel with a regionally significant ecological corridor associated with Macintyre Brook.

Searches of State heritage registers did not identify records on this section.

This alignment passes through the township of North Star and Yelarbon. Whilst a rail corridor currently traverses this area, further consideration of noise, visual amenity, vibration and air quality will require consideration.

Inglewood to Karara (common to options 3 & 4)

Option 4 follows the existing south western rail corridor through mapped RE (Endangered and Of Concern) and crosses a state ecological corridor near the locality of Gore, and passes the eastern tip of Durikai State Forest (does not intersect). Whilst the alignment follows the corridor, it may not be possible to avoid impacts.

Karara to West Warwick

Option 4 is a brownfield option, which passes through Durikai State Forest, following the existing corridor for the south western rail line. Regional ecosystems within the State Forest area include Of Concern and Of Concern/Endangered. The option traverses a small patch of Of Concern regional ecosystem, associated with the Condamine River.

West Warwick to Wyreema

Option 4 follows the existing southern line rail corridor, weaving between small patches of Of Concern RE, and crosses a regional ecological corridor. It also traverses an area with potential groundwater dependent ecosystems and or surface expression, between Ellinthorp and Clifton. It also crosses an east-west regional ecological corridor, between Nobby and Greenmount, whilst threading between remnant vegetation.

Wyreema to Gowrie

Option 4 takes a greenfield alignment between Wyreema and Gowrie, directly intersecting Least Concern and Of Concern Regional Ecosystems, which from a land use perspective appear to correlate with grazing uses.

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.5. Agricultural Land Use Constraints

To summarise broadly, Option 1 affects a greater proportion of irrigated cropping land than other options. Option 2, Option 3 and Option 4 affect a mix of cropping and grazing land, with some scattered areas of irrigated cropping land. To cross irrigated flat floodplains where there is broad scale agriculture with irrigation, the track will need to be placed on long sections of embankment. This has the potential to disrupt overland waterflow, cause afflux issues and sever efficient farming practices.

Option 1

This option traverses large sections of Important Agricultural Areas, and Agricultural Land Class A. It traverses areas mapped as grazing-native until north of Bringalily State Forest, where it enters large tracts of cropping and irrigated cropping associated with the broad crossing of the Condamine River. This option passes through cropping and irrigated cropping

areas for approximately 150km of its length. This option has the greatest impact on cropping areas mapped as 'irrigated cropping' in land use datasets.

Option 2

This option crosses approximately 50% of its length through grazing- native vegetation, and 50% cropping, with only a small section of mapped irrigated cropping traversed south of Kingsthorpe. This option impacts areas mapped as Important Agricultural Area.

Option 3

From Inglewood to Leyburn this option traverses areas predominantly mapped as grazing-native vegetation. The option crosses a small section of irrigated crop land around Ellangowan, associated with the crossing of the Condamine floodplain, then continuing north traverses a mix of cropping and grazing- native vegetation. The northern half of the option (beyond Leyburn) is within mapped Important Agricultural Areas, with a mix of grazing and cropping. This option traverses large sections of Important Agricultural Areas, and Agricultural Land Class A.

Option 4

This option passes through predominantly grazing – native vegetation, from Inglewood to the Condamine River as it follows the existing railway. It then crosses existing cropping and irrigated cropping west of Warwick. Continuing north, the option crosses irrigated cropping areas associated with Dalrymple Creek, and skirts areas of cropping and irrigated cropping along the existing railway. It then deviates to the west and traversing a mix of grazing- native vegetation and cropping, with two areas of irrigated cropping intersected south of Kingsthorpe. Approximately 80% of this option passes through cropping and irrigated cropping, though the majority of this is via brownfield corridor.

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.6. Major Infrastructure Requirements

An assessment to identify significant infrastructure requirements has been undertaken for accommodating a corridor required for a two track standard gauge rail system. In the absence of detailed information about alignment design, focus has largely been on identification of major cost items, such as significant roads, pipelines and power easements.

Suitable treatments for each crossing will need to be developed in line with national and state requirements.

Option 1

Initial assessment suggests that Option 1 crosses the following infrastructure:

Table 23: Option 1 crossings of existing key roads

Item	Road	Location
1	Bruxner Highway	Greenfield alignment – between North Star and Yelarbon
2	Cunningham Highway	Greenfield alignment – near Yelarbon
3	Cunningham Highway	QR South Western Line, ch 154.230km
4	Inglewood – Texas Road	QR South Western Line, ch 117.340km

Item	Road	Location
5	Cunningham Highway	Greenfield alignment – east of Inglewood
6	Millmerran-Inglewood Road	Greenfield alignment – south of Millmerran
7	Millmerran-Leyburn Road	Greenfield alignment – east of Yandilla
8	Gore Highway	QR South Western Line, ch 45.780km
9	Warrego Highway	Greenfield alignment – south of Oakey

Table 24: Option 1 crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited

Option 2

Initial assessment suggests that Option 2 crosses the following infrastructure. Crossings of existing key roads, pipeline and power easements are as Option 1.

Table 25: Option 2 crossings of existing key roads

Item	Road	Location
1	Bruxner Highway	Greenfield alignment – between North Star and Yelarbon
2	Cunningham Highway	Greenfield alignment – near Yelarbon
3	Cunningham Highway	QR South Western Line, ch 154.230km
4	Inglewood – Texas Road	QR South Western Line, ch 117.340km
5	Cunningham Highway	Greenfield alignment – east of Inglewood
6	Millmerran-Inglewood Road	Greenfield alignment – south of Millmerran
7	Millmerran-Leyburn Road	Greenfield alignment – east of Yandilla
8	Gore Highway	QR South Western Line, ch 45.780km
9	Gore Highway	QR South Western Line, ch 29.340
10	Millmerran-Toowoomba Road	QR South Western Line, ch 23.060

Item	Road	Location
11	Umbiram Road	Greenfield alignment – between Southbrook and Umbiram
12	Gore Highway	Greenfield alignment – west of Westbrook
13	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 26: Option 2 crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Option 3

Initial assessment suggests that Option 3 crosses the following infrastructure.

Table 27: Option 3 crossings of existing key roads

Item	Road	Location
1	Bruxner Highway	Greenfield alignment – between North Star and Yelarbon
2	Cunningham Highway	Greenfield alignment – near Yelarbon
3	Cunningham Highway	QR South Western Line, ch 154.230km
4	Inglewood – Texas Road	QR South Western Line, ch 117.340km
5	Cunningham Highway	Greenfield alignment - near Gore
6	Umbiram Road	Greenfield alignment – between Umbiram and Wyreema
7	Gore Highway	Greenfield alignment – west of Westbrook
8	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 28: Option 3 crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd

Item	Asset	Location	Owner
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Option 4

Initial assessment suggests that Option 4 crosses the following infrastructure.

Table 29: Option 4 crossings of existing key roads

Item	Road	Location
1	Bruxner Highway	Greenfield alignment – between North Star and Yelarbon
2	Cunningham Highway	Greenfield alignment – near Yelarbon
3	Cunningham Highway	QR South Western Line, ch 154.230km
4	Inglewood – Texas Road	QR South Western Line, ch 117.340km
5	Cunningham Highway	QR South Western Line, near Yuraraba Yuraraba
6	Toowoomba Karara Road	QR South Western Line, Ch 57.650km
7	Clifton-Leyburn Road/ Opportunity Drive	QR Southern Line, ch 214.430km
8	Toowoomba Karara Road	QR South Western Line, ch 185.360km
9	Umbiram Road	Greenfield alignment – between Umbiram and Wyreema
10	Gore Highway	Greenfield alignment – west of Westbrook
11	Warrego Highway	Greenfield alignment – near Gowrie Mountain

Table 30: Option 4 crossings of pipelines and power easements

Item	Asset	Location	Owner
1	Oil pipeline	Between Brookstead and Mt Tyson	Moonie Pipeline Company Ltd
2	Power easement	Mt Tyson - Motley	Babcock & Brown NPP Mulgrove Road Power PTY Ltd
3	Oil pipeline	Crossing of Warrego Highway near Kingsthorpe	APT Petroleum Pipelines Pty Limited
4	Gas pipeline	North of Wyreema	Envestra Limited

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.2.7. Property Impacts

The predominant land uses across the study area are agriculture (grazing, cropping and irrigated cropping), with urban uses in the Toowoomba urban area, and scattered areas of environmental protection particularly in the southern extent of the study area. Predominant land use zoning is rural, with the Charlton Wellcamp industrial area located in the north, and the eastern-most options traversing the urban areas of Toowoomba. The Darling Downs Regional Plan also defines a number of Priority Living Areas', at the smaller rural townships scattered across the study area (generally along existing rail corridors).

Option 1 and Option 2 intersect mapped coal resources, however these are only under production in the area south of Millmerran on Option 1. Resources in the vicinity of Option 2 (south of Felton East) are currently subject to agricultural land uses, and mapped and would be subject to the Regional Planning Interests Act as they are appear to correlate with the area mapped as Strategic Cropping Land.

All options will have a significant requirement for property acquisition. Options that generally follow brownfield corridors (i.e. existing railway lines) may have a somewhat lesser requirement, however in many locations road realignments and edge effects will result in unavoidable property impacts. Further design detail will be required to adequately define and cost these elements.

High level property counts have been undertaken to characterise the Short Listed options. It is important to note that the figures listed in Table 31 do not represent land requirements, they are provided for option comparison purposes only. These figures have also not been factored into costing at this stage, as further design would be required to do so with any degree of confidence.

Both properties impacted by a corridor, and properties within 200m of a corridor are included in Table 31.

Table 31: Indicative Property Counts

	Intersected properties NSW	Properties within 200m NSW	Intersected properties QLD	Properties within 200m QLD
Option 1	39	86	246	789
Option 2	39	86	252	765
Option 3	39	86	251	559
Option 4	39	86	291	1364

Refer Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D

4.3. Hydrological Floodplain Assessment – Option 1 versus Option 3

One of the potential differentiators between Option 1 and Option 3 is the exposure to flooding and in particular exposure to the Condamine floodplain. A separate investigation was therefore done in order to better understand the impact of waterways and associated floodplain on each of the two alignments across this major waterway. The assessment involved a high level hydrological assessment and a count of the number and width of bridge/culvert structures that may be required.

The approach used the flood extents maps and contour data to estimate the width and depth of each waterway. Use the QRT method to calculate flow rates considering the catchment areas and based on a 1m afflux and a velocity of 3m/s calculate the width of the bridge/culvert structure required.

The results of the assessment where then compared to the estimates included in the strategic comparative cost estimates.

Assumptions:

- Trapezoidal shape of the floodplain, with similar side slopes
- A manning of 0.035 for all the floodplain
- Minor waterways and those not forming part of a floodplain are not included.

Table 32: Hydrological Floodp*lain Assessment – Option 1*

	Chainage (m)				Calculations				Suggestions			
	Location/ catchment	*Begin*	*End*	*Distance (m)*	*Q (m^3/s)*	*assumed base width (m)*	*Flow depth (m)*	*Velocity (m/s)*	*Assumed afflux(m)*	*upstream depth (m)*	*assumed velocity (m/s)*	*Suggested bridge/ culvert width (m)*
0		133400										
1	A1	136500	137200	700	511	400	1.047	0.6	1	2.047	3	80
2	A2	147300	148100	800	650	400	1.17	0.7	1	2.17	3	100
3	B	150000	151400	1400	1043	400	1.48	0.8	1	2.48	3	140
4	C	165500	167300	1800	528	400	1.06	0.6	1	2.06	3	80
5	D	196000	216100	20100	7843	2250	2.6	0.5	1	3.6	3	720
6	E	249900	256500	6600	527	400	0.527	0.3	1	1.527	3	120
7	F	262700	263450	750	301	200	0.78	0.7	1	1.78	3	60
8	G	277400	290500	13100	3247	2000	1.16	1.3	1	2.16	3	500
9	H	302600	307900	5300	3752	2000	1.35	1.2	1	2.35	3	540
10	I	322900	326000	3100	3880	2000	1.5	1.5	1	2.5	3	520

Table 33: Hydrological Floodp*lain Assessment – Option 3*

		Calculations				Suggestions			
		Q (m3/s)	*assumed base width (m)*	*Flow depth (m)*	*Velocity (m/s)*	*Assumed afflux*	*upstream depth*	*assumed velocity*	*suggested width (m)*
0									
1	T	537	200	1.24	1.1	1	2.24	3	80
2	S	748	400	1.4	0.3	1	2.4	3	100
3	K	1257	400	1.7	0.8	1	2.7	3	160
4	L	6020	400	2.65	0.8	1	3.65	3	560
5	M	1212	400	1.61	0.6	1	2.61	3	160
6	N	471	400	1.05	0.5	1	2.05	3	80
7	O	265	200	1.12	0.5	1	2.12	3	40
8	P	340	200	1.18	1.1	1	2.18	3	60
9	Q	392	200	1.04	0.7	1	2.04	3	60
10	R	2293	2000	1.44	0.7	1	2.44	3	320
11	H	3557.71	2000	1.43	1.1	1	2.43	3	500
12	I	3880.312	2000	1.5	1.2	1	2.5	3	520
13	J	9782.359	2000	2.58	2.6	1	3.58	3	920

Note: The suggested width of bridge/culvert presented in last column of each of the above tables is the estimate of a width based on assumption of 1m afflux and a velocity of 3 m/s which in such flat Floodplains might not be possible to reach.

Figure 4 - Hydrological Floodplain Assessment – Catchments (North)

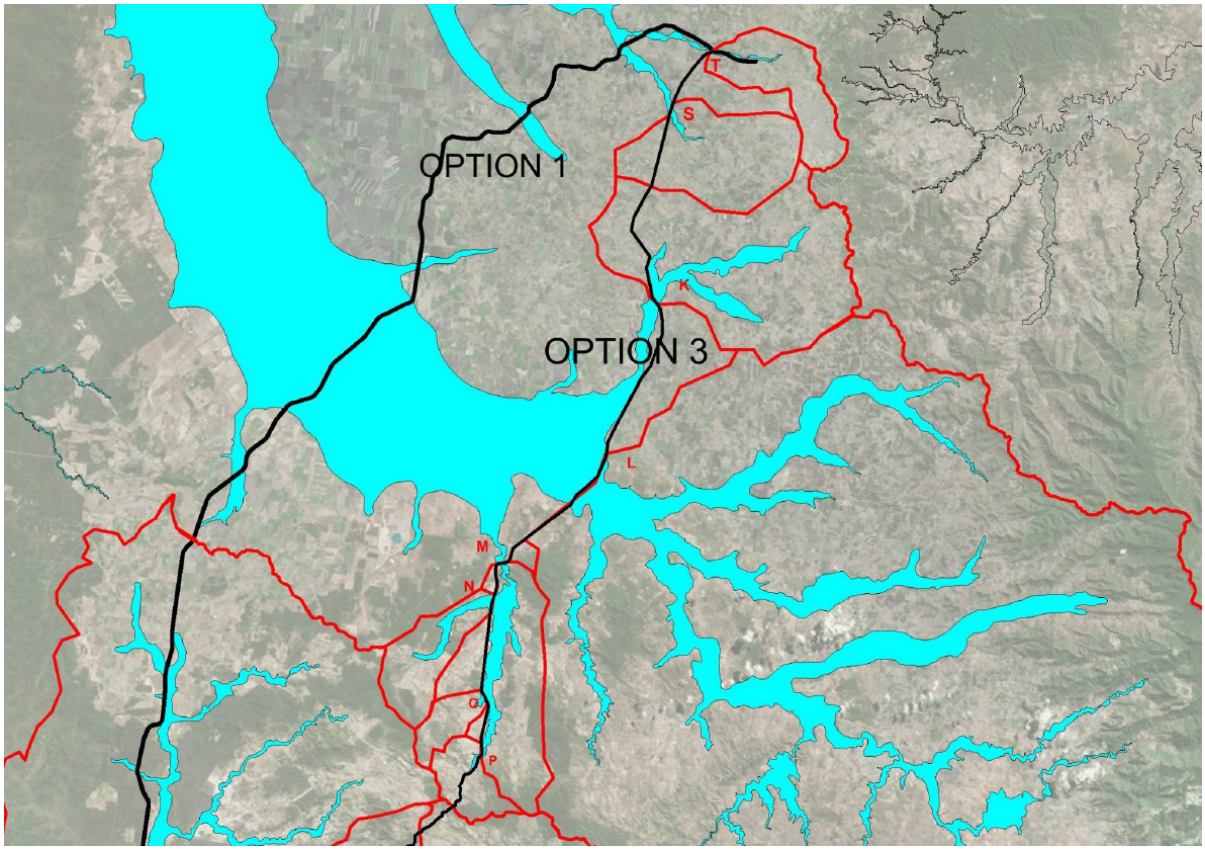
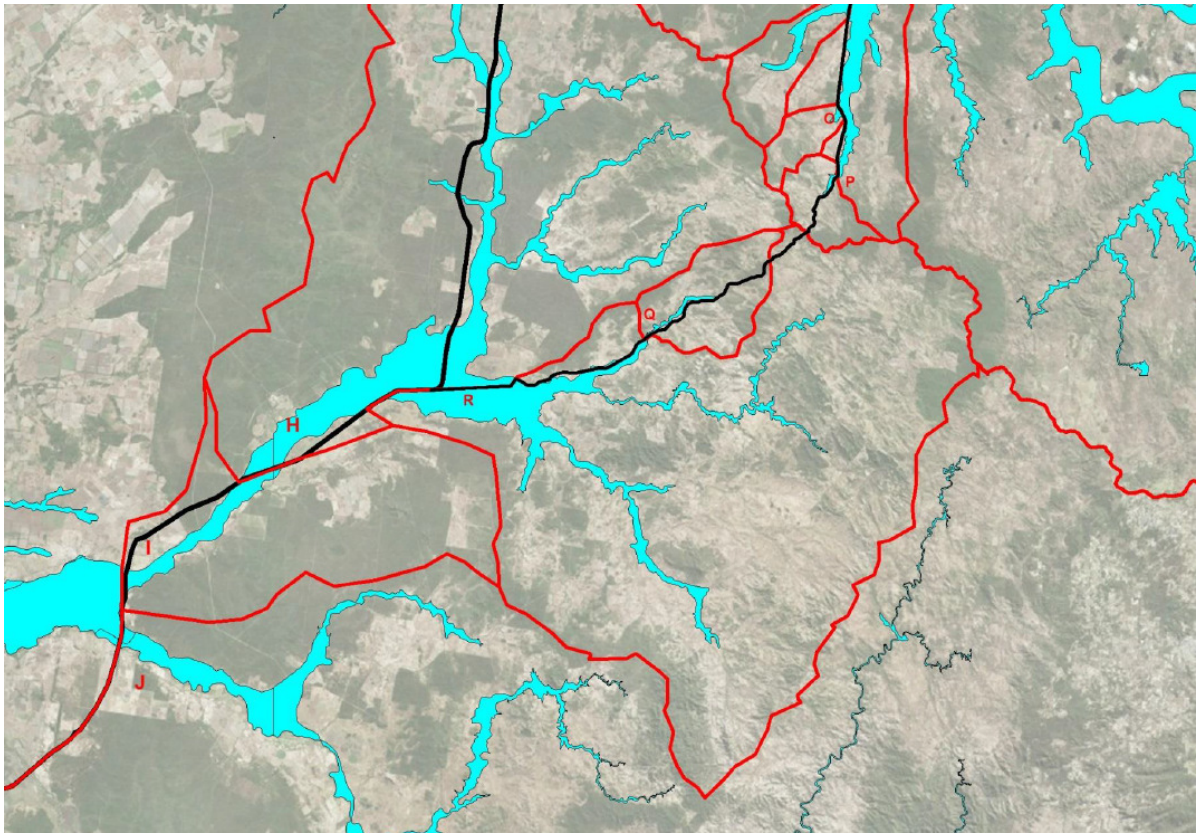


Figure 5 - Hydrological Floodplain Assessment – Catchments (South)



The number and total length of bridge/culvert structures estimated for the two alignments taken from the strategic comparative cost estimate and the hydrological assessment are as follows:

Table 34: Options 1 and 3 bridge/culvert structure

Option	Number of Bridge/Culvert structures (no.) - Strategic Comparative Cost Estimate	Total Length of Bridge/Culvert Structures (m) - Strategic Comparative Cost Estimate	Number of Bridge/Culvert structures (no.) - Hydrological Assessment	Total Length of Bridge/Culvert Structures (m) - Hydrological Assessment
Option 1	31	2,235	10	2,860
Option 3	71	3,460	12	2,650
Difference	129%	55%	20%	-7%

Due to the different methods employed it is not possible to make direct comparisons between the two sets of data. The strategic comparative cost estimate is based on numbers of waterways crossed taken from the available GIS data. The hydrological assessment considers flood extents and the number of bridge/culvert structures required to span the floodplains. Given that a floodplain may consist of a number of waterways, the number of structures calculated in this way may be expected to fewer than that based on a count of waterways and also, given that the hydrological assessment does not include minor waterways, the total length of structures for an alignment would also expected to be different. However, while it may not be possible to compare the two sets of data directly, it is possible to make some observations about the relative difference between the GIS waterway counts and structure lengths used for the cost estimate, and the relative exposure to floodplains while noting the preliminary nature of the alignments and the assessments undertaken.

The GIS data indicates that while Option 3 may have more than twice the number of waterway crossings than Option 1 (at 129%), the difference in the total length of all structures along the alignment assumed for the strategic comparative cost estimate is proportionately less at only 55% greater. Similarly, the hydrological assessment indicates that Option 3 has 20% more structures than Option 1, but the difference in the total length of structures along the alignment is proportionately less at only -7%.

In summary, the GIS data and structure length assumptions used as a basis for the strategic comparative cost estimate suggest that Option 3 has roughly twice the number of waterway crossings compared to Option1 and one and a half times the total structure length for the alignment however, the hydrological assessment suggests that Options 1 and 3 are similarly exposed to floodplains.

Note: In undertaking the hydrological assessment it is apparent that the current alignments run alongside floodplains in a number of locations. It may be possible to reduce the exposure and hence the number of bridge/culvert structures by making relatively minor adjustments to the alignments at these locations.

4.4. Comparative Summary Assessment

Refer to Dashboard Assessment Spreadsheet Appendix C and Constrains Map Appendix D.

Option 1

- 247km
- Estimated Transit Time North Star to Gowrie: 3hrs, 5min

- Comparative Capital Cost excluding land cost & contingency = $3.07M
- This alignment passes directly through or is in close proximity to Gowrie, Kingsthorpe, Aubigny, Mount Tyson, Brookstead and Inglewood.
- Does not assist in providing greater connectivity with the Woolworth Freight Distribution Centre in Warwick or the proposed containerised freight terminal at Hendon/Allora
- Major waterways crossed: Gowrie Creek (multiple crossings), Westbrook Creek, Linthorpe Creek, Fourteen Mile Creek, Condamine River (main and north branch), Canning Creek, Cattle Creek, Macintyre River and Dumaresq River at the Qld - NSW border
- All the above crossings will be exposed to rapid flow areas while the stretches of railway intruding the floodplains will be exposed to flood prone land, especially at the Condamine River floodplain which is flat and wide (about 20km).
- Bridges will be required at all major creeks and rivers systems. Bridges are likely to be founded on piles, which in some cases may require deep piles, e.g. Condamine River.
- Large sections of expansive soils (black soils) between Toowoomba and Condamine River valley area and up to Millmerran.
- Cutting in Sedimentary rocks, maybe some volcanics.
- Grain:
    - South Western Line (NG): Thallon - Goondiwindi, connect to DG at Yelarbon. Grain from Thallon (GrainCorp), Talwood (AWB + GrainCorp), Bungunya (GrainCorp) & Toobeah (GrainCorp)
    - South Western Line (NG): Warwick - Karara, connect to DG at Inglewood. Allora (GrainCorp)
- Resources: deposits at Bringalily and Lochbar, excess product from Commodore mine to Port of Brisbane?
- Intermodal Container Freight: Charlton Wellcamp
- Mostly freehold land and local roads. Crosses Warrego Highway and a number of other State Controlled Roads including Toowoomba Cecil Plains Road, Oakey-Pittsworth Road.
- The proposed alignment is located within the Border Rivers-Gwydir and Condamine catchment management areas.
- The alignment passes cleared land used for grazing and cropping, an area of State Forest and an area over which several Mineral Development Licences are held.
- The northern portion of the alignment traverses a known coal resource and areas subject to Mineral Development Licences.
- Traverses large sections of Important Agricultural Areas, and Broad Acre and Horticulture. Directly intersects an area of Limited Crop Land and crosses several stock routes.
- Traverses Petroleum pipeline
- 1,160 Properties intersected within 200m of the corridor (NSW & QLD)

SUMMARY: Flatter, but flooding issues, expansive black soils and agricultural impacts, further away from regional centres (Warwick). Close to existing grain storage facilities at Millmerran & Brookstead.

Option 2

- 246km
- Estimated Transit Time North Star to Gowrie: 3hrs, 14min
- Comparative Capital Cost excluding land cost & contingency = $2.97M
- Close proximity to Umbiram and Southbrook and directly through Pittsworth.
- Does not assist in providing greater connectivity with the Woolworth Freight Distribution Centre in Warwick or the proposed containerised freight terminal at Hendon/Allora
- Major waterways crossed: Gowrie Creek, Westbrook Creek, Linthorpe Creek, Fourteen Mile Creek, Condamine River (main and north branch), Canning Creek, Cattle Creek and Macintyre River
- Similar to Option 1, the northern section of the alignment runs nearly parallel to Gowrie Creek until Kingsthorpe, where it deviates south and crosses Dry Creek and Westbrook Creek before entering the Condamine River floodplain (main branch) at Brookstead. The northern branch of the Condamine River is avoided. The Condamine River crossing will be smaller than for Option 1.
- Bridge at Six Mile Gully and Westbrook Creek may have deep pile foundations.
- Most of the northern section of the alignment will be located in expansive soils between Gowrie and Six Mile Gully. Then between north of Yarranlea Station and Brookstead
- Cuts in weathered basalts and other volcanics - blasting
- Grain:
    - South Western Line (NG): Thallon - Goondiwindi, connect to DG at Yelarbon. Grain from Thallon (GrainCorp), Talwood (AWB + GrainCorp), Bungunya (GrainCorp) & Toobeah (GrainCorp)
    - South Western Line (NG): Warwick - Karara, connect to DG at Inglewood. Allora (GrainCorp)
- Resources: deposits at Bringalily and Lochbar, excess product from Commodore mine to Port of Brisbane?
- Passes predominantly through freehold land, lands lease associated with the existing rail and local roads. Also traverses easements, state controlled roads such as the Gore Highway and Warrego Highway, and a reserve in Pittsworth.
- The proposed alignment is located within the Border Rivers-Gwydir and Condamine catchment management areas.
- The alignment passes cleared land used for grazing and cropping, an area of State Forest and an area over which several Mineral Development Licences are held.
- The northern portion of the alignment traverses a known coal resource and areas subject to Mineral Development Licences.
- Traverses large sections of Important Agricultural Areas, and Broad Acre and Horticulture. Directly intersects an area of Limited Crop Land and crosses several stock routes. This has a lesser impact than the alternative for Option 1.

- 1,142 Properties intersected and within 200m of the corridor (NSW & QLD)

SUMMARY: Flatter, but flooding issues and agriculture impacts (however reduced over Option 1). Further away from regional centres (Warwick), but close to existing grain storage facilities at Millmerran & Brookstead.

Option 3

- 239km
- Estimated Transit Time North Star to Gowrie: 2hrs, 56min
- Comparative Capital Cost, excluding land cost & contingency = $2.97M
- Passes through or in close proximity to the towns of Umbiram, Leyburn, Karara, Gore and Yarrabah.
- Opportunity for freight terminal at Karara providing good connection (approx. 40km) to Woolworths' distribution centre (Warwick), proximity to proposed freight terminal at Charlton Wellcamp. Creation of freight terminal at Karara (staging opportunity) would provide alternative to road for Woolworth Freight Distribution Centre in Warwick and link with proposed containerised freight at Hendon/Allora
- Major waterways crossed: Hodgson Creek, Condamine River, Thanes Creek, Canal Creek, Sandy Creek, Middle Creek and Chain of Ponds Creek (multiple crossings).
- Although there are several crossing along this alignment, they will tend to be smaller than those for Option 1.
- Bridges will be required at all mayor creeks and rivers systems. Bridges are likely to be founded on piles, which in some cases may require deep piles. i.e. Condamine River and Hodgson Creek
- Although there are several crossing along this alignment, they will tend to be smaller than those for Option 1
- Expansive soils are expected Gowrie and the Brisbane West Wellcamp Airport and in the alluvial materials south of Umbiram and along the Hodgson Creek / Condamine River valley.
- Cuts will be in weathered basalts and other volcanics, and metasedimentary rocks. Blasting may be required.
- Grain:
    - South Western Line (NG): Thallon - Goondiwindi, connect to DG at Yelarbon. Grain from Thallon (GrainCorp), Talwood (AWB + GrainCorp), Bungunya (GrainCorp) & Toobeah (GrainCorp)
    - South Western Line (NG): Warwick - Karara, connect to DG at Karara. Allora (GrainCorp)
    - Millmerran Branch (NG): Millmerran - Brookstead, connect to DG at Umbiram. Grain from Brookstead (GrainCorp)
- Resources: Coal deposits at Felton West, Felton North, Felton East
- Intermodal Container Freight: Karara (approx. 40km from Warwick - Woolworths, Hendon/Allora - containerised grain), Charlton Wellcamp

- Predominantly freehold and local road reserve. Traverses lease land associated with existing rail, several State Controlled Roads such as Cunningham Highway. It intersects numerous areas of reserve land, through Karara, Gore and along the Cunningham Highway.
- Northern half of the alignment is within Important Agricultural Areas. Passes directly through a large area of Broad Acre and Horticulture around Condamine River and Hodgson Creek. Intersects and follows a number of stock routes.
- Northern half of the alignment is within Important Agricultural Areas. Passes directly through a large area of Broad Acre and Horticulture around Condamine River and Hodgson Creek. Intersects and follows a number of stock routes.
- Northern section runs parallel to TSRC alignment
- Crosses power easement near Felton East
- 935 Properties intersected within 200m of the corridor (NSW & QLD)

SUMMARY: Less exposed to flooding, but greater environmental impacts. Closer to regional centres (Warwick) and coal deposits (Felton), but further away from existing grain storage at Millmerran and Brookstead. Opportunity for staging, i.e. freight terminal at Karara

Option 4

- 308km
- Estimated Transit Time North Star to Gowrie: 4hrs, 14min
- Comparative Capital Cost excluding land cost & contingency = $5.73M
- Passes close proximity to smaller towns including Wyreema, Cambooya, Greenmount, Nobby, Clifton, Ellinthorp, Hendon and Thane to Karara.
- Opportunity for freight terminal at Karara (staging), proximity to Woolworths' distribution centre (Warwick), proximity to proposed freight terminal at Charlton Wellcamp. Access to Woolworths Freight Distribution Centre would provide alternative to current road transport and access to proposed containerise freight at Hendon/Allora
- Major waterways crossed: Hodgson Creek, Kings Creek, Spring Creek, Dalrymple Creek, Glengallan Creek, Condamine River and Thanes Creek.
- Apart from the Glengallan Creek/ Condamine River crossings, all other crossings along this alignment will tend to be smaller than those for Options 1 and 2 (north of Umbiram).
- Bridges will be required at all mayor creeks and rivers systems. Bridges are likely to be founded on piles, which in some cases may require deep piles, i.e. Condamine River and Hodgson Creek. Additional bridges may be required along the alignment between Condamine Station and Greysholm Station.
- Expansive soils are expected all alluvial and residual soils between Toowoomba and Cunningham Station, including the Hodgson Creek / Condamine River valley.
- Cuts will be in weathered metasedimentary rocks and granitoids. Blasting is likely to be required.
- Grain:

- South Western Line (NG): Thallon - Goondiwindi, connect to DG at Yelarbon. Grain from Thallon (GrainCorp), Talwood (AWB + GrainCorp), Bungunya (GrainCorp) & Toobeah (GrainCorp)
- Millmerran Branch (NG): Millmerran - Brookstead, connect to DG at Wyreema. Grain from Brookstead (GrainCorp)

- Intermodal Container Freight: Warwick (Woolworths distribution centre, containerised grain (Hendon/Allora), Charlton Wellcamp
- Predominantly freehold, local road reserve and lands lease associated with the existing rail line.
- Traverses numerous areas of important agricultural land, broadacre and horticulture and stock routes.
- Crosses transmission line corridor
- 1,780 Properties intersected and within 200m of the corridor (NSW & QLD)

SUMMARY: Greater use of existing railway corridor, but longer slower route. Greater community impacts, (Warwick, Toowoomba).

4.5. Future Economic and Transport Opportunities in Toowoomba and Environs

The MBIR will transform the rail freight task in Australia, linking the key capital cities along the east coast and catalysing the development of regional freight and distribution hubs. It will support strategic goals, such as the provision of new jobs and more sustainable economic and environmental conditions, and strengthen Australia's export competitiveness by providing more cost effective freight access to key port locations.

Transport and Main Roads (TMR) is planning for this growing challenge with 'Moving Freight", a 10-year strategy which identifies a number of actions to improve the movement of freight across Queensland. More specifically, Moving Freight outlines the Queensland Government's strategy to develop a multi-modal freight network that is both sustainable and productive, with reference to both road and rail. It also outlines a short, medium and long-term strategy to move freight onto rail and improve the efficiency of road freight, recognising that the road network clearly represents by far the largest proportion of the transport task.

The MBIR is a recognised priority for the Australian Government that will unlock major economic benefit and revolutionise rail freight on the eastern coast of Australia.[1] Queensland's freight task is rising rapidly, and is forecast to increase from 870 Mtpa in 2010/11 to 1,700 Mtpa by 2026.

While the growth in exports will continue to be driven by strong economic activity including population growth and international trade, the reduction in manufacturing in Australia will add to the increased demand for imported goods. This will lead to an increased demand on our existing road and rail links along Queensland's coastal corridor as well as the interstate corridors and links to the southern states.

[1] Moving Freight. Department of Transport and Main Roads, Queensland. December 2013.

Table 35- Estimated total freight volumes for key commodity groups

Commodity Group	Million Tonnes per Annum			
	2016	2021	2026 (low)	2026 (high)
Bulk Export Coal and Gas	216	282	378	378
Bulk Export Minerals	40	57	68	76
Agricultural Produce and Livestock	9	11	13	13
General Freight	830	1,016	1,185	1,274
TOTAL	1,095	1,366	1,644	1,741

Source: Pekol Transport and Traffic 2013 and TMR aggregation. Table 2, Moving Freight. Department of Transport and Main Roads, December 2013.

The primary freight network comprises 13,600km of road and 9,550km narrow gauge and standard rail line. Any inefficiency is generally passed on through the supply chain via and increased cost resulting in a loss in competitiveness which can in turn be capitalised on. The responsibility for managing, maintaining and growing the Queensland road and rail network is increasingly being shared between infrastructure owners, regulators, transport operators, and freight consumers. The introduction of a dedicated rail link between Melbourne and Brisbane will not only improve existing freight connections, but serve as the catalyst for increased rail mode share and drive lower freight transport costs, in addition to improving road safety by the reduction in trucks.

Figure 6 provides an overview of the current rail network as a way of illustrating the road versus rail network and the inefficiency of the rail corridors connecting with the Toowoomba and environs region.

What this map shows is a significant reliance on the major east-west rail corridors to transport coal and minerals from inland to the coastal ports of Brisbane, Gladstone, Mackay and Bowen (i.e. Hay Point). These ports provide the interfaces with Australia's major trading partners and act as the link between the land and the sea. Virtually all of the rail corridors run like spines through the middle of the various coal fields collecting and transporting this low value high volume commodity to the ports. The network of trains is operated by a variety of parties, some commercial, some governmental in the knowledge that these ports are an extremely important part of national freight flow.

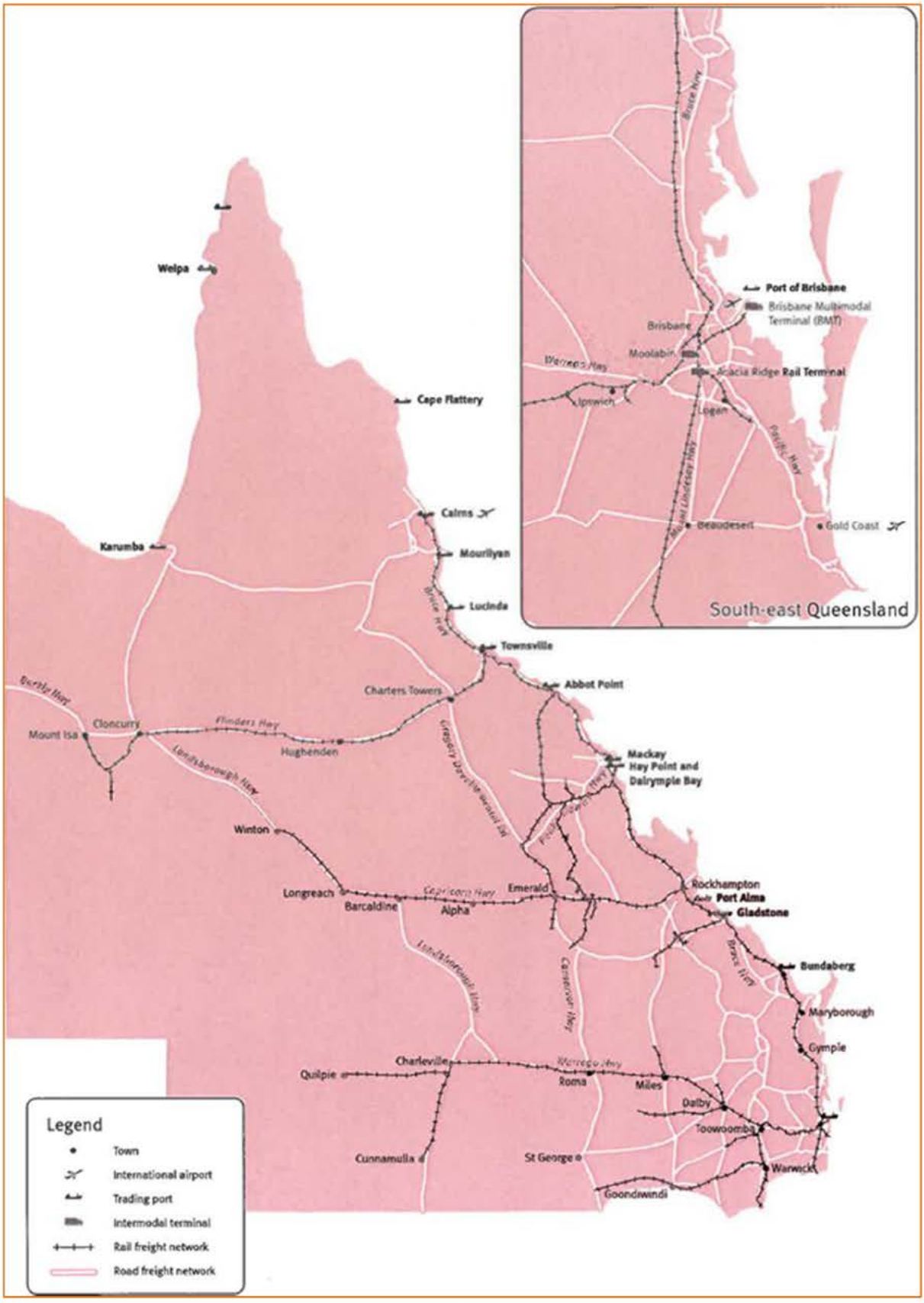
Intermodal freight across the southwest of Queensland is largely limited to the eastwards movement of 10,000-15,000 containers (as TEU's) between Goondiwindi and the Port of Brisbane. No product moves westerly from Brisbane into the region by rail for a range of reasons, not the least of which is a constrained narrow gauge rail corridor capacity, and an adverse commercial position relative to the price and flexibility offered by road freight.

Northbound and southbound interstate freight associated with the proposed MBIR include:

- Capturing a high proportion of cotton, grain and meat exports.
- Handling the inbound logistics and staging associated with current and future coal mine and gas developments across the Surat Basin (as non-bulk mine inputs)
- Westbound flows into the region of consumer, agricultural and industrial goods

The introduction of a dedicated rail link between Melbourne and Brisbane will not only improve existing freight connections, but serve as the catalyst for increased rail mode share and drive lower freight transport costs, in addition to improving road safety by the reduction in trucks.

Figure 6 - Queensland Road versus Freight Rail Network



Source: Moving Freight. Department of Transport and Main Roads, December 2013

The Queensland agriculture, horticulture and grain sectors are mature industries, due in part to large tracts of arable land utilised for extensive dry-land and irrigated cropping. Major road investment is aimed at improving the freight carrying capacity of the vast Queensland road network in support of this industry mainly through the upgrade of aging infrastructure and improving flood resilience.

Grain

On average, there is around 1.5 Mtpa of winter crops grown annually, including wheat, barley and maize. Around 750,000 tonnes, being 50% of the average winter harvest is moved by rail in bulk to port for export, the balance moved by road as bulk or in export containers. Most of the flows to domestic markets are transported by road due to the dispersed nature of the supplier network and the comparatively small order quantities. Rail transport could achieve a higher mode share of the export bulk volumes depending on the availability of extra train paths, with two scenarios at 1 million and 1.5 million tonnes considered. In addition, further volume in containers could also be attracted to rail provided that these consignments could access a suitable intermodal terminal in the region.

Cotton

Cotton is a significant broadacre crop and in Queensland is grown mostly in the south in the Darling Downs, St George, Dirranbandi and Macintyre Valley regions. Cotton exports are an outstanding commodity for carriage by rail, all other factors being equal. Presently rail transport cannot complete due to infrastructure constraints, mainly being low height tunnels that impede the movement of high-cubic containers. Currently between 5 and 15 ('000 TEU's) are carried by rail from Goondiwindi to Port of Brisbane.

Horticulture

While the horticulture produces up to 200,000 tonnes of fruit and vegetable across the study region, much of this volume is delivered into the domestic market in Brisbane, Sydney or Melbourne. The perishable nature of the product and the shortened delivery times are not conducive to carriage by rail.

Agriculture – Livestock

While the total volume of livestock being transport is significant, very little of his volume is readily contestable by rail transport, due to the inconsistent demand and dispersed nature of the network.

While livestock travels from northern Queensland by rail, rail transport over shorter travels distances though the study area is not considered to be commercially viable and may require further financial support from Government.

Materials, Plant and Equipment

While considerable attention is generally given to the scale and impact of mining outputs, the inbound logistics transport task can also be significant, particularly given that inbound flows are carried by road transport.

Several studies have identified that the scale of inbound logistics to mine site can vary from 5% of forecast output during set-up and construction, down to 2-3% for steady state operations. Inbound logistics to a mine site will include:

- Earthmoving equipment, which is generally as oversized loads
- Fuel for explosives and equipment
- Ammonium nitrate for explosives
- Construction and maintenance consumables (steel, cement, etc.)
- Workforce provisions

Coal

Queensland has significant oil and gas potential. However, coal is clearly the dominant freight generator in Queensland with the main destinations being Hay Point, the Port of Gladstone and the Port of Brisbane. The increase in global demand for coal over time with the rise of developing economies such as China has seen a rapid rise in the development of coal mining in south-east Queensland, particularly in the Surat, Bowen and Clarence-Moreton Basins. Coal in this region is predominantly thermal, used primarily for energy generation.

The current coal mining task is around 14mtpa and an inbound task at 3% is around 420,000 tonnes per annum or 8,000 tonnes per week equivalent to 200 inbound loaded trucks per week, with a similar number returning empty. Virtually all of the rail corridors run like spines through the middle of the various coal fields collecting and transporting this low value high volume commodity to the ports. The network of trains is operated by a variety of parties, some commercial, some governmental in the knowledge that these ports are an extremely important part of national freight flow.

Charlton Wellcamp

There is a considerable volume of freight (mainly grain and cotton exports) that has an affinity with rail transport given the overall volume and density of the goods. Apart from the Goondiwindi terminal, there are limited strategically located and adequate terminal facilities across the region to compete for a greater share of the road freight. A review of the current and potential freight flows provides an opportunity to develop a long run forecast for freight through a terminal at Charlton Wellcamp. Figure 7 provides an overview of the area and how it fits in with the potential alternative alignments for the MBIR.

Figure 7 - Charlton Wellcamp Area and Surrounds

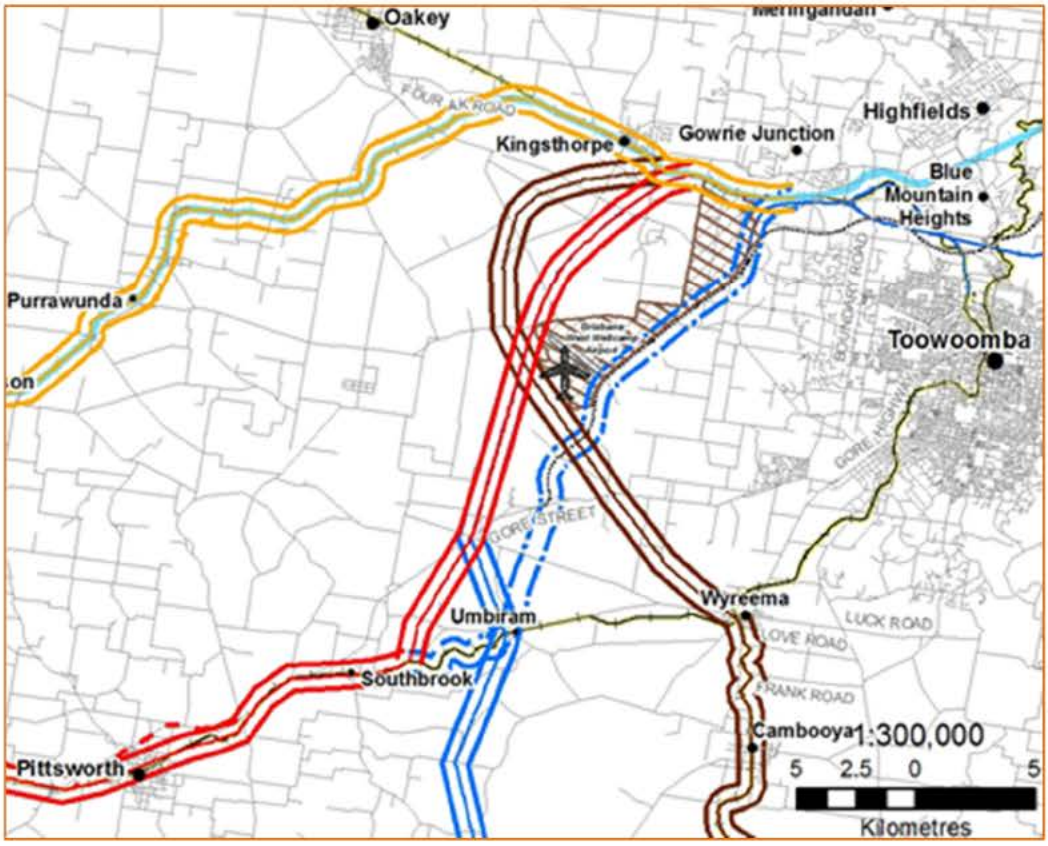


Table 36: Market segments, assumptions, growth rates and potential throughput volumes for Charlton Wellcamp

Non-bulk goods freight market	Driver	Growth rate and/or key assumptions on demand	Contestable demand (units)	Units	Identified in prior analysis of volumes	Assumed market share through Charlton	Nominal tonnes ('000tpa)	Equivalent domestic or IMEX TEU's (10t/TEU)
Current freight demand								
Containerised grain	Current receipts at port for Darling Downs	1% growth linked to farm output	50000	TEU	Yes	50%		25000
Containerised cotton lint and seed	Current receipts at port for Darling Downs	1% growth linked to farm output	20000	TEU	Yes	50%		10000
Meat products (Beef City, Dalby)	Current receipts at port for Darling Downs	1% growth linked to farm output	30000	TEU	Yes	50%		15000
Existing mine inputs	10 Mtpa output (no growth)	Inbound logistics for non-bulk products estimated to be around 0.5% of output	50000	Tonnes	Yes	50%	25000	2500
Consumer goods	Population at 254,000 persons; 2.5 tonnes per capita	Forecast 0.7% growth for population	165000	Tonnes	No	25%	41250	4125
Farm and industry goods	Estimate only	1% growth linked to farm output	200000	Tonnes	No	25%	50000	5000
Future freight demand								
Expanded coal mine inputs	Straight-line expansion to additional 40 Mtpa output by 2035	Inbound logistics for non-bulk products estimated to be around 0.5% of output						
		- 2025; 10 Mtpa output	50,000	Tonnes	No	50%	25,000	2,500
		- 2035; 40 Mtpa output	200,000	Tonnes	No	50%	100,000	10,000
Charlton Wellcamp industrial development	2000 Ha development to employ 10,000 persons starting 2025 to 2055	Assume straight-line development and employment over 25 years; 250 tonnes per person freight attraction/generation						
		- 2025; 200 Ha; 1,000 persons	250,000	Tonnes	No	50%	125,000	12,500
		- 2050; 2000 Ha; 10,000 persons	1,500,000	Tonnes	No	50%	750,000	75,000

Various “top down” demand studies for the site have forecast throughput up to 380,000 TEU’s however a comprehensive assessment of the contestable freight types is not known to have been completed or publically available. It appears route Options 2, Option 3 and Option 4 in combination running west of the Brisbane West Wellcamp Airport and joining the western line near Kingsthorpe would provide the best arrangement going forward. This could facilitate access to possible future passenger and freight facilities near the airport and more particularly the planned Charlton intermodal precinct. This could route could also assist in facilitating a bypass of Kingsthorpe town.

Whilst the current private sector proposal needs to be encouraged, it is important to carry out some broader master planning for the area to ensure the space, the land use and the infrastructure framework is adequate to the vision of significant freight node or activity centre.

Karara

In addition to Charlton Wellcamp, a terminal near Karara may present an opportunity to capture freight from the Woolworths FDC at Warwick. It is understood that an average of 5,000 pallets per week (approx. 25,000 TEU per annum) pass through the Woolworths FDC primarily to/from Melbourne, Sydney and Brisbane via road.[2] The volume and extent to which it is contestable by rail needs to be established.

Yelarbon/Inglewood

A terminal at one of these centres for grain and cotton transport may be viable in addition to Karara, if sufficient volumes can be mobilised. Whilst there is generally pressure to development such facilities at many locations economies of scale are required to make the viable. Thus locations and numbers of such facilities will need to be carefully analysed and planning coordinated. A separate study currently in progress in relation to the QR SW rail system will provide some preliminary guidance in that direction.

Brisbane West Wellcamp Airport

The new Brisbane West Wellcamp Airport (WTB) located 17km west of Toowoomba is Australia’s newest airport. Developed and operated by local construction company Wagner’s, Brisbane West Wellcamp Airport is touted to be the aviation gateway connecting Toowoomba and south-west Queensland to the world.

Plans are underway for a Wellcamp Business Park, incorporating Brisbane West Wellcamp Airport. The aim is for this area to become the business hub of Toowoomba and regional Queensland with a key focus on aviation, logistics, transport and mining services. There are currently about two scheduled flights per day.

4.6. Some Thoughts on Future Staging

The possibility of staging the delivery of the MBIR north of North Star has been discussed (Workshop with TMR & QR on 23rd February 2015 and Workshop with TMR, QR & ARTC on 27th February 2015).

It is understood the development of MBIR within Queensland would best be served by facilitating early benefits from investment in the Grandchester- Helidon section, as sections such as the Little Liverpool Range represent significant constraints. Following this, the Helidon- Gowrie (GDR range section) is the next critical section, albeit expensive. These improvements would allow greater volumes of freight to pass through to the Port of Brisbane thus utilising the existing infrastructure in the Brisbane region.

[2] Warwick Daily News, Nov. 2013

Once the Brisbane rail system is at capacity investment will be required in the Southern Freight Rail Corridor and the interstate line from Kagaru to Acacia Ridge.

Following this, further investment in the Gowrie – North Star section would facilitate delivery of significant volumes of grain and cotton from southern Queensland and northern NSW. A build-up in freight volumes both bulk and containers should then be sufficient to underwrite the development of the expensive link from Acacia Ridge to the Port. Coal from eastern and central Surat Basin will obviously be critical to that equation.

It would appear there is less likelihood of Queensland grain being carried south on account of the distance differential

With respect to the Gowrie to NSW link, careful consideration needs to be given to the interrelationship between the existing South West Rail System and the planned new MBIR dual gauge line (north of Yelarbon). The actual sequence and triggers for development on this link Gowrie – NSW will closely interact with the location and spacing of possible inland freight terminals. Whilst a substantial facility is proposed for Charlton there appears potential to have smaller loading facilities at centres such as Yelarbon, Inglewood, and/or Karara. Certain size thresholds will be needed to trigger development of infrastructure investment and viable operations.

Interaction with road freight will also be critical as road is generally more efficient on short haul operations and already road transport accounts for 85% of the grain tonnage through the Port of Brisbane. A-Double PBS HPV configurations are proving financially attractive as efficient freight vehicles.

It would appear the initial rail development between Gowrie and a terminal at say Yelarbon (see above) would allow quick capture of grain and cotton freight and diversion of grain from road to rail, thereby generating revenue for MBIR from a relatively early date. On the other hand, if the MBIR was developed from the south this may promote the development of Charlton a key terminal point from where road transport may play greater part.

Development of Gowrie to Yelarbon is probably more a matter of timing and integration with development of the South West Rail System including terminals. Substantially more detailed analysis and strategy development is required on appropriate terminal development and related timing of investment. Such analysis is beyond the scope of this strategic level study.

5. STRATEGIC COMPARATIVE COST ESTIMATES

TMR has engaged SMEC to provide a strategic comparative analysis of section from Toowoomba to the NSW Border as part of the development of the MBIR project. SMEC engaged Project Support to assist with a strategic cost comparison of 4 alignment options.

5.1. Development of a Strategic Cost Estimate

The development of a strategic comparative cost estimates has been completed generally in accordance with the TMR Guidelines for the Preparation of Cost Estimates and will be prepared in the order of +/- 50% accuracy in 2014 dollars. Route length costed were made of as follows:

- Option 1 – North Star to Inglewood and then to Gowrie via ARTC alignment - 247km
- Option 2 – North Star to Inglewood and then to Gowrie via Pittsworth and Southbrook - 246km
- Option 3 – North Star to Inglewood and then to Gowrie via Karara and Umbiram - 239km
- Option 4 – North Star to Inglewood and then to Gowrie via Karara, West Warwick and Wyreema - 289km

5.2. Cost Estimate Assumptions

Terrain categories were based on plans and previous work completed by Project Support. Terrain categories used were flat, undulating and hilly. Track lengths were broken down into Brownfield (BF) and Greenfield (GF) and modified depending on terrain category.

Table 37: Cost Estimate Assumptions

Item	Assumption / Clarification
Terrain Categories	Divided to flat, undulating and hilly
Track Work	Dual gauge. Split into Brownfield and Greenfield
Bridges	Based on number supplied by SMEC. Divided into Type 1 and Type 2 bridges with lengths ranging from 35m to 150m.
Option changes	Option 3 increased by 4km from 235 to 239km. Option 4 increased by 44km from 245 to 289km
O/H & Margin Mark-up	Allowance of 35%
Design	Allowance of 5%
Contingency	Allowance of 30% for Owners and Project Wide Risks. Discussion held with ARTC.
Owners costs	Adopted 20%. Discussion with ARTC.
Property	Excluded
Escalation	Excluded
MBIR Rates	The following MBIR rates have been used Supply of track and sleepers Pre-construction flora/fauna surveys

Table 38: Strategic Cost Estimate for Option 1: North Star to Gowrie via Millmerran and Mt Tyson – ARTC 2010 alignment

Item	Description	Cost ($)
1	Construction	1,817,348,847
2	Owners Cost	541,796,725
3	Contingency	707,902,741
	TOTAL	**3,067,048,313**

Table 39: Strategic Cost Estimate for Option 2: North Star to Gowrie via Pittsworth and Southbrook

Item	Description	Cost ($)
1	Construction	1,792,952,556
2	Owners Cost	536,96,477
3	Contingency	645,462,920
	TOTAL	**2,974,611,953**

Table 40: Strategic Cost Estimate for Option 3: North Star to Gowrie via Karara and Umbiram

Item	Description	Cost ($)
1	Construction	1,79,873,792
2	Owners Cost	531,326,650
3	Contingency	645,794,555
	TOTAL	**2,970,994,967**

Table 41: Strategic Cost Estimate for Option 4: North Star to Gowrie via West Warwick and Wyreema

Item	Description	Cost ($)
1	Construction	2,421,257,099
2	Owners Cost	1,292,901,022
3	Contingency	2,014,247,437
	TOTAL	**5,728,405,558**

From a cost estimate point of view it appeared as if Option 4 was the most expensive. However, the costs estimates for Option 1, Option 2 and Option 3 were more closely aligned and could not be used a means to rule out any other options from further consideration.

Refer Strategic Cost Estimates provided in Appendix E for more details.

6. ENVIRONMENTAL APPROVALS

The scale and nature of the MBIR will result in a complex multi-jurisdictional approvals process. For the purpose of this assessment, a focus on Queensland approvals pathways and processes is summarised below.

6.1. Transport Infrastructure Act (1994)[3]

In giving effect to the objective of this Act, the chief executive must, from time to time, develop for the Minister's approval transport infrastructure strategies that are designed to give effect to the coordination plan in relation to transport infrastructure in accordance with the objectives of this Act.

Transport infrastructure strategies must include:

a) a statement of the specific objectives sought to be achieved; and

b) proposals for the provision of transport infrastructure; and

c) investment criteria for deciding priorities for government supported transport infrastructure between and within the different transport modes and options for financing the priorities

Once granted, the chief executive must ensure that the construction, maintenance and operation of all government supported transport infrastructure for which the chief executive is responsible is carried out in a way that:

a) takes into account best practice and national benchmarks; and

b) promotes the safe transport of persons and goods; and

c) reduces adverse environmental impacts; and

d) encourages efficient and competitive behaviour in the construction and maintenance of transport infrastructure.

Chapter 7 "Rail transport infrastructure and other matters", provides a framework to:

a) allow railway managers to manage rail transport infrastructure in an effective and efficient way; and

b) allow railway operators to operate rolling stock in an effective and efficient way; and

c) allow rail transport infrastructure to be constructed and maintained in an effective and efficient way;

More specifically, Chapter 7, Part 2 "Investigating Potential Rail Corridors", is aimed at

a) facilitating the development of rail transport infrastructure by giving a person who is genuinely considering constructing a railway or the chief executive authorisation to enter land to enable the land's potential and suitability as a rail corridor to be investigated; and

b) to safeguard the interests of owners and occupiers of land affected by the entry.

Examples of the kind of things the chief executive may do on the land include:

[3] Transport Integration Act (1994) prepared by the Office of the Queensland Parliamentary Counsel, current as at 1 January 2015.

- conduct surveys and take soil samples;
- clear vegetation, or otherwise disturb the land, to the extent reasonably necessary;
- construct temporary access tracks using the land or using materials brought onto the land.

Before land is entered for the first time, the chief executive must give a written notice to the owner or occupier of the land. However, in doing so, the relevant person:

a) must take as much care as is practicable to minimise damage to the land or inconvenience to the land's owner or occupier; and

b) may do anything necessary or desirable to minimise the damage or inconvenience; and

c) is liable to compensate the land's owner or occupier for any loss or damage suffered by the owner or occupier arising out of the entry onto the land, any use made of the land, anything brought onto the land or anything done or left on the land in connection with the relevant person's authority.

Chapter 7, Part 4 deals specifically with "Watercourses", and to this end the Act allows an accredited person to carry out railway works, with the chief executive's written approval to—

a) divert a watercourse; or

b) construct a watercourse, whether temporary or permanent.

Noting that the chief executive must consider the effect the works would have on the watercourse's physical integrity and flow characteristics.

Chapter 7, Part 7 "Land for railway purposes" deals with the resumption of land for use by a railway manager as part of a rail transport corridor. However, the chief executive may delay the acquired land becoming unallocated State land until any proposed rail transport infrastructure is built or substantially built and the boundaries of the land are more accurately defined.

6.2. Environment Protection and Biodiversity Conservation Act (1999)[4]

The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. The EPBC Act focuses Australian Government interests on the protection of matters of national environmental significance, with the states and territories having responsibility for matters of state and local significance.

The objectives of the EPBC Act are to:

a) provide for the protection of the environment, especially matters of national environmental significance;

b) conserve Australian biodiversity;

c) provide a streamlined national environmental assessment and approvals process;

d) enhance the protection and management of important natural and cultural places;

e) control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife;

[4] Environment Protection and Biodiversity Conservation Act (1999). Australian Government, Department of Environment.

f) promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;

g) recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity;

h) promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

The MBIR may require a referral assessment under the EPBC Act. However, further analysis would be required to determine if this will indeed need to occur and therefore what the best environmental assessment approach to service both the Australian government and the state government environmental assessment procedures would need to be.

No project of this scale has been progressed through an EPBC Act assessment and referral process before. Consultation with the Department of Environment will therefore be required to confirm the most appropriate approach.

There are several pathways available, including (but not limited to):

- Environmental Impact Statement under the State Development Public Works Organisation Act;
- Impact Assessment Report under the State Development Public Works Organisation Act;
- Environmental assessment following the TMR Environmental processes manual (preferred);
- Environmental assessment to support a community infrastructure designation under the provisions of the Sustainable Planning Act;
- Transport Infrastructure Act.

The selected approach will depend on the proponent, and will require an integrated stakeholder engagement process, as well as identification of subsequent construction environmental approvals and exemptions to ensure the project can proceed. Native title and cultural heritage will also need to be addressed in engagement and approvals processes.

7. CONCLUSIONS AND RECOMMENDATIONS

The high level strategic review of feasible alignments/rail corridors between North Star and Gowrie suggest that there is at least one alternative to the ARTC 2010 study preferred alignment that is worthy of further investigation and refinement.

Long List

Five suggested alternatives with some minor deviations were identified for further study. The most significant deviations have been proposed to address flooding and unfavourable ground conditions and seek to take greater advantage of potential transport and economic opportunities. Minor adjustments have been proposed mainly to address localised curvature and grades

Each alignment refinement has been reviewed from the perspective of the following constraints in the context of the section between North Star and Gowrie:

- Alignment Performance;
- Hydrological/Floodplain (flood inundation);
- Geotechnical (terrain and ground conditions);
- Environment and Heritage Constraints;
- Agriculture and Land Use Constraints;
- Major Infrastructure requirements;
- Stakeholder and Community Sentiments.

Short List

In developing the Short List, the report has examined a number of major constraints, including the alignment performance, flooding impacts, geotechnical conditions, environmental and land use impacts, service utility impacts, land use and property impacts, community impacts, stakeholder sentiments, and current and future economic opportunities. In addition, the study has reviewed the need for supplementary infrastructure such as the need to replace existing bridge structures and build new bridges. The derived Short List of alignment options has been taken forward as Options 1 through to Option 4. These options represent the most feasible rail alignments between North Star and Gowrie.

Strategic Comparative Cost Estimate

A strategic comparative cost estimate has also been prepared for each of the Short Listed options. The result of this assessment is shown in Table 42 below.

Table 42: Strategic Comparative Cost Estimates (2014 dollars)

Option	Description	Cost Estimate ($m)
1	North Star to Gowrie via Millmerran and Mt Tyson – ARTC 2010 alignment	3.07
2	North Star to Gowrie via Brookstead and Pittsworth	2.97
3	North Star to Gowrie via Karara and Umbiram	2.97
4	North Star to Gowrie via west Warwick and Wyreema	5.73

Hydrology

A separate Hydrological Floodplain Assessment for Option 1 versus Option 3 was carried out as a potential differentiator between Option 1 and Option 3. The exposure to flooding and in particular exposure to the Condamine floodplain was seen as a differentiating feature. A separate investigation was therefore done in order to better understand the impact of waterways and associated floodplain on each of the two alignments across this major waterway.

Economic and Transport Opportunities

The impact of future economic and transport opportunities in Toowoomba and Environs was also considered. The MBIR is a recognised priority for the Australian Government that will unlock major economic benefit and revolutionise rail freight on the eastern coast of Australia. The introduction of a dedicated rail link between Melbourne and Brisbane will not only improve existing freight connections, but serve as the catalyst for increased rail mode share and drive lower freight transport costs, in addition to improving road safety by the reduction in trucks.

The need for an alignment that runs west of Brisbane West Wellcamp Airport was another consideration in support of the ongoing economic activity for the region. The work done to date suggests that the most promising alternative is Option 3 North Star to Gowrie via Karara and Umbiram.

Staged Delivery

The possibility of staging the delivery of the MBIR north of North Star has been discussed (Workshop with TMR & QR on 23rd February 2015 and Workshop with TMR, QR & ARTC on 27th February 2015). It is understood the development of MBIR within Queensland would best be served by facilitating early benefits from investment in the Grandchester- Helidon section, as sections such as the Little Liverpool Range represent significant constraints. Following this, the Helidon- Gowrie (GDR range section) is the next critical section, albeit expensive. These improvements would allow greater volumes of freight to pass through to the Port of Brisbane thus utilising the existing infrastructure in the Brisbane region. Once the Brisbane rail system is at capacity investment will be required in the Southern Freight Rail Corridor and the interstate line from Kagaru to Acacia Ridge.

Preferred Combination

The preferred combination of options is as follows:

- North Star-Yelarbon-Inglewood-Karara (Option 1)
- Karara-Leyburn-Felton East- Umbiram (Option 3)
- Umbiram - west of Brisbane West Wellcamp Airport (Option 2)
- Brisbane West Wellcamp Airport - Kingsthorpe – Gowrie (Option 4)

Key benefits noted with this combination of options include:

- **The total alignment** is marginally shorter than the ARTC 2010 alignment from North Star to Gowrie (239km vs. 247km), and has shorter section running times (2hrs 56 min vs. 3hrs 5min) based on ARTC 2010 assessment methodology
- **The Option 1 section** alignment provides good access to the grain markets with existing storage facilities along the alignment at Yelarbon, Millmerran, and Brookstead. In addition, the connection of South Western Line to Option A at Yelarbon provides access to existing grain storage facilities (GrainCorp & AWB) at Goondiwindi, Toobeah, Bungunya, Talwood and Thallon. Option 1 adopts a minor deviation to the east to skirt the eastern extent of the

Yelarbon Desert. The deviation also provides a possible better crossing of the floodplain. Some discrete areas of remnant vegetation are retained along the major waterway corridors.

- **The Option 3 section** has less exposure to flooding with respect to the Condamine floodplain where the ARTC alignment traverses some 20km and Option 3 some 10km. Option 3 also has reduced exposure to expansive black soils and a lesser impact on the agricultural land associated with the floodplain. Option 3 appears to have better access to transport links including New England/ Cunningham Highways, and proximity to existing and potential future economic activity centres, including Woolworths FDC at Warwick.

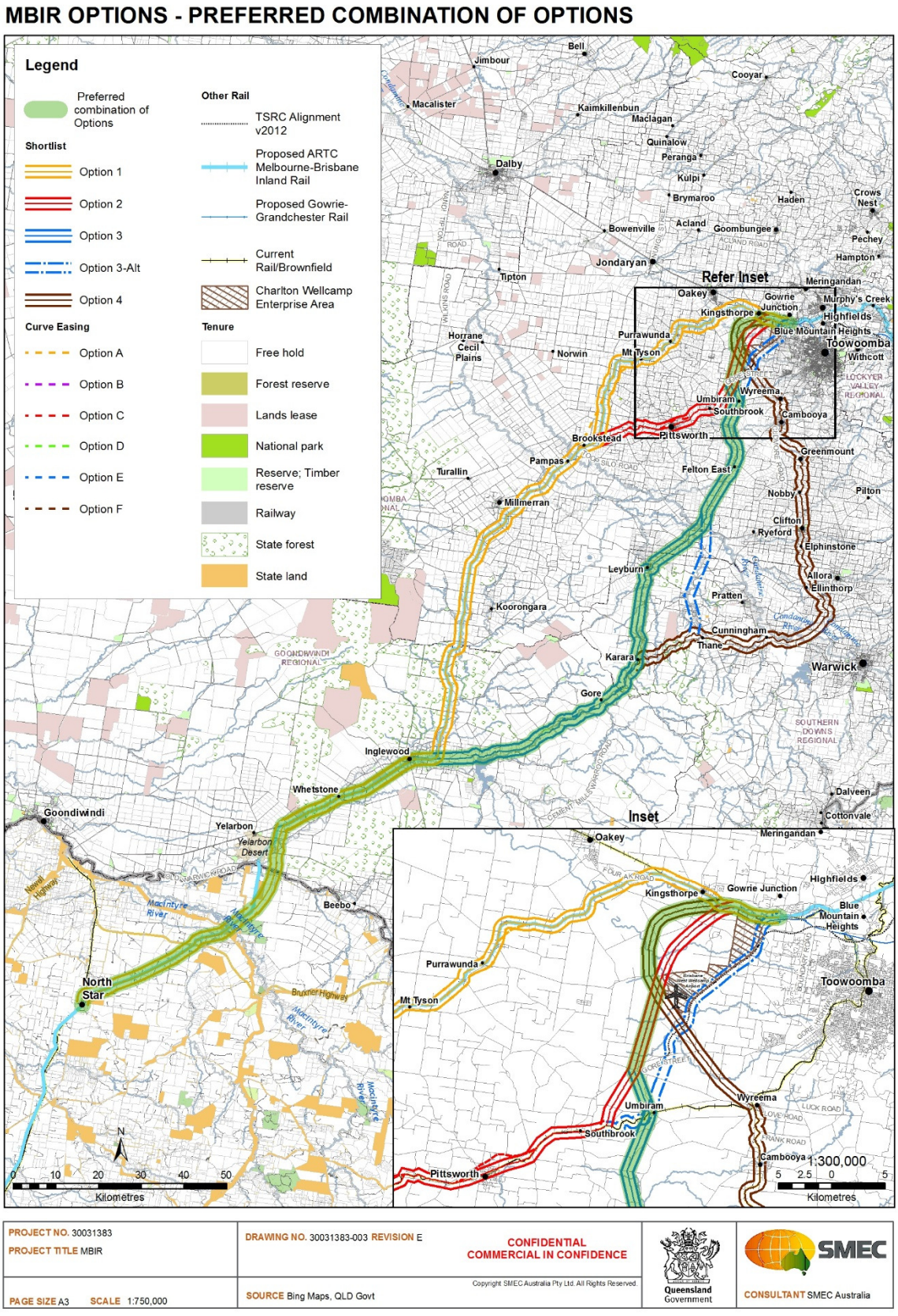
  There is also possible feasible alternative alignment (Option 3-Alt) via Thane - Felton South - Umbiram and then to the west of the industrial hub at Charlton Wellcamp, joining the Western Line to the west of Gowrie may further improve the preferred combination of options still further.

- **The Option 2 section in combination with the Option 4 section** running west of the Brisbane West Wellcamp Airport and joining the western line near Kingsthorpe would allow the MBIR to pass near the airport and also provide for straight path access into terminal in the Charlton Wellcamp area. This could facilitate access to possible future passenger and freight facilities near the airport and more particularly the planned Charlton Wellcamp intermodal terminal precinct.

This preferred combination alignment is shown in Figure 8 below.

Further targeted environmental and agricultural assessments and stakeholder engagement is necessary to determine the suitability of an alternate corridor. This includes the fine tuning of the alignment, the engineering design and a determination of the appropriate mitigation treatments to address any negative environmental impacts. This will also enable the confirmation of the requisite environmental approvals necessary for project delivery.

Figure 8 - MBIR Preferred Combination of Options



8. AREAS FOR FUTURE ASSESSMENT

There are a number of additional investigations that are suggested for further investigation work to support the development of alternative route options as part of the proposed MBIR.

These works include:

- Development of feasible alignment(s) based on the preferred route option, supported by sufficient engineering detail to evaluate the land footprint required for a connection between North Star to Gowrie, and development of earthworks quantities and assessment of requirement for bridge structures, etc.;
- Further proofing of the Option 3-Alt alignment via Karara/Thane/Felton South including the preparation of a basic alignment model and earthwork quantities;
- Concept design for Freight Terminal at Charlton-Wellcamp to future proof for 3600m trains, and freight and passenger to Brisbane West Wellcamp Airport;
- Analysis of alignment options for a Kingsthorpe rail bypass
- Further work on alignment options east and west of Brisbane West Wellcamp Airport;
- A formal multi criteria analysis is undertaken against an agreed set of weighted assessment criteria that considers the key objectives, of not only TMR, but ARTC and other stakeholders before confirming the preferred route option;
- An assessment against 'Dial Before You Dig' services information undertaken and contact made with existing services or infrastructure owners to determine future provisions or reservation requirements. It is recommended that a full analysis is undertaken of the preferred option(s) prior to progressing with Detailed Design;
- Further assessment of the land and agricultural impacts is undertaken to determine the policy for partial or full resumption requirements;
- Relevant stakeholders are identified and engaged in accordance with applicable processes throughout the design process;
- Confirmation of any environmental and statutory approvals is required to progress the proposal;
- Additionally, consideration for undertaking works on or near the existing sections of the Queensland Rail network should be considered, and assessed for their impacts on existing operations.
- Impact of the MBIR alignment and gauge on the infrastructure and operations of the existing QR network including South Western and Western Systems.

APPENDIX A – LONG LIST DASHBOARD ASSESSMENT

APPENDIX B – LONG LIST CONSTRAINTS MAPS

APPENDIX C – SHORT LIST DASHBOARD ASSESSMENT

APPENDIX D – SHORT LIST CONTRAINT MAPS

APPENDIX E – STRATEGIC COMPARATIVE COST ESTIMATE

DOCUMENT/REPORT CONTROL FORM

File Location Name:	Options Analysis Report – Toowoomba to the Border
Project Name:	MBIR Options Analysis Project Issues Identification and Alignment Refinement of the ARTC Inland Rail Alignment between Toowoomba and the NSW Border
Project Number:	30031383
Revision Number:	4

Revision History

Revision #	Date	Prepared by	Reviewed by	Approved for Issue by
1	06-03-2015	s.47F(1)	s.47F(1)	s.47F(1)
2	22-04-2015	s.47F(1)	s.47F(1)	s.47F(1)
3	26-06-2015	s.47F(1)	s.47F(1)	s.47F(1)
4	01-07-2015	s.47F(1)	s.47F(1)	s.47F(1)

Issue Register

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Document 27

s.22(1)(a)(ii)

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Sent: Wednesday, 31 August 2016 2:29 PM
To: WOOD Richard; s.47F(1) ; s.47F(1) ; s.47F(1)
Subject: Fwd: Outcomes of meeting with Farmers Steering Committee on Y2G
Attachments: image001.png

FYI
Richard , this group as mentioned in an earlier meeting has pushed back on a meeting until October . I presume they will want to confront the Minister before the meeting and get their point across
I will get s.47F(1) prepared with some key notes around the 2010 alignment
Regards
s.47F(1)

Sent from my iPhone

Begin forwarded message:

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Date: 31 August 2016 at 1:16:56 PM AEST
To: s.47F(1) <s.47F(1)@ARTC.com.au>
Cc: s.47F(1) <s.47F(1)@ARTC.com.au>, s.47F(1) <s.47F(1)@ARTC.com.au>, s.47F(1) <s.47F(1)@ARTC.com.au>
Subject: Outcomes of meeting with Farmers Steering Committee on Y2G

Hi s.47F(1)
I spoke with s.47F(1) in the Mayor's office and she advised the following:
The Mayor and s.47F(1) met with the Y2G Farmers Steering Committee this morning who had three key statements:

1. Other Inland Rail route options for the Y2G section have not been disclosed to the community. Other options need to be disclosed for ARTC and the Inland Rail proposal to have credibility
2. By following the Inglewood – Millmerran Road access to 40 farming properties will be impacted. The farmers want the IR team to investigate Inland Rail going through the Forest
3. The farmers want reassurance that the flooding and hydrology modelling applied to the construction of IR will work.

In response the Mayor noted the farmers concerns and said he would pass them onto s.47F(1) s.47F(1)
I also explained to s.47F(1) that despite frequent offers to bring specialists to meet with the Farmers Steering Committee that they had pushed this meeting back to October and could she advise the Mayor. s.47F(1) personal view of this October date is that the group will no doubt be seeking a meeting with the Minister to reiterate their position as per above.
Regards
s.47F(1)
s.47F(1)
Community Engagement QLD
Inland Rail

P. s.47F(1)

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Australian Government
Department of Infrastructure and Regional Development

DEPUTY SECRETARY MEETING BRIEF

Subject: Inland Rail Steering Committee

Date and Time: Wed 31 August 2016, 11:00 am –12:30 pm

Location: Department of Infrastructure and Regional Development, 111 Alinga Street, Canberra
Flynn Room (outside Security)

Attendees: List of participants is provided at **Attachment A**.

Key Issues

- The meeting is expected to focus on ARTC's proposed criteria for amending the alignment (item 6)
- You may wish to recommend that:
  - the assessment framework be amended so that proposals meet some, not all, of the stated criteria in Stage 1.
  - the assessment criteria be flexible enough to consider refinements to this alignment that will deliver improved benefits.
  - an additional criterion be included around extra benefit and the assessment of proposal needs to be a value judgement based on all criteria.

Meeting Agenda Items

1. Welcome

This is the third Inland Rail Steering Committee meeting. No apologies are expected for this meeting.

2. Administration

Richard Wood will provide a summary of outstanding items from the last Steering Committee meeting and consideration of any declarations of Conflict of Interest.

Status on outstanding items from the previous Inland Rail Steering Committee are as follows:

s.22(1)(a)(ii)

- Members of Parliament: ARTC has met with Mr McVeigh's office, but are yet to brief Mr Littleproud. This is likely to occur in early to mid-September.

s.22(1)(a)(ii)

Contact Name: s.22(1)(a) Contact Number: s.22(1)(a)(ii)
Position: Director, Rail Freight Networks Branch/Section: Rail and Intermodal

s.22(1)(a)(ii)

6. Preconstruction Activities (ARTC – s.47F(1))

ARTC will provide an update and present a paper on alignment refinement and community consultation.

In relation to the assessment framework for assessing alternative routes:

- The Department generally supports the proposed two-stage approach for assessing alternative Inland Rail routes presented by third parties, but recommends that:
    - the assessment framework be amended so that proposals meet some, not all, of the stated criteria in Stage 1;
    - the assessment criteria should be flexible enough to consider refinements to this alignment that will deliver improved benefits;
    - there needs to be an additional criteria based around additional benefit and the assessment of any proposal needs to be a value judgement based on all criteria.
- ARTC is concerned about opening up the alignment to excessive amendment. Our proposed amendments would still only allow amendments where value can be clearly demonstrated.

In relation to the Wellcamp Airport Alignment:

- The owners of Wellcamp Airport are seeking for the Inland Rail alignment to deviate past the airport to allow access to a planned intermodal facility and for potential future passenger services. The owners of the nearby Interlink SQ intermodal facility are concerned any alignment changes may negatively impact Interlink's connectivity to Inland Rail.
- You may like to note that ARTC has proposed to do a concept design for an alignment that could go past both the Wellcamp Airport and Interlink SQ Intermodal facility. This is estimated to cost just under $200,000.
- We support this study, because Wellcamp Airport wasn't there at time of 2010 study.
    - It is also consistent with considering options for passenger future proofing, as requested by Queensland, and may increase access to additional future freight facility.
    - This work should also consider the other options that run near the Wellcamp site and have been previously ruled out so it is comprehensive.
- The Wellcamp owners have informally raised the possibility of a contribution to the study. We do not support this as it would lose the report's independence; however, we should stay open to seeking a contribution to any capital costs should a change in the alignment be realised.

s.22(1)(a)(ii)

s.22(1)(a)(ii)

[redacted]

Attachments:

A. List of participants for Inland Rail Steering Committee Meeting – 31 August 2016.

Attachment A

List of Participants for Inland Rail Steering Committee Teleconference - 31 August 2016

Department of Infrastructure and Regional Development
Mr Shane Carmody – Deputy Secretary and Chair
Mr Mark Thomann – Executive Director Infrastructure Investment
Mr Richard Wood – Assistant Secretary Inland Rail Taskforce
s.22(1)(a)(ii) – Director Inland Rail
s.22(1)(a)(ii) (and s.22(1)(a)(ii)) – Inland Rail Taskforce, Secretariat

Australian Rail Track Corporation
Mr John Fullerton – Chief Executive Officer
s.47F(1) – Executive General Manager Interstate
s.47F(1) – Executive General Manager – Strategy & Corporate Development
s.47F(1) – Inland Rail Programme Director

Department of Finance (observers)
Mr Philip Smith – Assistant Secretary, Infrastructure Projects
Mr Clayton Hitch – Assistant Secretary, Budget Group

Melbourne-Brisbane Inland Railway

Issued: 29-08-2016

AGENDA ITEM:	6
SUBJECT:	**Preconstruction Activities – community consultation and alternative route assessment process**
SUBMITTED BY:	ARTC
PRESENTED BY:	s.47F(1) , Programme Director Inland Rail

PURPOSE

1. To update the Steering Committee on pre-construction activities for Inland Rail (including community consultation activities)
2. To seek the Steering Committee's endorsement to proposed alternative route assessment principles for Inland Rail

RECOMMENDATIONS

That the Steering Committee:

1. **NOTES** the report
2. **ENDORSES** the alternative route assessment process outlined in this paper.

DISCUSSION

s.47F(1) , Programme Director Inland Rail, will provide an overall verbal update at this item.

In addition, ARTC would like to provide additional information in relation to:

- community engagement activities undertaken to date, currently underway and planned for the future
- the proposed process and criteria for assessing third party proposals for route amendments to the Inland Rail alignment

COMMUNITY ENGAGEMENT
Background

- The Inland Rail Implementation Group's September 2015 report to the Australian Government considered alignment issues in depth
- The IR-IG recommended that Inland Rail adopt the alignment determined in the 2010 Inland Rail Alignment Study and refined in the 2015 business case (the principle refinement in the business case was the adoption of a '2003 alignment' through the Toowoomba Range already protected and partially acquired by the Queensland Government). A copy of the IR-IG recommendation is attached.
- ARTC has recently completed a major phase of developmental work involving the preparation of Concept Assessment Reports (which include concept design) along the entire Inland Rail alignment, consistent with the alignment recommended by the IR-IG.
- Associated with the development of the Concept Assessment Reports, an intensive round of stakeholder and community engagement has been undertaken.
- The purpose of consultation and engagement has been twofold:

1. Facilitation of field studies and engagement with Councillors, Council management, peak bodies, impacted landowners and the wider community. The purpose was to identify technical data and issues, risks and opportunities to inform the Concept Assessment Phase for each project.

2. Support the environmental approvals process. Identification of issues and opportunities raised by the community and other stakeholders during this phase of work to be addressed in preparing State Significant Infrastructure (SSI) Applications and Preliminary Environmental Assessments (PEAs) for the NSW Department of Planning and Environment, and in preparing the Initial Advice Statement for the Queensland Coordinator General.

- It must be stressed that the consultation activities have been around the alignment recommended by the IR-IG, from the perspective of identifying minor route refinements where required by specific local conditions.

- The consultation has not sought to identify or assess major alternatives to the alignment recommended by the IR-IG, given the consideration given by IR-IG to these issues and the previous extensive analysis in the 2010 IRAS and the earlier 2006 North South Corridor Study undertaken by the Department of Infrastructure.

Stakeholder Engagement Undertaken and Planned

- In total, approximately 80 workshops, community drop in sessions, presentations to local councillors, briefings for aboriginal land councils etc were held over the period August 2015 to July 2016.

- Over 290 individual stakeholder meetings were held over the period October 2015 to July 2016.

- 485 Property Access Agreements were also obtained from individual landowner meetings

- A detailed Phase 1 Concept Assessment – Consultation Outcomes Report has been separately provided to the Department of Infrastructure providing an overview of the consultation undertaken and the outcomes of that consultation.

- A detailed forward consultation plan has been developed for each project in the overall programme, with week-by-week activities planned on a project by project basis, including:

    - Ongoing briefings of elected representatives, Councils and peak bodies

    - Formal notification (by letter) to all landowners in the study areas followed by ongoing liaison with landowners

    - A further round of community information sessions after all landowners are notified of the project in NSW and where appropriate in QLD and Victoria

    - Technical workshops to support flooding and hydrological investigations

Relationship to EIS processes (and to EOI for Technical and Approvals Consultants)

- Moving forward, a key focus of consultation will be to support the Environmental Impact Statement process through the preparation, public exhibition and submissions phases.

- The EIS public exhibition and submissions process will provide a formal avenue for further stakeholder comment, and for consideration of these comments by the relevant planning regulators in each state. These processes may result in further alignment refinement before planning approval is received.

- Preparation of EISs and management of the exhibition and approval processes will be undertaken by the proposed Technical and Approval Consultants.

- The proposed EOI process is the first step in the procurement process for these consultants and delays to the EOI flow through to delays in the EIS and associated public consultation processes.

- After recent delays to the EOI, engagement of the consultants is currently envisaged for February / March 2017, with formal public exhibition of the EISs later in 2017 and 2018.

ALTERNATIVE ROUTE ASSESSMENT CRITERIA

- The recent round of community engagement has been a catalyst for calls from some stakeholders for more significant route changes. Topical examples are proposals for routes via Warwick (from Southern Downs Regional Council) and Toowoomba-Wellcamp Airport (from the Airport owners).

- Moving forward, it is proposed to adopt the following process for considering proposals for alternative routes:

    - As a first step, relevant analysis undertaken for the 2010 Inland Rail Alignment Study will initially be considered and if required brought together into a brief report.

    - The proposal will then be assessed in accordance with the attached paper "Assessment Tool for Alternative Routes". The results of that assessment, with relevant recommendations, will be considered by the IR Steering Committee for decision.

- It is recommended that the Steering Committee endorse the approach outlined above and the attached paper "Assessment Tool for Alternative Routes".

CONTACT

s.47F(1) , Programme Director Inland Rail, ARTC

s.47F(1)

s.47F(1) @ARTC.com.au

ATTACHMENTS

1. Assessment Tool for Alternative Routes – for endorsement
2. Extract from Inland Rail Implementation Group Report regarding the recommended Inland Rail alignment – for information

ATTACHMENT 1 - ASSESSMENT TOOL FOR ALTERNATIVE ROUTES

TO	Inland Rail Steering Committee
CC	
FROM	s.47F(1)
DATE	August 2016
SUBJECT	Assessment Tool for Alternative Routes

1. PURPOSE

The purpose of this briefing note is to outline the proposed approach to assessing alternative routes presented by the community and key stakeholders.

2. BACKGROUND

The Inland Rail study completed in 2010 identified a preferred alignment between Melbourne and Brisbane which has been the basis of further detailed consideration over the last 18 months. In recent months Inland Rail has commenced consultation with peak bodies, Council and elected representative at all levels of government and the general community. This engagement has been extremely productive giving the Inland Rail team insights into some of the technical issues which will require further consideration during the formal approval processes in all three States.

This feedback has however also raised alternative routes which are well beyond the alignment refinement (defined in this note as generally within 1km of the centre line of the base case as approved in 2015 by IRIG) contemplated in the approval process to come. While many of these alternatives have previously been considered in the options development phase of the 2006 and 2010 studies respectively other have not.

While ARTC has undertaken a robust assessment process around the preferred 2010 route it is necessary through the formal approval processes consultation and equally through good governance to consider these alternatives.

3. DISCUSSION

The key challenge for the Inland Rail team moving forward is providing adequate consideration of the proposals without necessarily undertaking detailed engineering and environmental assessment every time which can be costly and take significant time. It is also important that all alternatives proposed are given even and equal consideration. To help facilitate this it is proposed that a two stage approach be considered when assessing alternative routes.

Stage 1 – preliminary assessment

To provide direction in these considerations the following 5 criteria have been developed for use consistently across the project. To progress to the second stage a proposal must satisfy all 5 criteria. This assessment must be documented as it will form part of the formal approval process documentation.

1. Service Offering – same or better (eg. travel time)

   The service offering is critical aspects of the project and therefore any consideration of an alternative must be equal or better than the current base case. Key considerations will be around
   - travel time,
   - operational performance including specifications eg. grades/curves,
   - safety such as number of level crossings,
   - reliability, and
   - connectivity.

2. Environmental impacts

The environment is a critical consideration of the Inland Rail with need to find a balance between progressing the project and mitigating impacts on the natural environment. To assist in any preliminary assessment of an alternative the proposal must be equal to or reduce the impacts of the base case.

3. Cost

   Large infrastructure projects such as Inland Rail are very sensitive to cost and for this reason alternative proposal need to be cost neutral or better to be further assessed. This preliminary assessment will be a strategic cost estimate and all assumptions should be documented to ensure and open and transparent assessment. Careful consideration of the alternative to the base case will need to be done to ensure no bias towards the more detailed project.

4. Constructability

   While constructability will be considered to a certain point by cost, ensuring the practical ability to construct the proposed alternative and consideration of the other extraneous impacts on social and environmental aspects should also be assessed. For this reason constructability should be the same or have an improvement.

5. Social impacts

   In large scale infrastructure project there are impacts and sometimes these are unavoidable particular around private property. To ensure that alternative alignments don't simply move the impacts, consideration will also be given to proposed impacts on property and communities of the alternative.

Stage 2 – MCA (if required)

In keeping the Inland Rail methodology any proposal under Stage 2 will use the a Multi-Criteria Analysis process, as adopted by the Inland Rail leadership team in 2016 for use across the Inland Rail programme, informed by desk top assessments.

While alignment refinement will follow a similar robust process the implications of changes within the study area will have fewer impacts on the Inland Rail programme than an alternative route outside the study area once the formal approval process has commenced.

4. RECOMMENDATION

Based on the issues outlined above it is recommended that Inland Rail implement a two stage approach to any alternative routes using the recommended criteria documented above.

Melbourne-Brisbane Inland Railway

Inland Rail Steering Committee – Summary of Outcomes

Meeting: 10:00am – 12:30pm, Wednesday 31 August 2016

Members: **Shane Carmody,** Deputy Secretary and Chair, Department of Infrastructure and Regional Development
John Fullerton, Chief Executive Officer and Managing Director, Australian Rail Track Corporation (ARTC)

Participants: **Mark Thomann,** Executive Director Infrastructure Investment
Richard Wood General Manager, Department of Infrastructure and Regional Development
s.22(1)(a)(ii) Director, Department of Infrastructure and Regional Development
s.47F(1) , Executive General Manager Interstate, ARTC
s.47F(1) , Programme Director, ARTC (via teleconference)
s.47F(1) , Executive General Manager – Strategy and Corporate Development
s.47F(1) , Executive General Manager - Interstate, ARTC

Observers: s.47F(1) , General Manager, Finance
s.47F(1) , General Manager, Finance

Secretariat: s.22(1)(a)(ii) **and** s.22(1)(a)(ii) Department of Infrastructure and Regional Development

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
1	Welcome	-	-	-
2	s.22(1)(a)(ii)			

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
		Mr Fullerton noted he will meet Minister Chester on 9 Sept, where he would likely inform the Minister of the implications of delaying the EOI and settling the alignment. In relation to the action item under item 8 of the previous minutes, s.47F(1) has met with Mr McVeigh's office. Further, Mr Fullerton will shortly meet with Mr Littleproud.	Mr Fullerton to meet Minister Chester Mr Fullerton to meet Mr Littleproud	9 Sep TBC
	s.22(1)(a)(ii)			
3				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
4				
5				
6	Preconstruction activities - ARTC	The Committee discussed ARTC's draft criteria for alignment changes and whether a proposal needed to satisfy *all* five criteria before it could be considered, as implied by ARTC's paper. Mr Carmody noted that it was important for all		

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
		proposals to change alignment are considered consistently, and that the criteria need to be clear to reflect that. s.47F(1) noted it was essentially a three stage process: - Stage 0: has the alignment been considered and discounted before? (e.g. 2010 alignment study) - Stage 1: Assessment against 5 criteria - Stage 2: In depth analysis of alignment. ARTC agreed to revise the paper to make this process clearer, and to show that proposals do not need to meet all five criteria to be considered.	ARTC to update paper	13 Sep
7	Stakeholder engagement and community consultation	Mr Carmody noted that there is still community resistance in some areas, with concerns mainly around "personal level impacts" rather than "technical level impacts". Mr Fullerton noted there was a need for improvement and that s.47F(1) is now leading Inland Rail engagement as part of the overall ARTC Corporate Communications and Media role and will report directly to him. s.22(1)(a)(ii)	s.22(1)(a)(ii)	

Document 30

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
8	s.22(1)(a)(ii)			
9				
10				

ARTC InlandRail

Richard Wood
General Manager
Inland Rail Taskforce,
Department of Infrastructure and Regional Development
GPO Box 594
CANBERRA, ACT, 2601.
Email: s.22(1)(a)(ii) @infrastructure.gov.au

6 September 2016
01-9000-PG-P00-LT-0005

Dear Richard,

RE: INLAND RAIL - WELLCAMP AIRPORT ALIGNMENT STUDIES

I refer to our previous discussions, particularly in last month's Inland Rail Programme Control Group meeting, regarding the Department's request for advice on potential Inland Rail alignment studies in the vicinity of Wellcamp Airport near Toowoomba.

As requested, ARTC has obtained a quotation for this concept planning work, as presented in the 22 August 2016 Programme Control Group Meeting. The cost of this additional work, including the preparation of a concept design, would be s.47G(1) . Total cost to the Programme is estimated at s.47G(1) including taxation uplift.

I am writing to seek confirmation that the Department would like this work to proceed.

s.47G(1)

We have updated the relevant Inland Rail Project Proposal Report 03 Tables to reflect this variation in red (attached).

We look forward to your advice in relation to the alignment studies and, if agreed, the Department's approval for the associated minor variation to PPR03.

For any questions, please do not hesitate in contacting either s.47F(1) (PH: s.47F(1)) or s.47F(s.47F(1) (PH: s.47F(1)).

Yours sincerely

s.47F(1)

per

Programme Director – Inland Rail

cc: s.22(1)(a)(ii) , A/G Director, Department of Infrastructure and Regional Development

Table 9 Development Phase (Third Tranche) – Key Activities

	ACTIVITY	DETAIL	DELIVERABLES	OUTCOMES / BENEFIT	TARGET
MILESTON PACKAGE 8					
8A	PROGRAMME & PROJECT ACTIVITIES:				
s.47G(1)					

8A.3	Technical Preparation for Phase 2 Feasibility Assessment Activities (for various Missing Links, Enhancement, and the Gowrie to Kagaru Qld Priority Projects)	Preparation work required before commencing Phase 2 Feasibility Assessment activities. Completion of a Programme-wide survey study along the primary rail corridor to establish and register survey control points. Also includes preparing a revised topographical survey. Completion of an integrated revision of hydrology models for projects with overlapping catchments and definition standards. Passenger compatibility studies if required (Gowrie to Kagaru Qld Priority Projects only). Additional data collection, analysis, assessment to address issues identified in community workshops. Finalisation of the Multi Criteria Assessment (MCA) obtaining broader input from stakeholders and community, and additional field surveys to update the Project's SSI submission and EPBC referral documentation. Feasibility Assessment of the alignment near the Wellcamp Airport, Toowoomba.	Programme Survey and Topographical Survey Report, Programme Hydrology Report, Concept Refinement Reports, Draft SSI and EPBC submissions. Concept Design for potential realignment of Inland Rail in the vicinity of Wellcamp Airport.	Provides the Programme with a more advance level of survey completeness with known and registered survey points along the primary rail corridor, and testing of hydrologic assumptions used in Phase 1 development activities to obtain higher accuracy levels for delivering Phase 2 Reference Designs. Provides a greater understanding of scope of works, refines possession planning, and de-risks the further development of the Programme's various projects, and as a result, the overall Programme. Evaluates the feasibility of establishing a potential realignment in the vicinity of the Wellcamp Airport.	Mar-2017* * **Note:** Progressive completion for individual projects expected between November 2016 and February 2017.
s.47G(1)					

s.47G(1)

s.47G(1)

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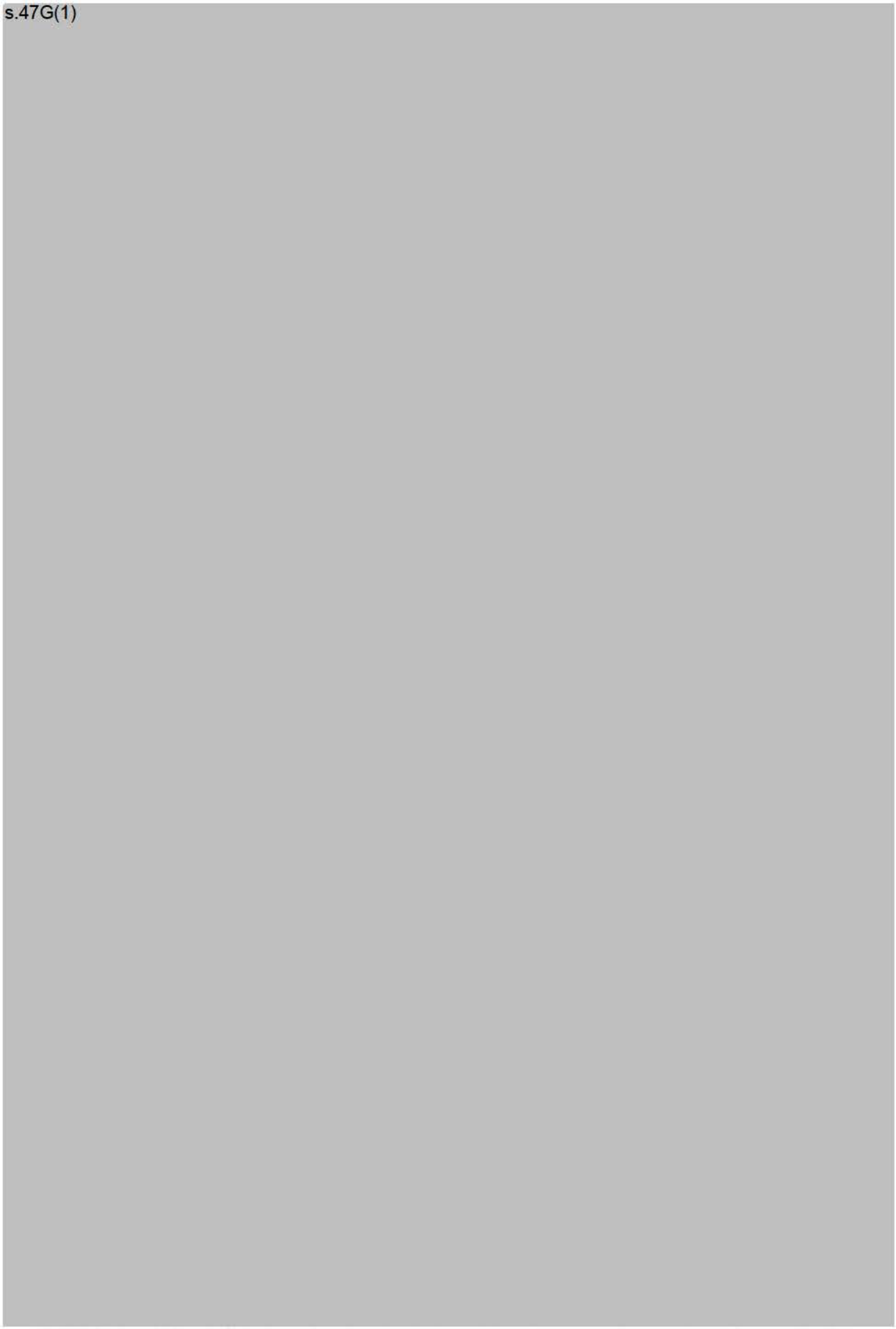
s.47G(1)

s.47G(1)



 Document 32

Australian Government
Department of Infrastructure and Regional Development

FOR: **The Hon Darren Chester MP** cc: Senator the Hon Fiona Nash Mr Mike Mrdak, Secretary Mr Shane Carmody, Deputy Secretary	**PDR ID:** MS16-001297	**For Decision by**: 16 September 2016 **Reason:** To enable commencement of a study of alignment options for Wellcamp Airport.

SUBJECT: Inland Rail – Proposed alignment via Wellcamp Airport

Recommendation: That you:

(a) **Agree** that the Australian Rail Track Corporation (ARTC) will investigate Inland Rail alignment options that service both Wellcamp Airport and InterLinkSQ Intermodal Facility.

(b) **Sign** the letter to InterLinkSQ (**Attachment A**).

Key Issues:

1. The privately owned Brisbane West (Wellcamp) Airport (the Airport) has proposed that the route alignment for Inland Rail be reconsidered to enable a connection to the airport. The airport is situated less than 10km from the alignment under consideration by the Australian Rail Track Corporation (ARTC). The ARTC's 2010 Inland Rail alignment study (the 2010 Alignment) did not consider this alignment as the Airport was not proposed at the time of the study.
2. The Airport intends to establish a freight hub including the potential for international cargo operations and indicated it has land on which it could develop an intermodal freight terminal should Inland Rail access the site. However, we note that air freight would not typically use rail. A dedicated rail line may also allow for future passenger services to the airport from Brisbane. A map of the area is provided at **Attachment B.**
3. On Monday 22 August 2016, the Inland Rail Programme Control Group discussed an approach to investigate an alternative alignment that services both the Airport and the InterLinkSQ facility. This approach was suggested as the airport was not there at the time of the 2010 alignment study and would provide potential improved access to future freight facilities.
4. The ARTC has now written to the Department of Infrastructure and Regional Development proposing to undertake a concept design for an alignment (**Attachment D**). The concept design is estimated to cost s.47G(1) and the work is consistent with Australian Government's commitment to ARTC to undertake the required pre-construction planning activities. This could be funded from within the funds currently allocated to ARTC.

Cleared by: Richard Wood Date: 9 September 2016 Phone: s.47F(1) Branch: Inland Rail Division: Infrastructure Investment	(a) Agreed/Not Agreed (b) Signed/Not Signed DARREN CHESTER 14 / 9 / 16

Minister's Comments/Supplementary Tasking:

5. We propose you agree to this approach, given the development of the Airport as a key piece of transport and economic infrastructure for the region, which could potentially benefit from a rail connection. While typically decisions on a study of this nature would be taken by the Project Steering Committee, in this instance we seek your agreement given the sensitivity of local stakeholders and as this study could be seen as a precedent for other reviews of the Inland Rail alignment.

6. The Steering Committee for Inland Rail is currently developing an assessment framework to guide decision making when considering and assessing proposals to deviate from the 2010 Alignment. A key principle of the framework is that options considered and dismissed in the 2010 Alignment Study would not be revisited unless there is a significant new development (such as the Airport), or a directive from Government. Proposals that meet a pre-determined set of criteria could proceed to further investigation and concept design. The final framework will be considered by the Steering Committee shortly and further briefing provided to you.

7. The Wellcamp Airport owners have informally raised the possibility of a contribution to the study. It is proposed that the Department does not support this approach as it would undermine the report's independence. The Government should stay open to seeking a contribution to any capital costs should a change in the alignment be realised.

Sensitivities:

Ms Michelle Reynolds, the Chief Executive Officer of Freight Terminal Pty Ltd, the proponent of the InterLinkSQ has written to you highlighting the investment it has already made on an intermodal facility, approximately 7km from the Airport, on the existing Queensland Rail network, which forms part of the 2010 Alignment (**Attachment C**).

Ms Reynolds has expressed concerns that a deviation from the 2010 Alignment would lead to public and investor uncertainty in the final alignment for the project.

We agree that certainty in the alignment is an important feature in enabling investment in supporting infrastructure, such as intermodal terminals, as well as enabling the project overall. We also note that a freight terminal at the Airport would be a significant competitor to InterLinkSQ and is likely to be a key factor in its concerns. We consider that while an examination of an alignment option including the Airport is warranted, any final decision on the alignment should consider a range of stakeholder concerns, and in particular the InterLinkSQ facility given the importance of intermodal terminals for the effective movement of freight.

A draft response to Ms Reynolds is at **Attachment A**. however, you may wish to defer a response until you have a made a decision on a possible Ministerial Advisory Group for Inland Rail to provide Ms Reynolds another avenue for engagement.

The development of Wellcamp Airport may build pressure for passenger services on the route connecting Toowoomba. The impact of potential future passenger trains running on the route may be considered as part of the investigation. Any passenger operations on the line could put considerable pressure on capacity of the line which could accelerate the requirement for the construction of a second (parallel) tunnel through the Toowoomba Range.

Action to Follow:

Should you agree to this Brief the Department will write to the ARTC formally approving the request to undertake the investigation of the alignment. The owners of the Airport will also be advised of this decision.

Background:

In August 2015, the Inland Rail Implementation Group (IR-IG) recommended the Alignment which was used for the development of the 2015 Inland Rail Programme Business Case. This Alignment has not been formally adopted by Government.

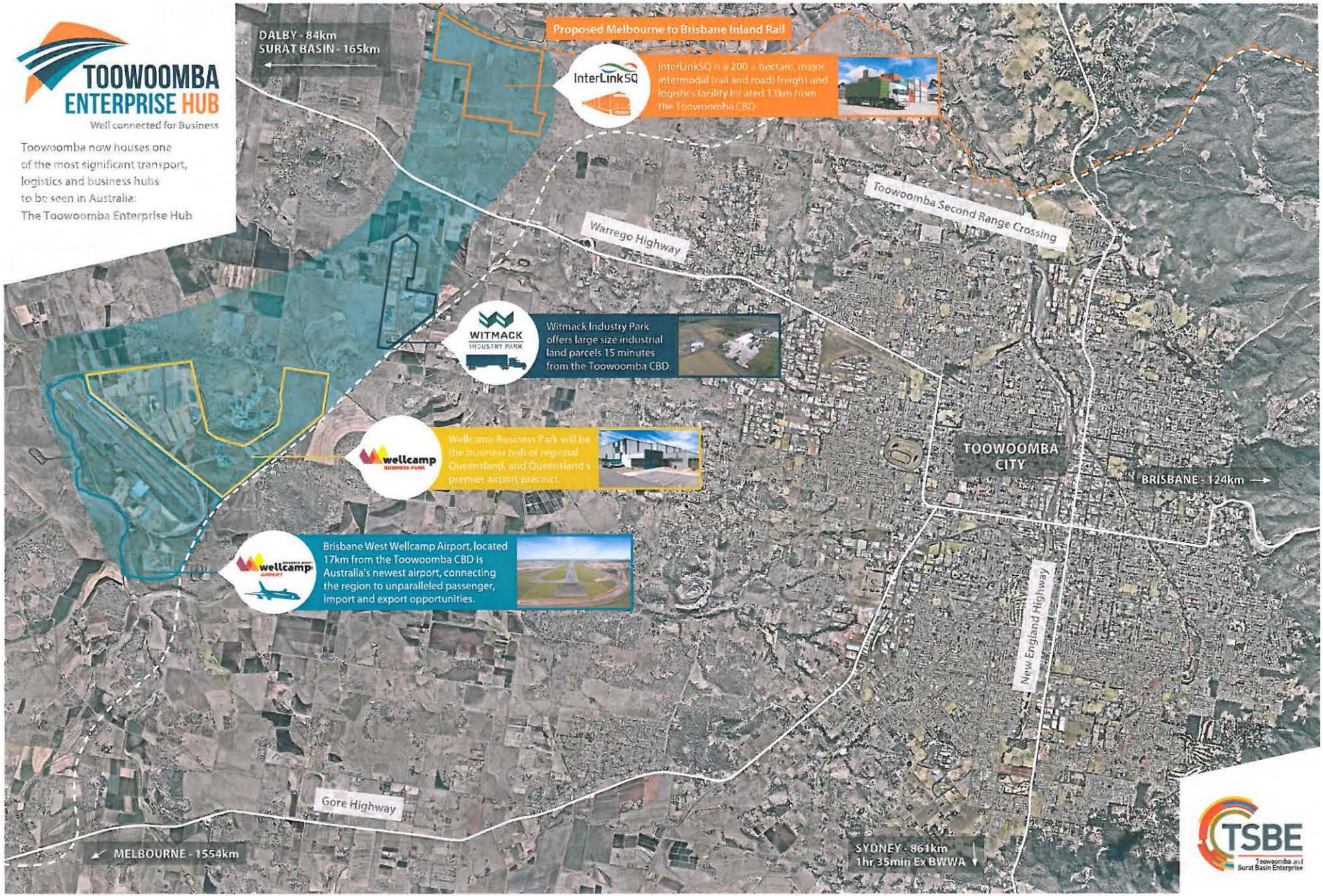
Some alterations to the Alignment were made in 2014 and 2015 to take account of specific factors, such as the section between Gowrie and Grandchester, near Toowoomba, Queensland, which will use an alternative alignment following the 2011 floods in Toowoomba and Lockyer Valley.

In recent months, Inland Rail has commenced consultation with peak bodies, Local Government Authorities, elected representatives from all levels of Government and the broader community. The engagement has provided insights into some of the technical issues which will require further consideration during the formal approval process across jurisdictions.

Feedback from the community has raised alternative routes which are beyond 1km of the centre line from the existing alignment. While many of these alternatives have been previously considered in the options development phase of the project, some have not and may require investigation.

Attachments:

Attachment A – Letter to InterLinkSQ
Attachment B – Map of Wellcamp Airport and proposed realignment
Attachment C – Correspondence from InterLinkSQ
Attachment D – ARTC Proposal for Wellcamp Airport concept design


TOOWOOMBA
ENTERPRISE HUB
Well connected for Business
Toowoomba now houses one of the most significant transport, logistics and business hubs to be seen in Australia: The Toowoomba Enterprise Hub
DALBY - 84km
SURAT BASIN - 165km
Proposed Melbourne to Brisbane Inland Rail
InterLinkSQ
InterLinkSQ is a 200+ hectare, major intermodal (rail and road) freight and logistics facility located 13km from the Toowoomba CBD
Warrego Highway
Toowoomba Second Range Crossing
WITMACK INDUSTRY PARK
Witmack Industry Park offers large size industrial land parcels 15 minutes from the Toowoomba CBD
wellcamp BUSINESS PARK
Wellcamp Business Park will be the business hub of regional Queensland, and Queensland's premier airport precinct.
TOOWOOMBA CITY
BRISBANE - 124km
wellcamp AIRPORT
Brisbane West Wellcamp Airport, located 17km from the Toowoomba CBD is Australia's newest airport, connecting the region to unparalleled passenger, import and export opportunities.
New England Highway
Gore Highway
MELBOURNE - 1554km
SYDNEY - 861km
1hr 35min Ex BWWA
TSBE
Toowoomba and Surat Basin Enterprise

Document 34

The Hon Darren Chester MP
Minister for Infrastructure and Transport
Deputy Leader of The House
Member for Gippsland

PDR ID: MS16-001297

14 SEP 2016

Ms Michelle Reynolds
Freight Terminal Pty Ltd
167 Draper Road
CHARLTON QLD 4350

Dear Ms Reynolds

Thank you for your letter of 28 July 2016 regarding Inland Rail - Proposed alignment via Wellcamp Airport and your kind hospitality during my recent visit. I regret the delay in responding.

I note your concerns regarding the consideration of alternative alignment options for Inland Rail. Inland Rail is a critical investment for Australia and it is important that we get it right. To this end the Australian Government is looking to work with industry and communities to work through issues and identify opportunities.

The Australian Rail Track Corporation (ARTC) is continuing with the preconstruction activities the Government has tasked it with including undertaking technical engineering analysis, environmental field studies and hydrology and geotechnical surveys. These activities use the 2010 Inland Rail alignment as the basis of its investigation.

Given the scale of this project, the Government aims to ensure that the views of all stakeholders are considered as part of this process. The ARTC will undertake a review of the 2010 alignment to consider the merits of amending the route to travel via Wellcamp Airport. Any changes to the alignment would need to carefully consider any impacts on stakeholders and other infrastructure, including the InterLinkSQ facility. I am conscious of the need for certainty for investors and the Government will be looking to finalise the alignment as soon as possible.

Thank you again for taking the time to write and inform me of your concerns on this matter.

Yours sincerely

DARREN CHESTER

Document 35

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Wednesday, 14 September 2016 11:36 AM
To: s.47F(1) (s.47F(1) @ARTC.com.au)
Cc: s.22(1)(a)(ii)
Subject: FW: Facebook Statement by Lawrence Springborg MP & Pat Weir MP - Melbourne Brisbane Inland Rail Corridor Options - posted at approx 9.45am, 14 Sept 2016 [SEC=UNCLASSIFIED]

Importance: High

Hi s.47F(1)

Of relevance to you also in case s.47F(1) hasn't sent on.

Regards

Richard

From: David Keenan [mailto:s.47F(1) @sdrc.qld.gov.au]
Sent: Wednesday, 14 September 2016 11:03 AM
To: WOOD Richard ; s.47F(1) @artc.com.au; s.47F(1) @ARTC.com.au
Cc: s.47F(1) ; Tracy Dobie ; s.47F(1)
Subject: FW: Facebook Statement by Lawrence Springborg MP & Pat Weir MP - Melbourne Brisbane Inland Rail Corridor Options - posted at approx 9.45am, 14 Sept 2016
Importance: High

Good morning Richard, s.47F(1) and s.47F(1)

Just following up on a few things.

Firstly, Richard could a response please be provided to Council in relation to the Mayors letter written some months ago?

Secondly, s.47F(1) and s.47F(1) you indicated in out meeting that Council would remain involved in the consultation process from an ARTC perspective. Council is yet to be approached to be involved in the consultation process, is this likely to occur?

Thirdly, could ARTC please provide an explanation as to how the report cited below will form part of the consultation process that is being undertaken?

I am sorry for the shortness within the email, but some responses were promised some time ago and have not been provided.

Please ECM s.47F(1)

With thanks

David Keenan
CHIEF EXECUTIVE OFFICER
Southern Downs Regional Council

From: s.47F(1)
Sent: Wednesday, 14 September 2016 10:22 AM
To: David Keenan; Tracy Dobie
Cc: Cameron Gow
Subject: Facebook Statement by Lawrence Springborg MP & Pat Weir MP - Melbourne Brisbane Inland Rail Corridor Options - posted at approx 9.45am, 14 Sept 2016
Importance: High

Hi David & Tracy

Please see below Facebook post which is a statement issued by Lawrence Springborg MP and Pat Weir MP regarding the Melbourne Brisbane Inland Rail Corridor Options. Cr Gow alerted me to this.

Lawrence Springborg MP
40 mins ·

Statement by
Lawrence Springborg MP and Pat Weir MP.
Melbourne Brisbane Inland Rail Corridor Options.
The preferred corridor for the proposed Melbourne Brisbane Inland Rail, (MBIR), should now be comprehensively and independently reviewed following the tabling of an assessment report of all Queensland corridor options in the Queensland Parliament last night.
The report which was prepared by the respected Snowy Mountains Engineering Corporation, (SMEC), highlighted problems with the proposed Inglewood/Millmerran/Toowoomba route and favoured a route from Inglewood via Karara and Leyburn to Toowoomba, was tabled by Member for Southern Downs, Lawrence Springborg.
There is almost universal support for the proposed standard gauge rail line, but there is far from universal support for the less than transparent and proper open assessment of all corridor options.
The detailed 90 page assessment looked at all aspects of the various options, including cost, engineering, flooding, environmental and train time efficiency.
The assessment report was finalised in July 2015 and comes five years after the 2010 report relied upon by the Australian Rail Track Corporation, (ARTC) and others to push for the current preferred corridor.
Since the 2010 report there has been serious and major flooding events on the Condamine Floodplain in both 2011 and 2013.
The SMEC report indicated that their preferred option, via Karara and Leyburn to Toowoomba was $100 million dollars less expensive, did not encounter the same floodplain problems and was quicker than the proposed corridor through Millmerran.
As local MP's in the impacted areas, we have no preferred corridor option and support the Standard Rail Line proposal absolutely, but we want this done right.
There must be public and landholder confidence in the process and there must be complete transparency.
The MBIR is a ten billion dollar, ten year project, therefore there is plenty of time to get this right.
This is a very extensive report, prepared with the full knowledge of the Queensland Government and ARTC and there is a very serious question as to why it has not been been previously released to the public, particularly given the issues it has raised about the various corridor options.
All options should be on the table and clearly to date that has not been the case.
The report can be downloaded at, http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2016/5516T1506.pdf
For further information contact.
Lawrence Springborg, s.47F(1) . Pat Weir, s.47F(1) .
13 September 2016

Regards
s.47F(1)

s.47F(1)
MARKETING & COMMUNICATIONS OFFICER
Southern Downs Regional Council

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www.sdrc.qld.gov.au | Follow us on Facebook
Get involved, get the MySDRC App!

Document 36

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Wednesday, 14 September 2016 12:42 PM
To: s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Cc: THOMANN Mark; s.22(1)(a)(ii)
Subject: FW: MEDIA EQUIRY | SMEC's MBIR Options Analysis Project report available publicly [SEC=UNCLASSIFIED]

s.22(1)(a)(i) and s.22(1)(a)(i

ARTC is getting questions from the media about the Queensland Government commissioned report by SMEC into the inland rail route between Toowoomba and the Border via Millmerran. ARTC are preparing a response which we will also consider.

The report was not previously publically available as it was not released by the Queensland Government. It had been provided to ARTC (but not the Minister or Department) and had been considered by ARTC.

regards

Richard

Richard Wood
General Manager, Inland Rail
Department of Infrastructure and Regional Development
GPO BOX 594 CANBERRA ACT 2601
☎ Ph s.22(1)(a)(ii) | 🖷 Fax 02 6275 1388 | ☎ Mobile s.22(1)(a)(ii) | s.22(1)(a)(ii)@infrastructure.gov.au

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Mr Springborg's statement follows.

Statement by
Lawrence Springborg MP and Pat Weir MP.
Melbourne Brisbane Inland Rail Corridor Options.
The preferred corridor for the proposed Melbourne Brisbane Inland Rail, (MBIR), should now be comprehensively and independently reviewed following the tabling of an assessment report of all Queensland corridor options in the Queensland Parliament last night.
The report which was prepared by the respected Snowy Mountains Engineering Corporation, (SMEC), highlighted problems with the proposed Inglewood/Millmerran/Toowoomba route and favoured a route from Inglewood via Karara and Leyburn to Toowoomba, was tabled by Member for Southern Downs, Lawrence Springborg.
There is almost universal support for the proposed standard gauge rail line, but there is far from universal support for the less than transparent and proper open assessment of all corridor options.
The detailed 90 page assessment looked at all aspects of the various options, including cost, engineering, flooding, environmental and train time efficiency.
The assessment report was finalised in July 2015 and comes five years after the 2010 report relied upon by the Australian Rail Track Corporation, (ARTC) and others to push for the current preferred corridor.
Since the 2010 report there has been serious and major flooding events on the Condamine Floodplain in both 2011 and 2013.
The SMEC report indicated that their preferred option, via Karara and Leyburn to Toowoomba was $100 million dollars

less expensive, did not encounter the same floodplain problems and was quicker than the proposed corridor through Millmerran.
As local MP's in the impacted areas, we have no preferred corridor option and support the Standard Rail Line proposal absolutely, but we want this done right.
There must be public and landholder confidence in the process and there must be complete transparency.
The MBIR is a ten billion dollar, ten year project, therefore there is plenty of time to get this right.
This is a very extensive report, prepared with the full knowledge of the Queensland Government and ARTC and there is a very serious question as to why it has not been been previously released to the public, particularly given the issues it has raised about the various corridor options.
All options should be on the table and clearly to date that has not been the case.
The report can be downloaded at, http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2016/5516T1506.pdf

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From: s.47F(1) [mailto:s.47F(1) @ARTC.com.au]
Sent: Wednesday, 14 September 2016 12:37 PM
To: WOOD Richard ; s.22(1)(a)(ii)
Subject: MEDIA EQUIRY | SMEC's MBIR Options Analysis Project report available publicly

Richard, s.22(1)(a)(ii)

Just a heads up that we are receiving follow up requests (WIN, Warwick paper – expect a few more) in response to last night's session of QLD Parliament where Mr Springborg tabled the SMEC document: http://www.parliament.qld.gov.au/work-of-assembly/broadcast-chamber/archive?file=20160913_184500 (see also record of proceedings attached, page 93).

The Qld Parliament website has made SMEC's MBIR Options Analysis Project report available publicly : http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2016/5516T1506.pdf

FYI at this stage – we're pulling together some key people together to determine responses to those enquiries.

Regards.

s.47F(1)

s.47F(1)
Media Manager
Office of the CEO

ARTC

P. s.47F(1)
M. s.47F(1)
E. s.47F(1)@ARTC.com.au

Australian Rail Track Corporation
Suite 1, Level 8, 45 Clarence Street
Sydney NSW 2000

artc.com.au

Document 37

Australian Government
Department of Infrastructure and Regional Development

s.47F(1)
Programme Director – Inland Rail
ARTC
45 Clarence Street
SYDNEY NSW 2001

Wellcamp Airport Alignment Study

Dear s.47F(1)

Thank you for your letter of 6 September 2016 relating to the request to undertake a concept design of an Inland Rail alignment via Wellcamp Airport.

We have written to the Minister for Infrastructure and Transport, the Hon Darren Chester MP, seeking his agreement to proceed with the investigation. The Minister agreed to this approach noting the estimated cost to undertake the work will be approximately s.47G(1) s.47G(1)

As this proposal contributes to further consideration and refinement of the Melbourne-Brisbane Inland Rail project, this is consistent with the existing funding approval made pursuant to PPR03. We agree with the proposed amendments to the milestones contained in your letter.

I look forward to working with you and your team in progressing this work.

Yours sincerely

s.22(1)(a)(ii)

Director
Inland Rail

22 September 2016

Document 38

s.22(1)(a)(ii)

From: s.22(1)(a)(ii)
Sent: Thursday, 22 September 2016 11:26 AM
To: s.47F(1) s.47F(1)
Cc: s.47F(1) ; s.47F(1) ; s.47F(1) ; s.47F(1) ; s.22(1)(a)(ii) s.22(1)(a)(ii) s.22(1)(a)(ii); WOOD Richard
Subject: RE: Wellcamp investigations [SEC=UNCLASSIFIED]
Attachments: Wellcamp Alignment Study - DIRD Letter to ARTC.pdf

Hi s.47F(1)

For your records, please find attached the letter from DIRD agreeing to the approach to undertake the investigation of the Wellcamp Airport alignment.

Kind regards,
s.22(1)(a)(

s.22(1)(a)(ii)
Inland Rail | Infrastructure Investment
Department of Infrastructure and Regional Development
GPO Box 594, Canberra ACT 2601
t s.22(1)(a)(ii) | m s.22(1)(a)(ii)
e s.22(1)(a)(ii)@infrastructure.gov.au | w www.infrastructure.gov.au

From: WOOD Richard
Sent: Thursday, 22 September 2016 10:37 AM
To: s.47F(1) ; s.47F(1)
Cc: s.47F(1) ; s.47F(1) ; s.47F(1) ; s.47F(1) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii) ; s.22(1)(a)(ii) s 22(1)(a)(ii)
Subject: RE: Wellcamp investigations [SEC=UNCLASSIFIED]

UNCLASSIFIED
Thanks

As advised last week the Minister has agreed this work be undertaken. We sought his approval given the risk of precedent and given the heightened community and commercial sensitivity in this area. We consider this is consistent with the funding approval given for Inland Rail by Minister Truss and doesn't require a variation in scope.

A letter will be sent today confirming this- apologies for the delay.

Richard

UNCLASSIFIED

Sent with Good (www.good.com)

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Sent: Thursday, September 22, 2016 10:03:08 AM
To: s.47F(1)

Cc: WOOD Richard; s.47F(1) ; s.47F(1); s.47F(1) ; s.47F(1)
Subject: Re: Wellcamp investigations

s.47F(1) , Richard

Please also note if we go with the wellcamp option , we need to complete this proposed concept design stage gate prior to tender and award the next phase of engineering . Therefore it's becoming critical we get an instruction for the new concept work asap
Regards
s.47F(1)

Sent from my iPhone

On 22 Sep 2016, at 9:26 AM, s.47F(1) <s.47F(1)@ARTC.com.au> wrote:

> Hi Richard
>
> You enquired about the duration of the Wellcamp investigations – I have checked the original schedule, it anticipated a commencement on 29 August and completion 2 December.
>
> Obviously we are at least three weeks behind the schedule at this point, even if we get an immediate green light, so it will be tight to finish by Xmas.
>
> Any update on when we can expect a letter giving the go-ahead?
>
> Regards
>
> s.47F(1)
> **Shareholder and Government Relations**
> Inland Rail
>
> **P:** s.47F(1)
> **M:** s.47F(1)
> **E:** s.47F(1)@ARTC.com.au
>
> **Australian Rail Track Corporation**
> Suite 1, Level 8, 45 Clarence Street
> Sydney NSW 2000
>
> **artc.com.au**
>

Document 39

s.22(1)(a)(ii)

From: s.47F(1) <s.47F(1) @ARTC.com.au>
Sent: Friday, 23 September 2016 6:37 PM
To: s.22(1)(a)(ii) ; s.22(1)(a)(ii); WOOD Richard; s.22(1)(a)(ii) ; s.22(1)(a)(ii) s.22(1)(a)(ii)
Cc: s.47F(1) ; s.47F(1) ; s.47F(1); s.47F(1)
Subject: Inland Rail - briefings with stakeholders in Toowoomba next week
Attachments: Inland Rail Overview Sep 16 160923 FINAL.pdf

Afternoon all,

Thanks again for your time on Wednesday to discuss Inland Rail and the next phase of communications and stakeholder engagement.

I wanted to advise you of our planned meetings in Toowoomba with key stakeholders next week and provide a copy of the presentation we will be leaving behind. The focus of our discussions is on the alignment issues, and community consultation which are covered in the slides up front.

We will also be pursuing some media opportunities which I will circulate the draft releases for. At this stage we are planning an open letter from John Fullerton which frames the next phase of community consultation – open, transparent and responding to the issues you've raised. We are also planning a media release announcing the concept study for the Wellcamp airport connection.

Over Monday and Tuesday we will be meeting with:

John and Denis Wagner – Wellcamp Airport

Board of the Toowoomba Surat Basin Enterprise, as well as the stakeholders below:

Ben	Lyons	CEO Food Leaders Australia (TSBE)
s.47F(1)	s.47F(1)	FKG Developments Manager of Building and Civil / TSBE Board
s.47F(1)	s.47F(1)	Consultant / TSBE Board
Paul	Antonio	Mayor of Toowoomba / TSBE Board
Shane	Charles	Executive Chairman of TSBE
s.47F(1)	s.47F(1)	Interlink SQ
Michelle	Reynolds	Interlink SQ
David	Janetzki	Member for Toowoomba South
John	McVeigh	Member for Groom

Mayor Antonio and staff– Toowoomba Regional Council

Mayor Dobie and David Keenan – Southern Downs

Please let me know if you'd like any further details or have any concerns,

Thanks

s.47F(1)

s.47F(1)
Executive General Manager Corporate Affairs
Office of CEO

ARTC

P. s.47F(1)
M. s.47F(1)
E. s.47F(1) @ARTC.com.au

Australian Rail Track Corporation
11 Sir Donald Bradman Drive
Keswick Terminal SA 5035

artc.com.au

Australian Government

BUILDING OUR FUTURE

ARTC

InlandRail

INLAND RAIL OVERVIEW

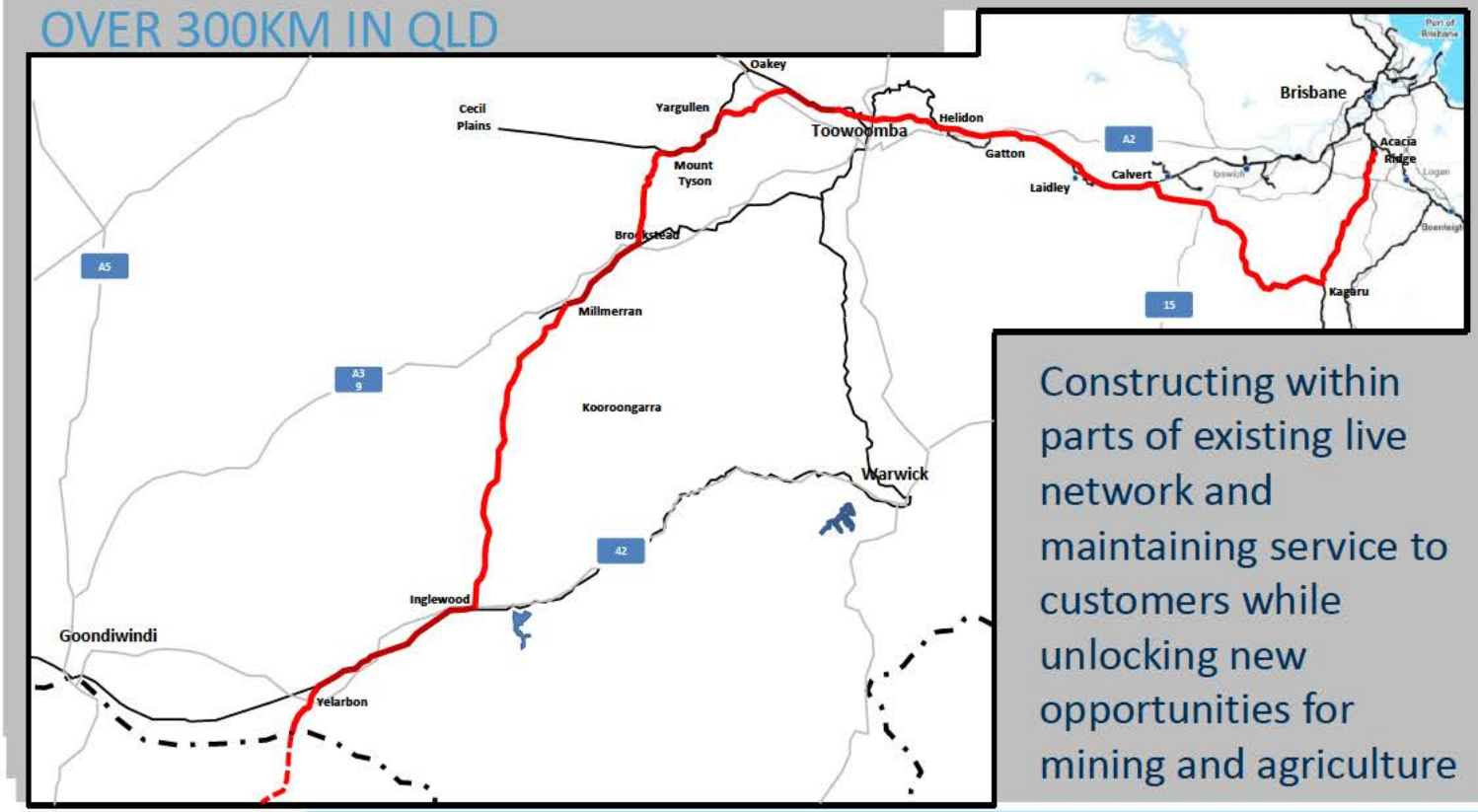
SEPTEMBER 2016

INLAND RAIL IN QUEENSLAND
INGLEWOOD TO BRISBANE ROUTE
ENGAGING WITH STAKEHOLDERS AND COMMUNITY
COMMUNITY ENGAGEMENT - NEXT STEPS

INLAND RAIL IN QUEENSLAND

InlandRail

21% OF THE INLAND RAIL CORRIDOR 60% OF THE COST OVER 300KM IN QLD



Constructing within parts of existing live network and maintaining service to customers while unlocking new opportunities for mining and agriculture

ARTC InlandRail

s.22(1)(a)(ii)

ROUTE REQUIREMENTS

- The producers and businesses who will depend on Inland Rail require:
  - Rail freight between Melbourne and Brisbane in less than 24 hours
  - Track that's reliable, not too steep, with minimal tight curves
- Current Study Area
  - Result of a series of detailed studies undertaken since 2006 to identify a route that meets these needs
- Work underway now
  - Finalise a Study Area and Corridor Alignment that meets these needs and balances social and environmental considerations, cost and constructability

FINALISING THE STUDY AREA

- A 2km wide strip that we are using as the basis for community consultation and further technical field work.
- Informed by more than 50,000 possible route combinations across the 1700 kilometres.
- Experts have looked at topography, soils, hydrology, cultural heritage, flora and fauna.
- Consultation underway so we can combine community feedback with the results of our field work to confirm the Study Area and rail corridor later this year.
- Study Area and Corridor Alignment then become the basis for our submission for State planning and environmental approvals. Formal community consultation is an important part of that process.

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INGLEWOOD TO BRISBANE ROUTE

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ROUTE FROM INGLEWOOD TO BRISBANE

A large number of route options were examined, including:

- A route via Warwick, descending the range from that point, were much more expensive than the Toowoomba alternative
- A route from Clifton to Gatton would have had 12km of tunnels and 11.5km of viaducts
- A route from Inglewood to near Warwick, then north to Gowrie, was found in the 2010 Inland Rail Alignment Study to be "longest and most indirect way to traverse this section of Inland Rail's route"
- A route from Cecil Vale to Wyreema, then north to Gowrie, had poor terrain and environmental constraints

The route from Inglewood to Gowrie via Millmerran met Inland Rail's requirements – including transit time, cost, terrain, environmental constraints and land use – better than any alternative.

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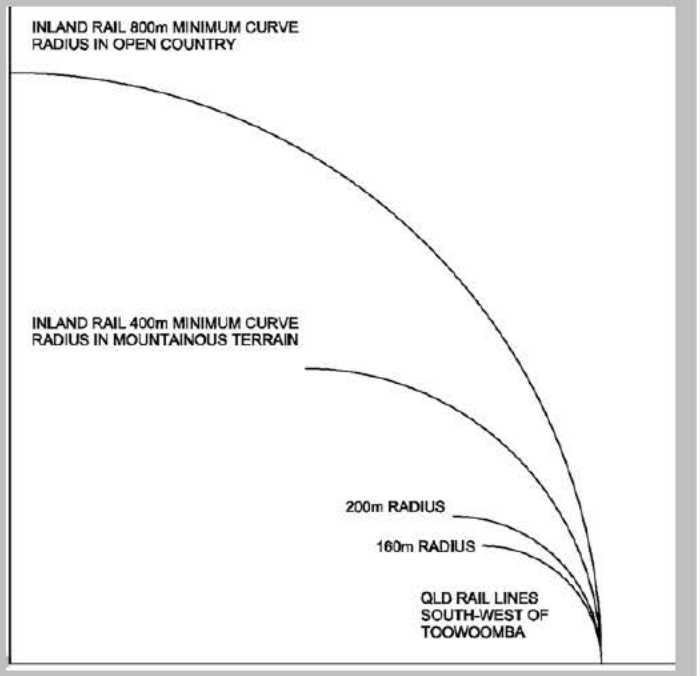
ROUTE/ALIGNMENT ISSUES – TOOWOOMBA AREA

Several variations to the route have been proposed in the Toowoomba area:

A route passing close to Warwick

- This would follow the existing QR line from Inglewood to Warwick (with a bypass of that town), then north to Gowrie, passing to the west of Toowoomba.
- These existing lines have curves of 160/200m radius.
- This option was discarded at an early stage of the 2010 analysis, being identified as the longest and most indirect way to traverse this section of Inland Rail's route.
- Even with substantial deviations to achieve Inland Rail's alignment standards, the Warwick route would be 26km longer, would add 46 minutes to transit time and would cost approximately $450 million more than the route via Millmerran.



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ROUTE/ALIGNMENT ISSUES – TOOWOOMBA AREA

A route from Karara to Gowrie

- In 2015 the Queensland Department of Transport and Main Roads (DTMR) received a report from SMEC Australia identifying an alternative route from Karara, between Inglewood and Warwick on the existing Queensland Rail line, north to the vicinity of Gowrie.
- This work didn't take into account elevations along the proposed route, it was a desktop 2D view.
- While our 3D comparison didn't present a compelling case for the Karara to Gowrie option - we want to provide clear and comparable assessment to the community between the two routes.
- We have commissioned this work and will report back to the community before the end of 2016.

ROUTE/ALIGNMENT ISSUES – TOOWOOMBA AREA

A route via Wellcamp industrial precinct

- Wellcamp precinct was not built or planned at the time of the 2010 Inland Rail Alignment Study
- Options to assess a deviation of the Inland Rail route or a connection to the route will be examined by the end of 2016
- This work is consistent with the Australian Government's desire to consider future intermodal terminals in the context of Inland Rail

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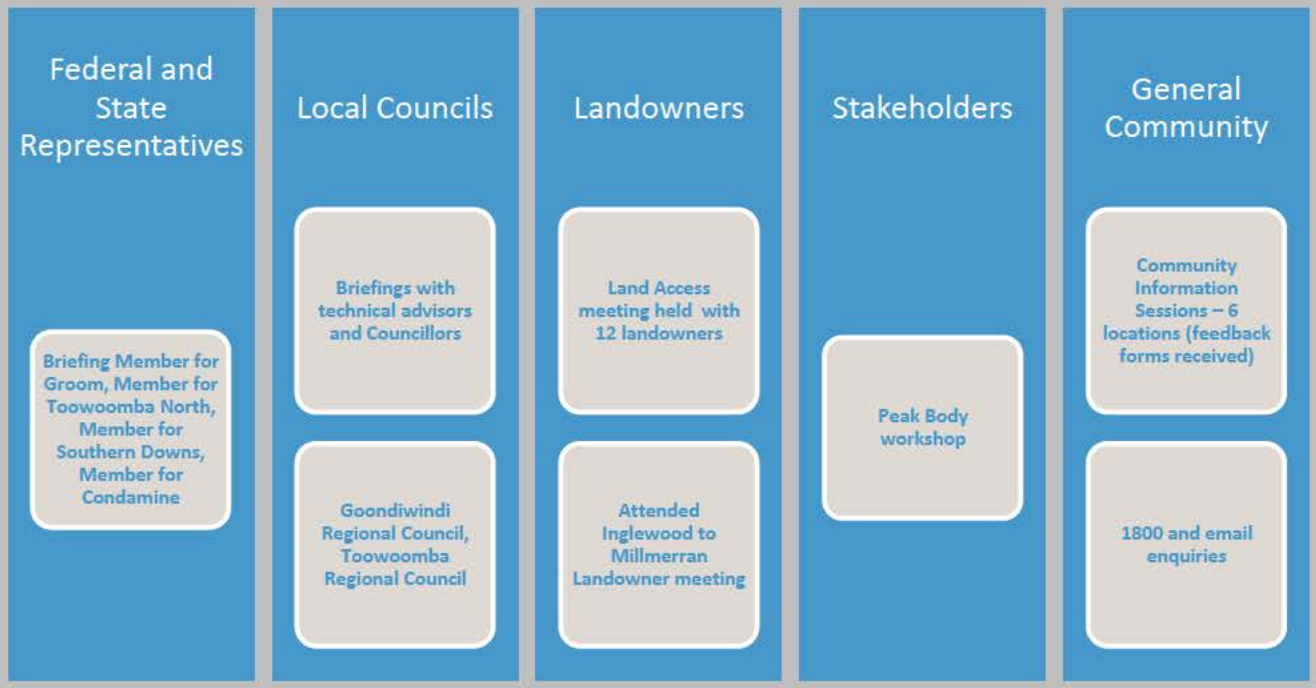
ENGAGING WITH STAKEHOLDERS AND COMMUNITY

InlandRail

YELARBON TO GOWRIE ENGAGEMENT



ARTC InlandRail

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ENGAGEMENT TO DATE

CATEGORY	STAKEHOLDER	BRIEFING	WORKSHOP
Regional development	Regional Development Australia – Toowoomba	✔	✔
	Toowoomba Chamber of Commerce	✔	✘
	Toowoomba Surat Basin Enterprise	✔	✔
Agriculture	AgForce	✘	✔
	Queensland Farmers Federation	✔	✔
	Cotton Australia	✔	✘
Environment	Condamine Alliance	✔	✔
	McIntyre Brook Irrigators	✘	✔
	Queensland Murray Darling Committee	✔	✘
Business	Millmerran Commerce and Progress Inc	✘	✔
	Millmerran Power Station	✔	✔
	Border Rivers Chamber of Commerce	✘	✔
	Inglewood Commerce	✘	✔

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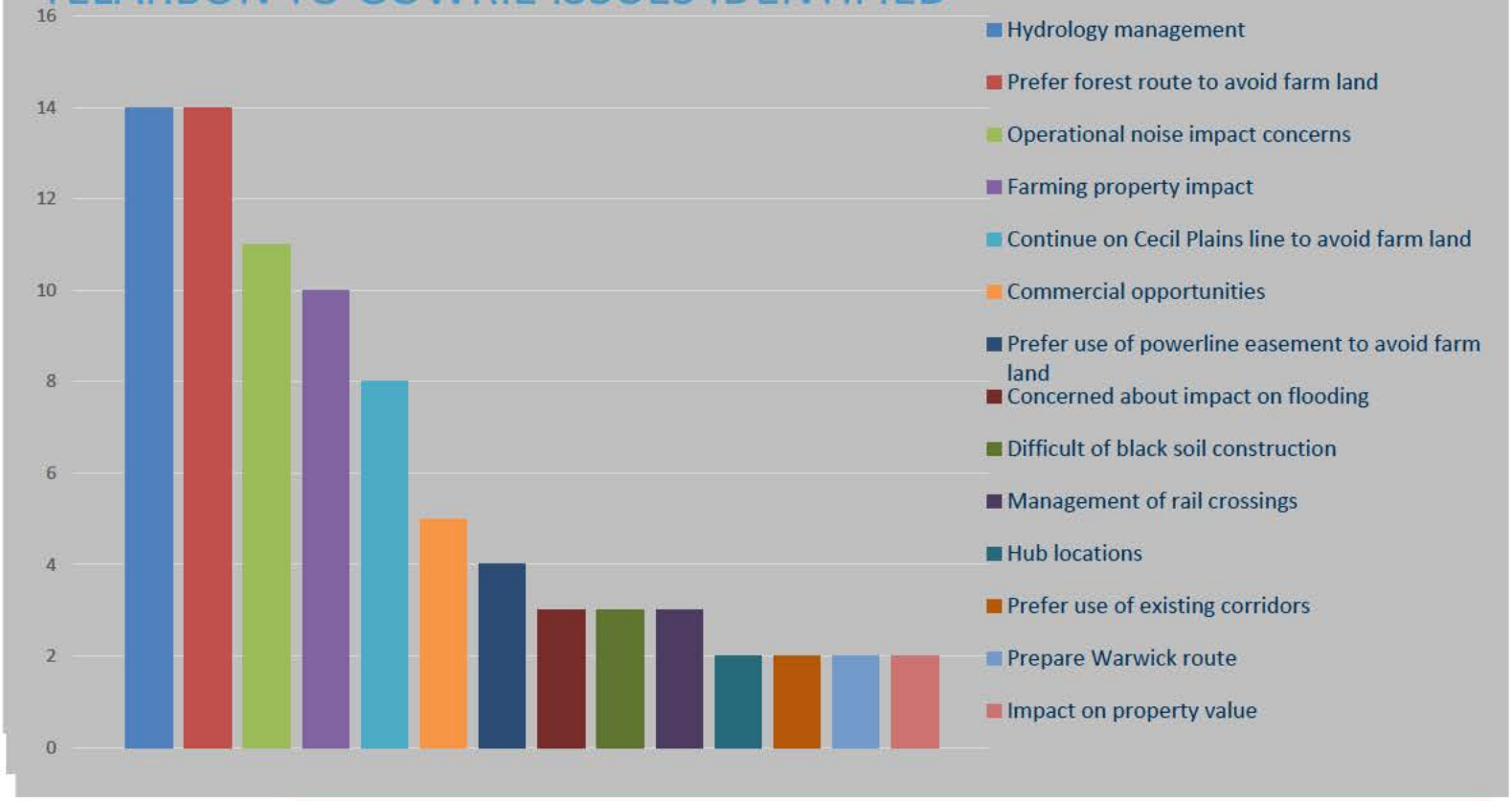
YELARBON TO GOWRIE ISSUES IDENTIFIED



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COMMUNITY ENGAGEMENT – NEXT STEPS

ENGAGEMENT THROUGH TO DECEMBER

- Provide the community with feedback on the common themes arising out of the first phase of consultation, including:
  - Letters to landowners
  - Community information sessions in Inglewood, Millmerran, Brookstead, Mount Tyson, Oakey, Leyburn and Umbiram
  - Attendance at community organisation meetings as requested
  - Dedicated community relations staff at a soon to open Toowoomba office
  - Regular media updates
- Briefings and discussions with State and Federal MPs, Councils, Peak bodies
- Ongoing alignment, hydrology and technical discussions and workshops with Councils, landowner groups and State departments

QUESTIONS

InlandRail

BACKGROUND - INLAND RAIL

- A new ~**1700km freight rail line from Melbourne to Brisbane** via regional VIC, NSW and QLD
- A **road-competitive rail service** based on transit time, reliability and cost (<24 hours Melb-Bris)
- **Completes the backbone of Australia's freight rail network**, Inland Rail is the safe, sustainable solution to Australia's freight challenge and will transform the way we move freight around the country.
- **Utilises more than 1200km of the existing network** – reducing community impacts and land costs

ARTC InlandRail

InlandRail

INLAND RAIL SERVICE OFFERING

Reliability

Price

Transit time

Freight available when the market wants

» Inland Rail - Key technical characteristics that underpin the service offering	
Train Length	1800m with future proofing for ultimate 3600m train length
Axle Load / Max Speed	21 tonnes @ 115km/h, 25 tonnes @ 80km/h, with future proofing for 30 tonnes @ 80km/h
Double Stacking	7.1m clearances for double stack operation
Interoperability	Full interoperability with the interstate mainline standard gauge network Dual-gauging in Queensland to provide for connectivity to the Queensland narrow gauge regional network Connections to the NSW Country Regional Network to provide for standard gauge connections to the ports of Melbourne, Port Kembla, Sydney, Newcastle, Brisbane, Adelaide and Perth.

ARTC InlandRail

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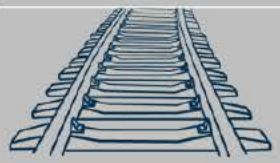
PROPOSED SCOPE

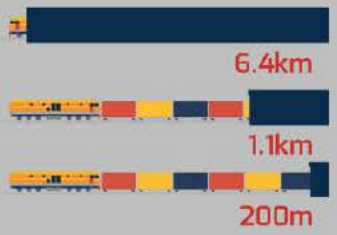
CATEGORY	PROJECT	DESCRIPTION	LENGTH (APPROX)
Upgrade works	Narrabri to North Star (NSW) Parkes to Narromine (NSW)	Upgrading to interstate mainline standards	293km
Enhancement works	Kagaru to Acacia Ridge (QLD) Albury to Illabo (NSW) Stockinbingal to Parkes (NSW) Tottenham to Albury (VIC)	Providing double-stack capability and passing loops	709km
Missing Link projects	Helidon to Calvert (QLD) Calvert to Kagaru (QLD)	New greenfield plus upgrade to dual gauge (includes Toowoomba and Little Liverpool Range tunnels)	708km
	Border to Gowrie (QLD) Gowrie to Helidon (QLD)	New greenfield plus upgrade to dual gauge	
	Narromine to Narrabri (NSW) North Star to Border (NSW) Illabo to Stockinbingal (NSW)	New greenfield standard gauge	

InlandRail

FACTS AND FIGURES



1.6 million
SLEEPERS



TUNNEL LENGTHS

181
TURNOUTS

17,000 tonnes
OF PRECAST
BRIDGE UNITS

138,000
tonnes
OF RAIL

20 million
cubic metres
OF EARTHWORKS

2.5 million
tonnes
OF BALLAST

16km
OF CULVERTS

ARTC InlandRail

PROGRAMME OVERVIEW - COMMITTED FUNDING

November 2013

Former Deputy Prime Minister The Hon. Warren Truss MP charged ARTC with developing a 10 year delivery plan for Inland Rail.

The Australian Government **committed $300 million** over 4 years to finalise planning, engineering design and environmental assessments for Inland Rail.

Work included:

- The development of the 10 year Programme
- Early design work and approvals
- The commencement of early works and land acquisition (where required)
- Development of a detailed Programme Business Case (completed).

May 2016

In the Federal Budget, Australian Government announced:

- **$594 million equity injection** to ARTC to progress pre-construction activities and land acquisition
- This will bring the Government's total commitment to the Programme to **$894 million**
- Inland Rail to be delivered by ARTC in partnership with the private sector.

InlandRail

TIMELINE TO DATE

2006	North-South Rail Corridor Study recommends a far western corridor via Parkes and Moree for a future north south railway
2010	Inland Rail Alignment Study recommends a detailed alignment via Albury, Parkes, Moree and Toowoomba
Late 2013	Initial $300m funding announced to develop Inland Rail Business Case and 10-year delivery schedule. Work included detailed Programme Business Case, early design work and approvals
Sep 2015	IR-IG Report and Programme Business Case delivered to the Australian Government IR-IG endorsed the 2010 Alignment as the Inland Rail base case Programme Business Case referred to Infrastructure Australia for assessment
May 2016	Infrastructure Australia included Inland Rail as a Priority Project in the Australian Infrastructure Priority List In the Federal Budget, Australian Government announced: • $594m equity injection to ARTC to progress pre-construction activities and land acquisition • Inland Rail to be delivered by ARTC in partnership with the private sector.
Sep 2016	Technical and Approvals Consultancy Services - Expressions of Interest released

ARTC InlandRail

s.22(1)(a)(ii)

s.22(1)(a)(ii)

s.22(1)(a)(ii)

Document 41

s.22(1)(a)(ii)

From: WOOD Richard
Sent: Tuesday, 27 September 2016 10:32 PM
To: THOMANN Mark; Carmody Shane; MRDAK Mike
Cc: s.22(1)(a)(ii)
Subject: Market Testing and EOI; community engagement [SEC=UNCLASSIFIED]
Attachments: s.22(1)(a)(ii)

Mike, Shane and Mark

Quick update on some key Inland Rail issues

s.22(1)(a)(ii)

Ministerial Advisory Group and engagement

- s.47F(1) has indicated Minister is considering travel to Toowoomba/Warwick next Wednesday 5 October to meet with State and Federal MP's on Inland Rail

- This is intended as a reset of engagement on Inland Rail issues. He indicated an outcome could be the establishment of a reference group to consider Queensland alignment and engagement issues.
- This may be easier to manage than a whole of alignment approach, however the real risk is that a group established in mid-late October would be hard pressed to undertake meaningful consultation and report in 2016, and may further open the alignment for consideration.
    - ARTC still consider finalisation of the alignment by December critical to undertake the design and EIS work. However, in practice, if the alignment is settled on other areas, a short delay in the Border-Oakey section may not require a delay to the balance of the alignment and would still represent substantial progress.
    - While we understand the Government intends construction in this term of Government, in practice substantial construction will only commence on the Brownfield sites in NSW- assuming Market Testing doesn't propose an alternative approach.

- An option may be for Members to agree enhanced consultation by ARTC would largely fix the issue without the need for a new structure, particularly as it is now doing work to consider the SMEC alignment via Karara and the Wellcamp Airport- however this may not satisfy those pushing for alignments via Warwick.
- I will try and meet with s.47F(1) on Thursday (he is travelling tomorrow) to further discuss and confirm arrangements for next week, as well as go through project risks and timing. He has indicated he would like Departmental and possible ARTC attendance. I'm on leave interstate so this will likely be Mark T and a rep from my team, subject to further discussion. We are commencing briefing. This could also be used as an opportunity to launch the Toowoomba office of Inland Rail.
- He considers issues in NSW/Vic are more manageable and may not need an additional reference group, although this remains an option.
- s.47C(1) [redacted]

ARTC engagement

- ARTC have made efforts to change their approach to engagement, although continue to be somewhat defensive and focused on maintaining the integrity of the 2010 alignment unless there are substantial reasons for change, although they are moving to a more open still of consultation and messaging.
    - Changes to the alignment do represent a challenge to cost and delivery timing, however we are continuing to press ARTC to consider alternative alignment options constructively, and they are starting to do so. ARTC is now commencing further work on the SMEC/Kara alignment, including consultation.
- John Fullerton has spent the last 2 days in Toowoomba and Warwick meeting with stakeholders and elected representatives. He indicated these engagements had been positively received, although I've yet to get an update on meetings with Southern Downs Council (Warwick) today. John indicated if asked he would indicate he would not recommend further work on an alignment via Warwick.
- At our suggestion, ARTC are preparing public release versions of the Concept Reports prepared for Inland Rail, and new more detailed maps. they will also shortly be writing to all landholders on the alignment study area and looking at improved communications tools and messaging.

I will keep you updated.

Regards

Richard

Richard Wood
General Manager, Inland Rail
Department of Infrastructure and Regional Development
GPO BOX 594 CANBERRA ACT 2601
☎ Ph s.22(1)(a)(ii) | 🖷 Fax 02 6275 1388 | ☎ Mobile s.22(1)(a)(ii) | s.22(1)(a)(ii) @infrastructure.gov.au

Document 42

s.22(1)(a)(ii)

From: MRDAK Mike
Sent: Thursday, 29 September 2016 10:22 PM
To: WOOD Richard; THOMANN Mark; Carmody Shane
Cc: SPENCE Pip; s.47F(1) ; s.22(1)(a)(ii)
Subject: RE: Inland Rail- Minister meeting next week [SEC=UNCLASSIFIED]

UNCLASSIFIED
Thanks Richard will discuss further with mo. Mike

UNCLASSIFIED

Sent with Good (www.good.com)

From: WOOD Richard
Sent: Thursday, September 29, 2016 10:18:55 PM
To: THOMANN Mark; Carmody Shane; MRDAK Mike
Cc: SPENCE Pip; s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Subject: Inland Rail- Minister meeting next week [SEC=UNCLASSIFIED]

Mike et al

I met with s.47F(1) today, who confirmed that the Minister would be meeting with elected representatives in Warwick on next Wednesday at 12.30 for an hour, and that the Minister will appoint an eminent person to act as a focal point for further community engagement.

The meeting would be attended by the Members for Groom and Maranoa and State MPs to discuss issues associated with the Inland Rail alignment in Queensland, with a major focus on the hot spot issues between Toowoomba and the Border, in particular the ARTC's preferred alignment via Millmerran vs the 'SMEC' alignment via Karara; alignment via Brisbane West (Wellcamp) Airport; and the option for an alignment travelling via Warwick and Toowoomba.

This would be followed by a media announcement. The ARTC (Fullerton and others) and Department (Mark Thomann) would also attend at least parts of the meeting. My team (s.22(1)(a)(ii)) will provide support and she would also attend.

I understand the meeting is intended to provide a reset on the engagement approach. The MO expects it to be a potentially heated meeting- I suspect the ARTC will receive substantial criticism for its engagement approach to date, which they are aware of and seeking to address.

The MO has indicated they expect the Minister will indicate he has heard these views and would indicate he will consider further, and then shortly afterwards (perhaps next sitting week) would announce an eminent person (yet to be identified) to act as a consultation point.

s.47C(1)

We are preparing briefing for the meeting and will provide follow up briefing to confirm arrangements for the eminent person.

The role of the eminent person requires further definition to manage the scope of activities. The MO has indicated they want to see this process wrapped up quickly, preferably to meet our preferred timetable of settling the alignment by the end of this year. This time is very tight and would mean an appointment in late October would only really allow for a month of consultation. Our initial view is this would involve meeting with stakeholders to identify key issues and then consider how ARTC has taken these into account and making recommendations to the Minister on any issues requiring further analysis. We're not proposing they are commissioning any independent work, although this remains an option. We will provide further advice to the Minister to try and shape this work to avoid

delay, while giving an opportunity to consider stakeholder views and inform the process. It may well be the case this work can't be done this year, meaning a delay in final decision on this part of the Inland Rail alignment. One key risk is that a substantial change in the alignment (eg going via Warwick) that drives up cost or reduces efficiency would require a significant reworking of the business case, requiring months of work and undermining the Market Testing and Commercial Business Case.

Also while in Warwick the Minister will meet with the owners of the InterLink terminal being developed outside Toowoomba. They are concerned in any reconsideration the alignment which they see as leading to delays and uncertainty although this is likely to be mainly driven by commercial considerations as a diversion via Wellcamp Airport could see a competitor emerge for them as the Wellcamp owners have indicated an interest in developing a freight terminal.

s.22(1)(a)(ii)

Regards
Richard

Australian Government
Department of Infrastructure and Regional Development

FOR: **The Hon Darren Chester MP** cc: Senator the Hon Fiona Nash cc: The Hon Paul Fletcher MP cc: Mr Mike Mrdak, Secretary cc: Mr Shane Carmody, Deputy Secretary cc: Ms Judith Zielke, Deputy Secretary	**PDR ID:** MB16-000502	**For Decision by**: 5 October 2016 **Reason:** Ministerial visit to region

SUBJECT: Inland Rail – SMEC desktop study on alternative alignments

Recommendation: That you:

(a) **Note** that the Australian Rail Track Corporation (ARTC) is currently undertaking further analysis on the SMEC desktop study on alternative alignments for the Inland Rail project.

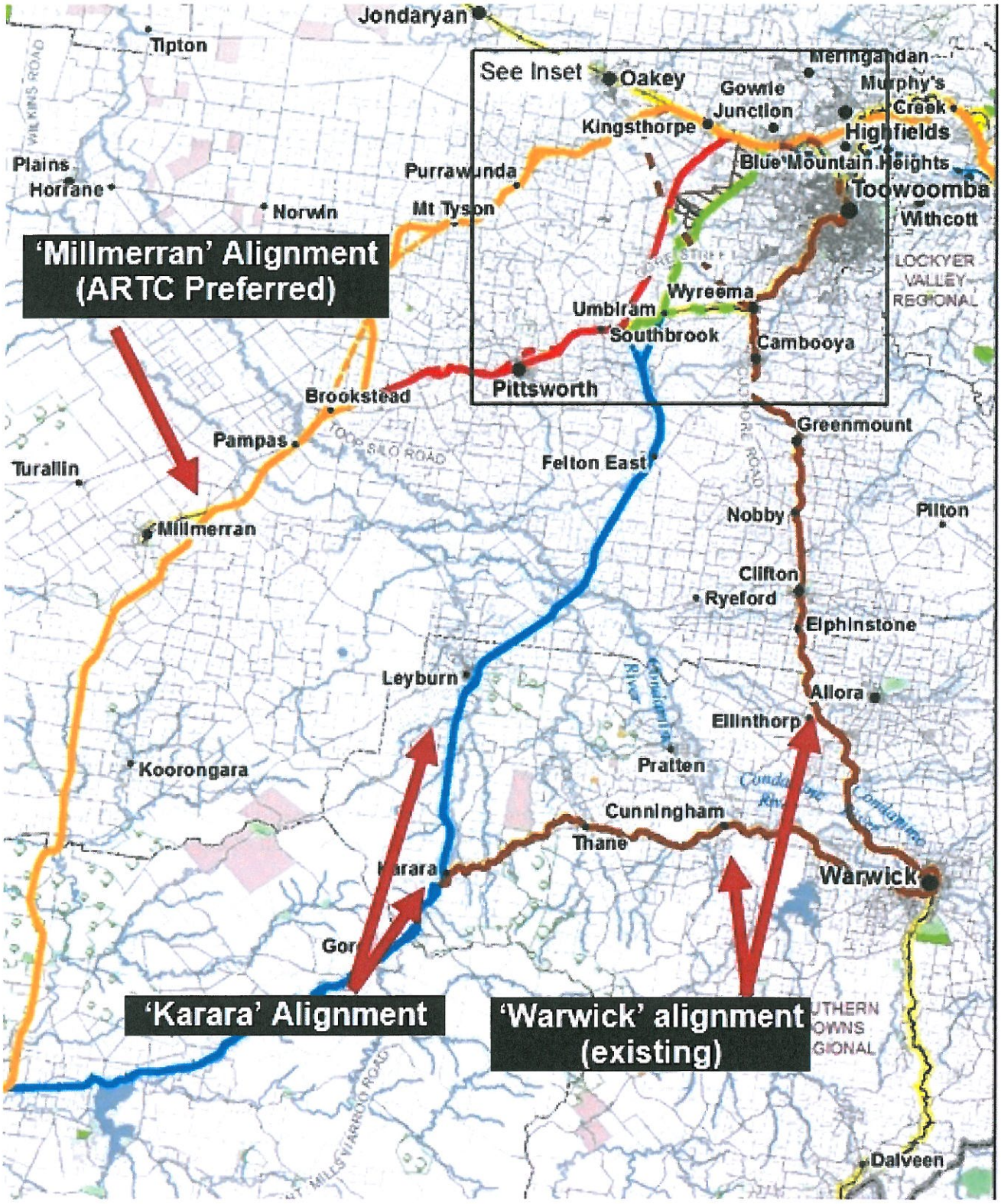
Key Issues:

1. SMEC (previously known as Snowy Mountains Engineering Corporation) prepared a desktop study in 2015 for the Queensland Department of Transport and Main Roads (TMR) examining feasible alternative alignments for the Inland Rail project in southern Queensland, between North Star and Gowrie Junction in Queensland. This desktop study was tabled in the Queensland Parliament on 13 September 2016 by the Hon Lawrence Springborg MP, the state member for Southern Downs, and is at Attachment A.
    a. As the SMEC study was a desktop review, it utilised limited data provided by TMR, Queensland Rail or found in the public domain.
    b. The SMEC report indicated that an alternative route from Inglewood to Karara and Gowrie could present a faster and cheaper route than the 2010 Alignment.
2. ARTC was informed of the SMEC study when it was prepared in 2015, and engaged consultants at the time to undertake a further analysis of the Inglewood to Karara and Gowrie alignment identified in the study. Rather than undertaking a desktop review, the work by ARTC analysed the relationship between the railway and surrounding terrain, including consideration of the civil works, gradients and structures such as bridges and viaducts that would be required for a railway.
    a. ARTC's initial assessment did not present a compelling case to adopt the alternative route in its entirety. However, the report's suggestion for a deviation of alignment past Brisbane West (Wellcamp) Airport is being investigated.
    b. ARTC has decided to undertake further assessment of the alternative alignment via Wellcamp Airport in order to provide the community with clear and comparable findings from the assessment of the preferred alignment compared to the Inglewood to Karara and Gowrie route.
    c. ARTC expects to be able to share the results of its assessment before the end of 2016.

Cleared by: s.22(1)(a)(ii) Date: 4 October 2016 Phone: s.22(1)(a)(ii) Branch: Inland Rail Division: Infrastructure Investment	(a) Noted DARREN CHESTER ..... / ..... / .....

3. While further assessment is being undertaken, ARTC is continuing its engagement with landholders and communities in the region to ensure that stakeholders are made aware of the current progress of the Inland Rail project. Extensive consultation will be undertaken before a final decision on the Inland Rail alignment is made.

4. The below map from the SMEC study shows the proposed route (yellow) and alternative alignments proposed by SMEC.



Attachments

A 2015 SMEC study on Refinement of the ARTC Inland Rail Alignment between Toowoomba and the NSW Border

Australian Government
Department of Infrastructure and Regional Development

This is a Meeting Brief for Information

FOR: The Hon Darren Chester MP cc: Senator the Hon Fiona Nash Mr Mike Mrdak, Secretary Mr Shane Carmody, Deputy Secretary Ms Judith Zielke, Deputy Secretary	PDR ID: MB16-000499	**Ministerial action required by**: 5 October 2016 **Reason:** Meeting will be held on 5 October 2016

SUBJECT: Minister Chester - Meeting with Queensland federal and state MPs – 5 October 2016

MEETING WITH: Local Federal and State elected representatives

TIME/DATE: 12.30pm to 1.30pm (Qld time), Wednesday 5 October 2016

VENUE: Scots PGC 60 Oxenham Street, Warwick

Purpose of Meeting

1. The meeting is to focus on Inland Rail's proposed alignment and alternatives in Queensland. Members will raise their concerns about community engagement and the lack of transparency on reaching a decision on the alignment, and potential impacts of the project on their electorates.
2. The meeting is an opportunity for you to hear the concerns of state and federal Queensland MPs and reinvigorate the process of positive engagement to enable a decision on the alignment to be made by the end of the year on the nationally significant Inland Rail project.
3. It should be noted that Inland Rail has bipartisan support at both the federal level and Queensland state level, and that this is the first Australian Government led project on Infrastructure Priority List (i.e. Infrastructure Australia approved).

Main Issues and Expected Outcomes

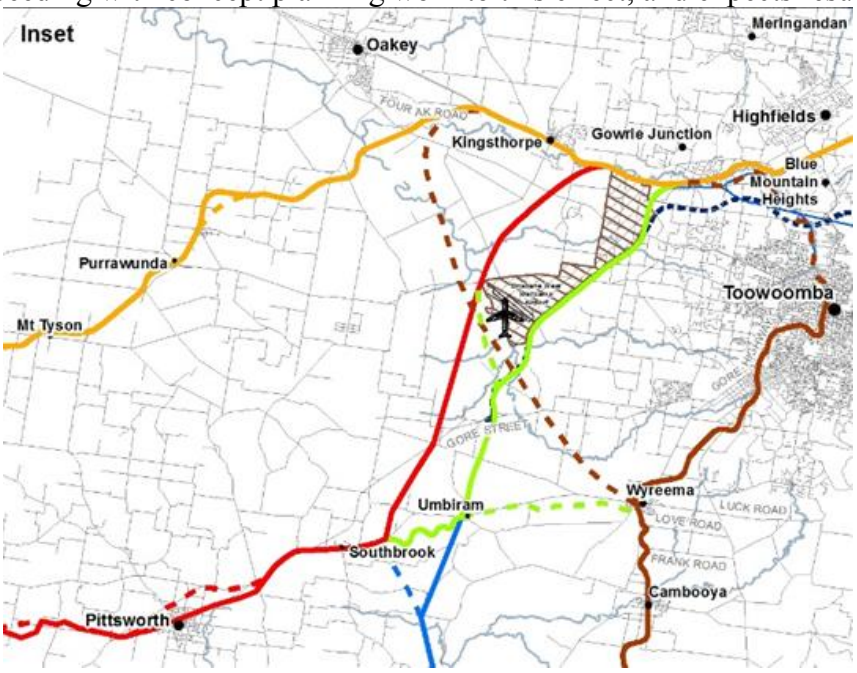
4. Southern Queensland state MPs have become increasingly concerned about the issues raised through the Snowy Mountains Engineering Corporation (SMEC) Inland Rail Report, particularly since its release in the Queensland Parliament by Mr Lawrence Springborg MP on 13 September 2016. A separate brief on the SMEC report is at MB16-000502.
5. There are some calls for changes to alignment by local government, industry and, in some cases, landowner alliances. In Queensland, these calls include:
   a. A route via Brisbane West (Wellcamp) Airport - (under consideration);
   b. A route via Inglewood-Karara-Umbiram-Wellcamp (SMEC desktop study alignment – previously rejected by ARTC but undergoing further analysis); and
   c. Route via Warwick (least favoured and previously rejected due to significant negative impact on cost and transit time).

Cleared by: Mark Thomann, Executive Director Date: 4 October 2016 Phone: s.22(1)(a)(ii) or s.22(1)(a)(ii) Division: Infrastructure Investment	DARREN CHESTER ..... / ..... / .....

6. These calls are largely driven by regional specific interests, landholder and community concerns on flooding, impact on agriculture or communities and environmental impacts. There is also a perception in some communities that ARTC has not been sufficiently open or transparent in its community consultations to date, or overly focused on the technical aspects of the project without 'bringing the community along'.
7. Mr John Fullerton, CEO of ARTC, met with federal, state and local politicians (see Background for list) in Toowoomba on 26 and 27 September where he agreed ARTC will do some further work on:
   a. the Wellcamp Precinct to further study either a deviation of the proposed Inland Rail alignment or a spur connection from the Charlton Wellcamp area into Inland Rail;
   b. the Inglewood-Karara-Umbiram-Wellcamp (SMEC) alignment to better compare against the ARTC alignment, so it can present comparable information that demonstrates why it was not adopted; and
   c. further investigate how the Warwick region can take advantage of Inland Rail, given the proposed Warwick alignment has significant negative impact on the economic viability of the project by increasing the transit time and project costs without commensurate economic benefits.
8. Once the alignment is agreed, the Department can prepare some information on how communities surrounding and in areas beyond the alignment, such as Warwick, can maximise the benefits to be had from Inland Rail.
9. It is import to maintain community support for the Inland Rail project and to ensure all relevant considerations have been taken into account. However, we also consider it is important to settle the route as soon as possible to enable reference design to proceed and give certainty to the public and businesses in the region.
10. More information on these alignments is below.

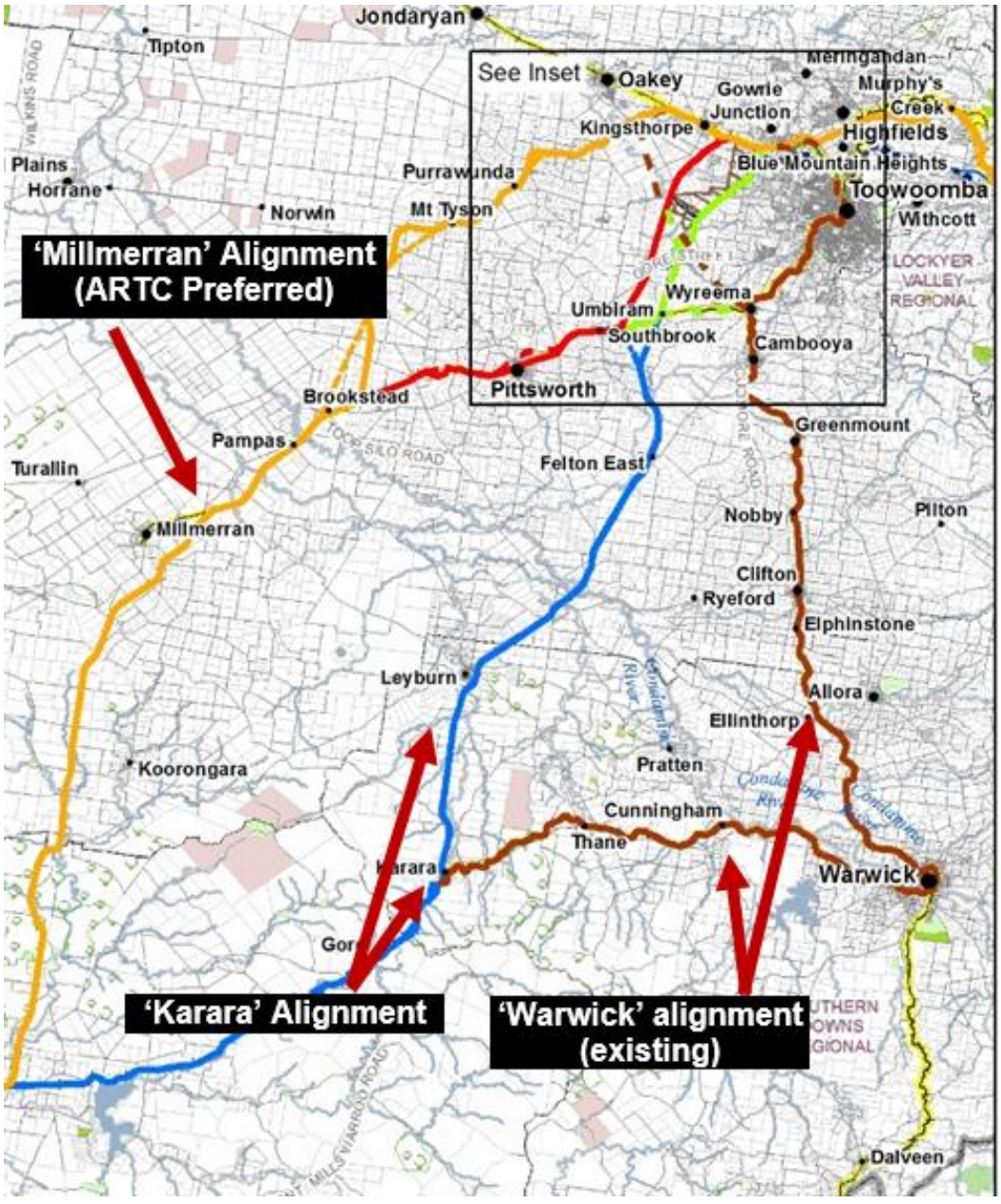
Brisbane West (Wellcamp) Airport

11. The Brisbane West (Wellcamp) Airport was not constructed at the time of the 2010 Alignment Study. In its 2015 Report, SMEC identified several routes that could go past Wellcamp Airport (see below).
12. ARTC is currently investigating the Wellcamp Precinct to further study either a deviation of the proposed Inland Rail alignment or a spur connection from the Charlton Wellcamp area into Inland Rail. It is proceeding with concept planning work to this effect, and expects results by end 2016.



Inglewood-Karara-Umbiram-Wellcamp (SMEC) Alignment

13. On 13 September 2016, the Queensland Member for the Southern Downs, Mr Lawrence Springborg, released the 2015 SMEC *Report on Inland Rail Options Analysis of the Section between Toowoomba and the NSW Border.* This report was prepared for the Queensland Government but not made public until Mr Springborg tabled it in the Queensland Parliament.
14. ARTC was informed of the SMEC desktop study when it was prepared and engaged consultants to further analyse the Inglewood to Karara and Gowrie route identified at that time.
15. While ARTC's first assessment did not present a compelling case to adopt the alternative route in its entirety, it will undertake some further analysis to provide the community with clear and comparable findings from the assessment of the alignment proposed in the 2010 Alignment Study compared to the Inglewood-Karara-Umbiram-Wellcamp route.
16. This work will begin shortly, with results expected before the end of the year.
17. The below map from the SMEC desktop study shows the ARTC proposed route (yellow) and alternative alignments examined by SMEC.



Warwick Routes

18. The 2010 Inland Rail Alignment Study considered two options for the 'Southern Connector' alignment via Warwick, but these were ruled out at a preliminary stage.
19. It was found that the first Warwick option (using the Queensland Rail alignment with existing grades and curves with minor upgrades) would add three hours to Inland Rail's transit time. This undermines the requirement of Inland Rail to be able to deliver freight from Melbourne to Brisbane within 24 hours.
20. The second option (also using the Queensland Rail alignment but with significant upgrades) would cost an additional $450 million (excluding risk contingency) and would still add 45 minutes to the transit time.
21. This view was seconded by the 2015 SMEC Queensland desktop study, which noted but did not recommend the Warwick alignment due to significant cost increases.
22. ARTC's paper explaining this analysis is at Attachment A).

Attached Biographical Details

Member for Groom
Hon Dr John McVeigh MP
Liberal Party of Australia

Member for Maranoa
Mr David Littleproud MP
The Nationals

Qld Member for Locker
Mr Ian Rickuss
Liberal National Party

Qld Member for Toowoomba South
Mr David Janetzki
Liberal National Party

Qld Member for Condamine
Mr Patrick (Pat) Weir
Liberal National Party

Qld Member for Southern Downs
Mr Lawrence Springborg
Liberal National Party

Qld Member for Toowoomba North
Mr Trevor Watts
Liberal National Party

Background

The 2010 Inland Rail alignment study identified a preferred alignment between Melbourne and Brisbane after a rigorous assessment of alternative options. This preferred alignment was used as the basis of the 2015 Inland Rail Programme Business Case.

Some alterations to the alignment have been made to take account of specific factors, such as the section between Gowrie and Grandchester, near Toowoomba, Queensland, which will use an alternative alignment following the 2011 floods in Toowoomba and Lockyer Valley.

In recent months, ARTC has commenced consultation with peak bodies, Local Government Authorities, elected representatives from all levels of Government and the broader community. The engagement has provided insights into some of the technical and other issues which will require further consideration during the formal approval process across jurisdictions.

ARTC meeting on 26 and 27 September 2016

Mr John Fullerton, CEO of ARTC, met with the following federal, state and local politicians in Toowoomba on 26 and 27 September:

John McVeigh (Federal Member for Groom)
David Janetzki (Qld MP for Toowoomba South)
Patrick (Pat) Weir (Qld MP for Condamine)
Mayor Paul Antonio (Toowoomba Regional Council)
Mayor Tracey Dobie (Southern Downs Council)
David Keenan (CEO Southern Downs Council)

An open letter from Mr Fullerton was also published in Toowoomba Chronicle on 4 October 2016. Copy is at Attachment B.

Attachments

A ARTC Inland Rail – Comparison of 2010 route and Warwick Option (August 2016)
B Open letter from Mr John Fullerton, CEO ARTC, appearing in the Toowoomba Chronicle on 4 October 2016

04 Oct 2016
Toowoomba Chronicle, Toowoomba QLD

Section: General News • Article type : News Item • Audience : 15,365 • Page: 17
Printed Size: 285.00cm² • Market: QLD • Country: Australia • Words: 515
Item ID: 666274895

Have your say on Inland Rail project

I AM writing to respond to community interest in the Inland Rail Programme.

Over the last few months we've met with landowners, community groups, councils, Members of Parliament and industry bodies and one thing is clear there's strong support for Inland Rail.

Everyone sees the benefit in cutting transport costs for producers and companies who will rely on Inland Rail to move their freight between Melbourne and Brisbane.

The purpose of this initial consultation has been to better understand the local conditions and issues that we need to take into consideration as we work to finalise the study area, generally 2km wide in most areas.

A common theme arising from the feedback was the need for more detail on the Programme, the route and its impact on people's property and concerns about flooding.

It has taken some time to consolidate the feedback and in coming weeks we look forward to providing landowners along the current 2km-wide study area with more detail, including how we are addressing their suggestions.

Landowners will receive direct feedback and there will be community information sessions for people to attend to find out more and provide further feedback.

This upcoming stage of further consultation will be used as the basis for further technical and design work that will form part of the submission we make to the relevant planning and approvals body, after which you will have the opportunity to again provide formal and detailed feedback.

We acknowledge there are a range of views and opinions regarding the route which understandably will be the case when faced by such a large and complex project like Inland Rail.

I openly encourage the community to keep talking with us and working with us as we work towards finalising the study area and rail corridor ahead of any formal planning and environmental process.

We will soon open an office in Toowoomba for the community to make appointments and speak with our people.

Our community engagement team will be on the ground meeting with community members at their homes, businesses and farms so we can better understand your environment, where you live along the study corridor and the things that concern you expect to see more of our people out and about in your communities.

I will be in the region with two senior executive ARTC colleagues meeting with local leaders, business and industry. I want to share where we are up to on this incredibly exciting project for Australia and your region, and highlight the extensive work still ahead of us to be done.

I look forward to being able to share more updates with you in the coming weeks and months as we gather feedback through our ongoing community consultation work with you.

In the meantime, I invite people to contact us via 1800 732 761 (free call) or email inlandrailenquiries @artc.com.au.

— JOHN FULLERTON, CEO, ARTC

“We acknowledge there are a range of views and opinions regarding the route – which understandably will be the case when faced by such a large and complex project like Inland Rail.

Document 46

s.22(1)(a)(ii)

From: THOMANN Mark
Sent: Wednesday, 5 October 2016 11:37 PM
To: MRDAK Mike; Carmody Shane
Cc: WOOD Richard; s.22(1)(a)(ii)
Subject: FW: ARTC Meeting with State Members- actions agreed [SEC=UNCLASSIFIED]
Attachments: 160930_Toowoomba_Alignment studies_ (2) 2.docx; ATT00001.htm

UNCLASSIFIED
Mike/Shane
Thanks for the news clip.

See below for your info. We will give an update at Steering Committee on the first meeting with MPs. We were not at this second meeting.

The message from MPs to ARTC was pretty blunt that ARTC needed to take a much more open and transparent approach to communicating with the community and that ARTC needed to lay out the evidence clearly for choosing one alignment over another. There was also feedback about the tone and approach to messaging and treating local people with dignity and respect.

Outcomes of the meeting that I noted was that ARTC would look at all 3 options and clearly articulate the compelling reasons one is preferred over the other options, would proceed in an open and consultative manner, and would ensure MPs have a single liaison point and are fully appraised of evidence and issues going forward.

I also think we need to discuss our next steps when I get back to Canberra.

Mark

UNCLASSIFIED

Sent with Good (www.good.com)

From: s.47F(1)
Sent: Wednesday, October 5, 2016 11:00:54 PM
To: s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Cc: s.22(1)(a)(ii); THOMANN Mark
Subject: ARTC Meeting with State Members- actions agreed
s.22(1)(a)(i and s.22(1)(a)(ii)

I wanted to provide an overview of the discussion that followed with the State Members (Lawrence Springborg, Trevor Watts, Pat Weir) this afternoon.

We talked in more detail about the current alignment and specific local issues of interest which included detail on the tunnel at Toowoomba (location, construction, emissions), train frequency and patterns across the route, construction approach (greenfield vs brownfield - order of approach), and the forward consultation plan.

In addition to our current planned consultation activities, the Member for Southern Downs proposed we consider forming a community reference group, to represent the landowners along the current proposed alignment between Inglewood and Gowrie. As a smaller, representative group we can involve them in

greater detail on the work that we are doing on the Karara and Charlton Wellcamp options. We think it's a good suggestion and we intend to progress it, subject to fleshing out some more details.

We briefed them on the planned media release to confirm the further study work. And the email update to landowners along the current route that we intend to send at the same time as the release. This is so that the landowners we've been talking to have all of the facts about what is being looked and and when we'll be bringing the results back to them.

We also agreed, to maintain coordination and consistency that we would establish a fortnightly meeting between ARTC and the State Members. The Member for Southern Downs will liaise with his fellow members to coordinate diaries and then liaise with me to coordinate ARTC, and of course any involvement your office and DIRD would like to have. The purpose of these sessions is to provide the members with an update on the consultation plan, what's coming up in their area, how we are tracking with our study work, and also provide them with an opportunity to share local feedback, raise concerns and questions. We've agreed to target the first of these in around a fortnight in Toowoomba.

In light of the further feedback out of today - and the critical phase of community consultation and public commentary over the coming months, I'd like to propose that we instigate a similar level of coordination and communication between your office, ourselves and DIRD dedicated to stakeholder, communications and media elements of the Programme.

I'd suggest a fortnightly hookup on the opposite fortnights to what we line up with the State Members, but happy to discuss further what will suit the needs of your office.

In the meantime, it would be great to get some time to catch up over the phone tomorrow, get your feedback on the meeting and determine next steps around engaging with Southern Downs/Warwick. I've attached a slightly re-worked release based on today's meeting, but I think we need to lock in some of the details before we're ready to issue this and able to deal with the follow up questions.

Thanks

s.47F(1)

ARTC Confirms Further Studies in QLD Response to Community Feedback

ARTC Chief Executive Officer John Fullerton today confirmed further details of the work now underway to examine changes to the current Inland Rail route in Southern Queensland in response to feedback from the community.

"ARTC has begun work to further compare the current route from Inglewood through Millmerran to an alternative route through Karara and Leyburn.

"A route from Inglewood through Karara and Leyburn was identified in a study undertaken by in 2015 by the Queensland Department of Transport and Main Roads (DTMR).

"While our early 3D comparison didn't present a compelling case for the Karara to Gowrie option - we want to provide clear and comparable assessment to the community between the two routes.

"That's why have committed to this study and to providing the results to the community before the end of this year.

"We are also looking at options to better connect Inland Rail to the Charlton Wellcamp areas.

"This study will look at a connection to the current route, or deviation from the current route to connect to the Charlton and Wellcamp areas.

"This work is consistent with the Australian Government's desire to consider future intermodal terminals in the context of Inland Rail.

"A lot of technical work has gone into defining the current route– more than 50,000 possible route combinations across the 1700 kilometres. Specialists have looked at topography, soils, hydrology, cultural heritage, flora and fauna.

"It's clear that the community want confidence that the current Inland Rail route is the right one.

"That's why we're doing this further work and at the same time we will be continuing with our community engagement which is providing practical input into important issues like flooding risk, access to and impact on farm land and maximising the commercial opportunities for the region.

"During meetings with local Members, Councils, peak bodies and businesses over the last week I was able to confirm the further work underway.

"A particular focus of our ongoing community consultation will be to provide the community with the detailed assessment of the options that were considered as part of the 2010 Alignment Study.

"That's especially important for the Southern Downs community where we've done extensive work on route options and where we are committed to working closely with landowners, producers and businesses in the area so we can determine the route that will deliver the best outcome for Queensland and Australia.

Commented [1]:

"We acknowledge there are a range of views and opinions regarding the route – which understandably is the case when faced by such a large and complex project as Inland Rail.

"It is in the community's and project's best interest that community consultation and this comprehensive study work takes place ahead of any formal planning and environmental process," said Mr Fullerton.

"While there will always be different views, we want people to have confidence in the process."

Field-based studies are expected to get underway in the area in the coming week with ARTC expecting to release the findings of both studies before the end of the year.

**// ENDS **
BACKGROUND

The following is an overview of the further studies:

MILLMERRAN/KARARA STUDY (further analysis and comparison work of the SMEC report recommendations)

- ARTC has engaged a consultancy firm to undertake this work which is expected to take around eight weeks
- The study will allow for further detailed comparison of the Inglewood via Karara option compared to the current Inglewood via Millmerran route
- The results from the study will be provided to the community
- If the results demonstrate that the alternative route is viable, ARTC will consult with landowners in the area, prior to determining the preferred route

Commented [2]:

CHARLTON WELLCAMP STUDY

- ARTC has engaged a consultancy firm to undertake this work which is expected to take around eight weeks
- The study will consider options connect Inland Rail to the recently developed Charlton Wellcamp areas via a connection or deviation of the current route
- If the results demonstrate that the alternative route is viable, ARTC will consult with landowners in the area, prior to determining the preferred route.

Commented [3]:

Melbourne-Brisbane Inland Railway

Steering Committee Agenda Paper

Issued: DD-MM-YYYY

AGENDA ITEM: 3
SUBJECT: Alignment Issues
SUBMITTED BY: ARTC
PRESENTED BY: s.47F(1) Executive GM Corporate Affairs
s.47F(1), Programme Director Inland Rail

PURPOSE

1. To brief the Steering Committee on the current status of alignment issues for Inland Rail.
2. To seek the Steering Committee's endorsement to the attached Position Paper – Inland Rail alignment.

RECOMMENDATIONS

That the Steering Committee

1. **NOTE the extract from the SMEC report**
2. **ENDORSE the attached Position Paper – Inland Rail alignment**

MAIN ISSUES

Current status – alignment issues

An update will also be provided by s.47F(1) Programme Director on the current status of alignment issues for Inland Rail.

In particular, it is noted that the Minister has recently approved that concept planning investigations should proceed for alignment deviation options to potentially serve Wellcamp airport. This work is now getting underway and it is planned that it will include a community/ stakeholder consultation element.

The community consultation for the Wellcamp studies has not yet been initiated, pending discussion in the Steering Committee on stakeholder consultation for alignment options more generally (including alignment options identified in the SMEC Report for the Queensland Department of Transport and Main Roads – see attached map).

A relevant consideration is that the Queensland Coordinator General has informally indicated that stakeholder consultation on alignment options should be undertaken prior to submission of the Initial Advice Statement for a preferred option. The IAS will be the formal initiation of the Coordinated Project EIS process in Queensland.

Position Paper – Inland Rail alignment

A revised Position Paper on the process for dealing with proposals that seek a deviation from the current Inland Rail base case alignment is attached, for the Steering Committee's consideration and endorsement.

s.47F(1) will provide a verbal overview of the paper to the Steering Committee.

CONTACT

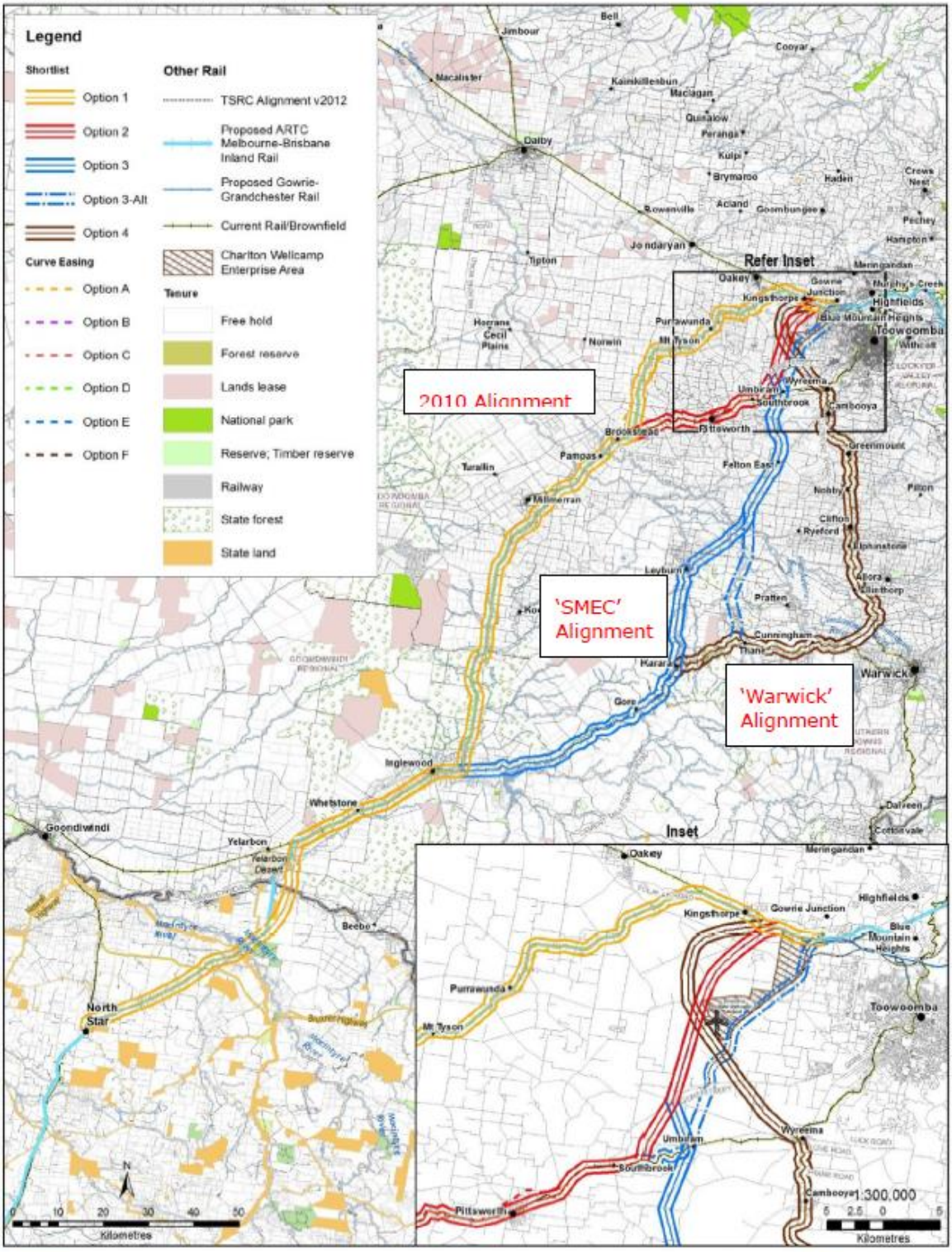
s.47F(1), Executive GM Corporate Affairs, ARTC
s.47F(1)@ARTC.com.au s.47F(1)

s.47F(1), Programme Director Inland Rail, ARTC
s.47F(1)@ARTC.com.au s.47F(1)

ATTACHMENTS

1. Alignment options – extract from SMEC Report
2. Position Paper – Inland Rail alignment.

MBIR OPTIONS - SHORTLIST



PROJECT NO. 30031383 PROJECT TITLE MBIR	DRAWING NO. 30031383-002 REVISION E	CONFIDENTIAL COMMERCIAL IN CONFIDENCE	SMEC
PAGE SIZE A3 SCALE 1:750,000	SOURCE Bing Maps, QLD Govt	Copyright SMEC Australia Pty Ltd. All Rights Reserved. Queensland Government	CONSULTANT SMEC Australia

ARTC InlandRail

BRIEFING PAPER

POSITION PAPER – INLAND RAIL ALIGNMENT

PURPOSE OF THIS PAPER

To clarify the process for managing and determining the Corridor Alignment

DEFINITIONS

2010 Inland Rail Alignment Study – Confirmed the optimum Study Area for the Inland Rail Programme, based on factors which include: less than 24 hour transit time, construction cost and environmental considerations.

2015 IRIG Report – Endorsed the Study Area to be used as a basis for community engagement and pre-construction activities. Based on the 2010 Alignment Study, with some refinements.

Rail Alignment – the exact positioning of the track along which the rail vehicle operates.

Corridor Alignment – The 20-40 metre wide corridor within which the rail tracks (Rail Alignment) and infrastructure are located. The Corridor Alignment and Rail Alignment are taken through to environmental and planning approvals.

Study Area – An approximately 2km wide strip identified in the 2015 IRIG Report and currently the subject of field investigations and community feedback.

Refinement – Changes within the Study Area based on current preconstruction activities and community feedback.

Deviation – A change to Study Area based on detailed assessment of an alternative.

First Train – The first train to operate from Melbourne to Brisbane in July 2024

Reference Design – broad technical specifications for the track (Rail Alignment) positioned within the Corridor Alignment which is submitted as part of the environmental and planning approvals process.

Environmental and Planning Approvals – the Federal and State process, which includes community consultation to obtain approval to construct and operate.

Inland Rail Communication and Engagement Strategy – The agreed strategy to communicate and engage with stakeholders and the community

Note – The Gowrie to Grandchester section in Queensland is Corridor Alignment stage. It is a gazetted corridor and Queensland Government support is based on adopting this as the Corridor Alignment.

ARTC InlandRail

BRIEFING PAPER

PROCESS OBJECTIVES:

1. To build an understanding amongst stakeholders and the community of the process to be followed in confirming the Corridor Alignment
2. To seek stakeholder and community input into the process
3. To demonstrate an evidence based approach in confirming the Corridor Alignment
4. To build genuine support for the project and the benefits it will deliver to local communities and industry.
5. To brief Ministers and MPs so they have the information and confidence to support the Programme and the process being undertaken to confirm the Corridor Alignment.
6. To provide the Australian Government with the confirmed Corridor Alignment by December 2016 to allow the next phase of community engagement to proceed and reference design combined with environmental and planning to commence in order to enable the First Train to operate by July 2024

1. BACKGROUND

The Inland Rail Study Area (detailed in the 2015 IRIG Report) was formally endorsed in 2015 by the Inland Rail Implementation Group which included representatives from the Queensland, NSW, Victorian and Australian Governments. The Study Area was the basis to commence more detailed stakeholder and community consultation and to begin certain pre-construction activities.

s.47C(1)

Much of the work to date has focused on undertaking field investigations and engaging with stakeholders and the community to determine the Corridor Alignment.

The purpose of the works and in particular the field investigations is to examine in more detail aspects such as cultural heritage, socio-economic, ecology, geology and flooding.

The purpose of community engagement is to obtain feedback from the community about these issues and others that need to be considered such as potential impacts to landowners, local flooding history, level crossing access and any other feedback based on local conditions that will help confirm the Study Area and Corridor Alignment for environmental and planning approvals.

Together the outcomes of the field investigations and community feedback will provide the basis for the Programme to confirm the Study Area and Corridor Alignment. This is essential prior to reference design, environmental and planning approvals, corridor reservation and land acquisition.

The outcomes also provide the Programme with a good understanding of the issues that need to be addressed as part of the environmental and planning approvals process to minimise risks, delays and community opposition during that phase.

2. APPROACH TO DETERMINING THE CORRIDOR ALIGNMENT

Determining the Corridor Alignment by December 2016 is critical to allow the engineering, and environmental and planning approvals work to commence to enable the first train to run as planned in July 2024.

If during the process to determine the Corridor Alignment a potential Deviation is considered as a possible alternative it will be assessed if there is a clear and compelling case to do so. Government and community confidence in the process for reviewing and responding to proposals for a Deviation is imperative.

In responding to these proposals, the position is:

1. The Programme will consider assessing a Deviation if there is a clear and compelling case to do so, including significant change since the 2010 Study was undertaken.

2. A clear and compelling case is one where the Deviation can demonstrate better outcomes across the following critical factors:

    - Transit time, reliability and operating features of Inland Rail's Service Offering, which has been endorsed by the freight industry
    - Cost and constructability and
    - Social and environmental considerations.

    (These factors have been central to each stage of the development of the Study Area as it stands today.)

Should a Deviation demonstrate better outcomes across those areas, then it will be considered in further detail.

Assessing and resolving proposed deviations is critical to determining the Corridor Alignment by December 2016.

3. CURRENT PROPOSED DEVIATIONS

There are five proposed Deviations put forward as part of community engagement to date:

1. Queensland - Proposals for the route to run close to Warwick. Instead of the 2010 route from Inglewood via Millmerran to Gowrie, the railway would follow the existing Queensland Rail line from Inglewood to Warwick (with a cut-off bypassing that town) thence north (again following the existing line) to Toowoomba or Gowrie. The Queensland Rail lines would require very extensive realignment and upgrading.

2. Queensland - A proposal originating from the Queensland Department of Transport and Main Roads for a route from Inglewood following the existing Queensland Rail line east to Karara, thence a greenfield line north to Gowrie. The Queensland Rail line from Inglewood to Karara is in rugged terrain and would require very extensive realignment and upgrading.

3. Queensland - A proposal for the line to be deviated, in the area south-west of Toowoomba, to serve the new Wellcamp airport.

s.22(1)(a)(ii)

s.22(1)(a)(ii)

RECOMMENDATION

It is recommended that the process set out in Section 2 of this paper for determining whether a Deviation will be considered for further detailed assessment, be adopted.

Melbourne-Brisbane Inland Railway

Inland Rail Steering Committee – DRAFT Summary of Outcomes

Meeting: 9:30am – 12:00pm, Thursday 6 October 2016

Members:
Shane Carmody, Deputy Secretary and Chair, Department of Infrastructure and Regional Development
John Fullerton, Chief Executive Officer and Managing Director, Australian Rail Track Corporation (ARTC)
Mike Mrdak, Secretary, Department of Infrastructure and Regional Development

Participants:
Mark Thomann, Executive Director Infrastructure Investment (via teleconference)
s.22(1)(a)(ii) A/g General Manager, Department of Infrastructure and Regional Development
s.47F(1), Executive General Manager Interstate, ARTC (via teleconference)
s.47F(1), Programme Director, ARTC (via teleconference)
s.47F(1), Executive General Manager, ARTC – Strategy and Corporate Development
s.47F(1), Executive General Manager, ARTC – Corporate Affairs (via teleconference)
s.47F(1), Deputy Secretary, Department of Finance

Observers:
s.47F(1), General Manager, Department of Finance
Secretariat:
s.22(1)(a)(ii), Director, Department of Infrastructure and Regional Development (via teleconference)
s.22(1)(a)(ii), Department of Infrastructure and Regional Development

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
1	s.22(1)(a)(ii)			
2				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
[-]	Stakeholder Engagement	The Chair added a new item to the Agenda for discussion ahead of the other items – stakeholder engagement and the Minister's Toowoomba meeting on 5 October 2016. Mr Fullerton updated the Committee on his meetings in Toowoomba last week (with the Wagners, Pat Weir, and affected MPs) around the process used to determine the alignment. He also met with Tracy Dobie, Mayor of the Southern Downs Regional Council. The meetings, at the time, were deemed positive. Mr Fullerton also updated the Committee on the Minister's meeting with local Federal and State MPs on 5 October 2016, where MPs advised that local communities felt excluded from the Inland Rail process and there was a perception ARTC is not being open. As a result, ARTC will commission an independent review of the Warwick alignment, along with the analysis of the Karara (SMEC) and Wellcamp Airport routes, with a view to give that information to the community and MPs in an easy-to-understand format. This will likely take 8 weeks. However, ARTC will also continue preconstruction works on the existing alignment so as not to delay the project.	ARTC to complete reviews of the Warwick, Karara and Wellcamp Airport alignments.	1 Dec 2016

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
		The Committee noted that, if the analysis of the Karara route does not satisfy stakeholders, ARTC may need to progress design works for both Millmerran and Karara. It was noted that this would also assist with obtaining environmental approvals as it would demonstrate that alternatives were fully considered. The Committee agreed that ARTC and Infrastructure would develop a plan for engaging stakeholders in South East Queensland (SEQ), with the aim to clearly communicate: - The story on why Inland Rail is important – i.e. a national focus and emphasis on the service offering - Timelines - The alignment decision making process - Data behind the alignments proposed and - Value of Inland Rail for Warwick, even if it does not use the Southern Downs Regional Council's proposed alignment Mr Fullerton noted that ARTC had received little public support, particularly from the Queensland Government, even though the Inland Rail Implementation Group report had been signed off by the Queensland Government representative. Mr Fullerton noted that it is likely that ARTC, the Minister's Office and Infrastructure will catch up every week over the coming weeks to talk about upcoming priorities on the stakeholder engagement front. s.47F(1) noted that ARTC will issue a statement	Infrastructure and ARTC to develop SEQ communications plan Infrastructure to work with the Minister's Office to get the letters re the MOU and IGA to States progressed. ARTC to issue statement	By 14 Oct ASAP 7 October 2016

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
		within 24 hours to clarify what was agreed at the 5 October meeting, with a draft to come through today for review by the Minister's Office.		
3	Alignment Issues and SMEC Report	ARTC noted that the alignment paper will need to be revised to include the three south east Queensland alignment reviews. The new paper will be included in the SEQ engagement plan. s.22(1)(a)(ii) noted that any correspondence going to community stakeholders should copy in the local MPs and our Minister so they can be kept updated of progress. ARTC agreed, and noted that they are likely to have fortnightly meetings with Lawrence Springborg (Qld MP) and others to keep them informed of progress.	ARTC to revise alignment paper	7 October 2016
4	s.22(1)(a)(ii)			
5				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
6				
7				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
8				
9				
10				
11				

Document 50

PDR: MC16-005203
Due at MPS:
26 / 10 / 2016

Australian Government
Department of Infrastructure and Regional Development

MINISTERIAL CORRESPONDENCE

Office of the Hon Darren Chester MP

OFFICE ADVICE

TIMEFRAME

- ❑ Standard (10 days)
- ❑ Urgent (5 days)
- ❑ Other:

ACTION

Reply:

- ❑ Minister
- ❑ Chief of Staff
- ❑ Department

Refer:

- ❑ State / territory Minister (Chief of Staff reply):
- ❑ Commonwealth Minister (MPS reply):

Other:

- ❑ Brief
- ❑ Department to determine appropriate action
- ☑ File – for information only
- ❑ Standard words

COMMENTS/INSTRUCTIONS

Show Min corro FYI ✓

RECEIVED
11 OCT 2016

Adviser: MM

Date: 10 / 10 / 2016

❑ Call DLO to discuss

DEPARTMENT ADMINISTRATION

Referred to adviser

BH	(MH)	SC
MD	RC	BS
	BC	

Date referred: 9 / 10 / 2016

DLO: (AT) SP

Referred to division

A&A	LG&T	STP
Corp	OTS	WSU
(I)	P&R	

❑ Please seek input from other division/agency:

Other information

❑ Referred from:

❑ Relates to PDMS item/s:

DAVID LITTLEPROUD MP
FEDERAL MEMBER FOR MARANOA

Mr John Fullerton
Managing Director
Australian Rail Track Corporation
11 Sir Donald Bradman Drive
Keswick Terminal SA 5035

By email: s.47F(1) **@ARTC.com.au**

Dear Mr Fullerton

Re: Outcome of Inland Rail meeting in Warwick, Queensland on 5 October 2016

Thank you to you and your team for attending Warwick, Queensland yesterday and meeting with the Minister for Infrastructure, the Honourable Darren Chester, Federal and State Members of Parliament, the Department of Infrastructure and myself for the purpose of discussing a review of the proposed inland rail track alignment through Inglewood and Millmerran.

As Chair of yesterday's meeting I would like to confirm the Members of Parliament in attendance at the meeting and ensure that the outcome of yesterday's meeting is documented and deemed concluded between all parties in attendance.

Parliamentarians present at yesterday's meeting include:

1. The Minister for Infrastructure, the Honourable Darren Chester;
2. The Federal Member for Groom, Dr John McVeigh;
3. The Honourable State Member for Southern Downs, Lawrence Springborg;
4. The State Member for Toowoomba North, Trevor Watts;
5. The State Member for Condamine, Pat Weir;
6. The State Member for Lockyer, Ian Rickuss; and
7. The State Member for Chatsworth, Steve Minnikin, by telephone.

The outcome reached between the parties and instructions issued by the Minister at yesterday's meeting, included:

1. That deviations from the current proposed alignment will be considered and assessed, specifically:

    a. A route through Warwick;
    b. A route through Karara and Leyburn; and
    c. A route through Charlton (**"route options"**).

PARLIAMENT HOUSE: R1.82, Parliament House, Canberra ACT 2600 P 02 6277 2276
DALBY ELECTORATE OFFICE: PO Box 641, Dalby QLD 4405 P 07 4662 2715
ROMA ELECTORATE OFFICE: PO Box 115, Roma QLD 4455 P 07 4622 7166
WWW.DAVIDLITTLEPROUD.COM.AU

DAVID LITTLEPROUD MP
FEDERAL MEMBER FOR MARANOA

2. That all information associated with the consideration and assessment of each of the route options will be made public.

I have made my position clear in ensuring that the alignment of this vital nation-building key infrastructure project is the most preferred option for as many stakeholders as possible with the least detrimental impact upon prime agricultural land and landholders. I have also made my wishes clear that I will also continue working to ensure the project is fit for purpose and takes into account future export connectivity developments and opportunities.

I am keen to remain involved in the assessment process and request regular fortnightly briefings from ARTC on the progress made in relation to the consideration and review of the route options. I am happy to discuss logistics in relation to facilitating these briefings further with you.

Should you require any further information from my office, please do not hesitate to contact me on 07 4662 2715.

Thank you for your assistance in this matter.

Yours sincerely,

DAVID LITTLEPROUD MP
6 October 2016

Cc:

1. The Minister for Infrastructure, the Honourable Darren Chester;
2. The Federal Member for Groom, Dr John McVeigh;
3. The Honourable State Member for Southern Downs, Lawrence Springborg;
4. The State Member for Toowoomba North, Trevor Watts;
5. The State Member for Condamine, Pat Weir;
6. The State Member for Lockyer, Ian Rickuss; and
7. The State Member for Chatsworth, Steve Minnikin.

LANGE Jacqueline

From: s.47F(1) (D. Chester, MP) <s.47F(1) @aph.gov.au> on behalf of Chester, Darren (MP) <Darren.Chester.MP@aph.gov.au>
Sent: Thursday, 6 October 2016 2:29 PM
To: Minister Chester
Subject: FW: Correspondence from Mr David Littleproud MP
Attachments: Ltr to John Fullerton of ARTC. 06.10.2016.pdf

Importance: High

s.47F(1)
Diary Manager/Electorate Officer
Office of Darren Chester MP
Federal Member for Gippsland
Minister for Infrastructure and Transport
ph s.47F(1)
www.darrenchester.com
Canberra: s.47F(1)
#lovegippsland

From: s.47F(1) (D. Littleproud, MP)
Sent: Thursday, 6 October 2016 2:28 PM
To: s.47F(1) @artc.com.au'
Cc: Littleproud, David (MP); 'Southern Downs Electorate Office'; 'Condamine Electorate Office'; Chester, Darren (MP); s.47F(1) @infrastructure.gov.au'; McVeigh, John (MP); 'toowoomba.north@parliament.qld.gov.au'; 'lockyer@parliament.qld.gov.au'; 'chatsworth@parliament.qld.gov.au'
Subject: Correspondence from Mr David Littleproud MP
Importance: High

Dear Mr Fullerton

Please find **attached** correspondence from Mr David Littleproud, dated 6 October 2016.

If you require any further information, please do not hesitate to contact me.

Kind regards
s.47F(1)

s.47F(1)
OFFICE MANAGER
OFFICE OF DAVID LITTLEPROUD, FEDERAL MEMBER FOR MARANOA
DALBY ELECTORATE OFFICE: PO Box 641, Dalby QLD 4405

Focused On Maranoa's Future

M: s.47F(1) | E: s.47F(1) @aph.gov.au | W: www.davidlittleproud.com.au

ARTC InlandRail

BRIEFING PAPER

INLAND RAIL'S ROUTE FROM INGLEWOOD TO GOWRIE

DRAFT 6 OCTOBER 2016

SUMMARY

This paper describes how Inland Rail's route from Inglewood to Gowrie was selected, from analysis of a range of options between the NSW/Queensland border and Brisbane.

This work was undertaken as part of the Inland Rail Alignment Study, now referred to as the 2010 Study. That followed the 2006 North-South Rail Corridor Study which had defined a preferred corridor for the Melbourne-Brisbane inland railway via Parkes and Moree.

The paper also outlines route alternatives currently being examined on this section of Inland Rail.

The route from Inglewood to Gowrie

The preferred route identified for Inland Rail from Inglewood to Gowrie involves a mixture of greenfield construction and the use of existing Queensland Railways alignments, most of them currently disused.

The route involves:

- A greenfield section from near Inglewood, on the existing Dirranbandi line, to Millmerran
- Upgrading the existing Millmerran line from narrow gauge to dual gauge between Millmerran and Brookstead
- A greenfield section between Brookstead and the Cecil Plains line near Mount Tyson
- Upgrading the Cecil Plains line to dual gauge from Mount Tyson to Yargullen
- A greenfield section from Yargullen to join the QR western line near Kingsthorpe, west of Gowrie
- Upgrading the railway from narrow gauge to dual gauge between Kingsthorpe and Gowrie

The sequence of route and alignment development was as follows:

- Analysis of the route – the route was analysed in terms of capital cost, environmental impacts and journey time as well as its preliminary economic and financial viability. Options with potential negative environmental impacts and land use constraints were excluded.
- Development of the alignment – the alignment was then developed considering environmental and engineering factors

The work described in this paper is part of progressive development of Inland Rail's route, which is continuing though concept assessment and will progress, with field studies, to reference design and environmental impact assessment.

ARTC InlandRail

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INTRODUCTION

The objective of this paper is to document the analysis of Inland Rail's route options between Inglewood and Gowrie, drawing on the broader examination of options from the NSW/Queensland border to Brisbane.

In 2006 the North-South Rail Corridor Study defined a preferred, broadly defined, corridor for Inland Rail via Parkes and Moree. The findings of the study are at http://investment.infrastructure.gov.au/publications/reports/north_south_corridor.aspx

Field Code Changed

This was followed by the Inland Rail Alignment Study, whose task was to develop an optimum alignment derived from the preferred corridor. This study was undertaken in three stages between 2008 and 2010, at a cost of $12 million; a series of working papers was published, with comment sought, at the end of the first two stages. The report of the Inland Rail Alignment Study, now referred to as the 2010 Study, is at http://www.artc.com.au/library/IRAS_Final%20Report.pdf.

Field Code Changed

The report is in effect a summary, with detail provided in 15 appendices. Of these, two key reference documents are Appendix D, Identification of Route Options; and Appendix E, Route Development. Much of the information which follows has been drawn from those documents. They can be found at http://www.artc.com.au/library/IRAS_Appendix_D.pdf and http://www.artc.com.au/library/IRAS_Appendix_E.pdf respectively.

Field Code Changed

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The route from Inglewood to Gowrie, determined by the 2010 Study is a combination of sections of existing Queensland Rail routes and sections of new 'greenfield' track.

Having crossed the NSW/Queensland border, Inland Rail will reach the existing Queensland Rail line at Yelarbon, and will follow that line east to Inglewood. At the other end of the route section discussed in this paper, Inland Rail will reach the existing Queensland Rail western line between Oakey and Gowrie. It will follow that line east, past Gowrie before turning onto a new route leading into a new tunnel to descend the Toowoomba Range.

DEVELOPMENT OF INLAND RAIL'S ROUTE AND ALIGNMENT

Development of the alignment along the whole of Inland Rail's route involved an assessment of a range of factors, many of them inter-related. In assessing alternative alignments, the 2010 Study included consideration of the following:

- Route distance and transit time, recognising that the objective of Inland Rail is to provide a competitive alternative to road transport. The service offering requires a Melbourne to Brisbane schedule of no more than 24 hours;
- Construction cost
- Terrain – a railway through rugged terrain will have grades and curves which reduce trains speeds, increasing transit time as well as adding to construction cost
- Environmental constraints, including protected or listed areas, flora and fauna, indigenous and non-indigenous heritage, impact on water catchments, noise and vibration, soils and contamination, and social issues
- Geology
- Hydrology/susceptibility to flooding
- Land use and tenure; zoning; property impacts; and infrastructure including utilities
- Impact on demand – would a particular route attract more regional freight to the railway

From a land use and property perspective, the alignments were developed to take advantage of some existing features and minimise impacts on others. The order of preference was:

1. To use 'paper roads' (i.e. corridors designated as roads, but not used)
2. To provide clearance to residences
3. To run parallel to existing roads where there is minimal impact on property access, recognising that this approach may need modification in particular circumstances
4. To run alongside or parallel to a cadastral boundary (to minimise severance) rather than through the middle of a property
5. To run across larger (by land area) properties rather than smaller properties (cost of acquisition is generally lower).

In assessing these factors, an important consideration was the extent to which existing sections of railway could be incorporated into the route, as opposed to the building of new or 'greenfield' sections of line. This was found to be the case for large sections of Inland Rail: of the 1700km distance from Melbourne to Brisbane, 1200km – more than two thirds – makes use of existing lines, upgraded where necessary to main line standards with clearances for double stacking of containers.

ROUTE OPTIONS BETWEEN MOREE AND BRISBANE

Between Moree and Brisbane a large number of route options were analysed in detail. They are shown on Figure 1. Options to the south-west of Toowoomba are shown on Figure 2.

Figure 1 Inland Rail route options, Moree to Brisbane

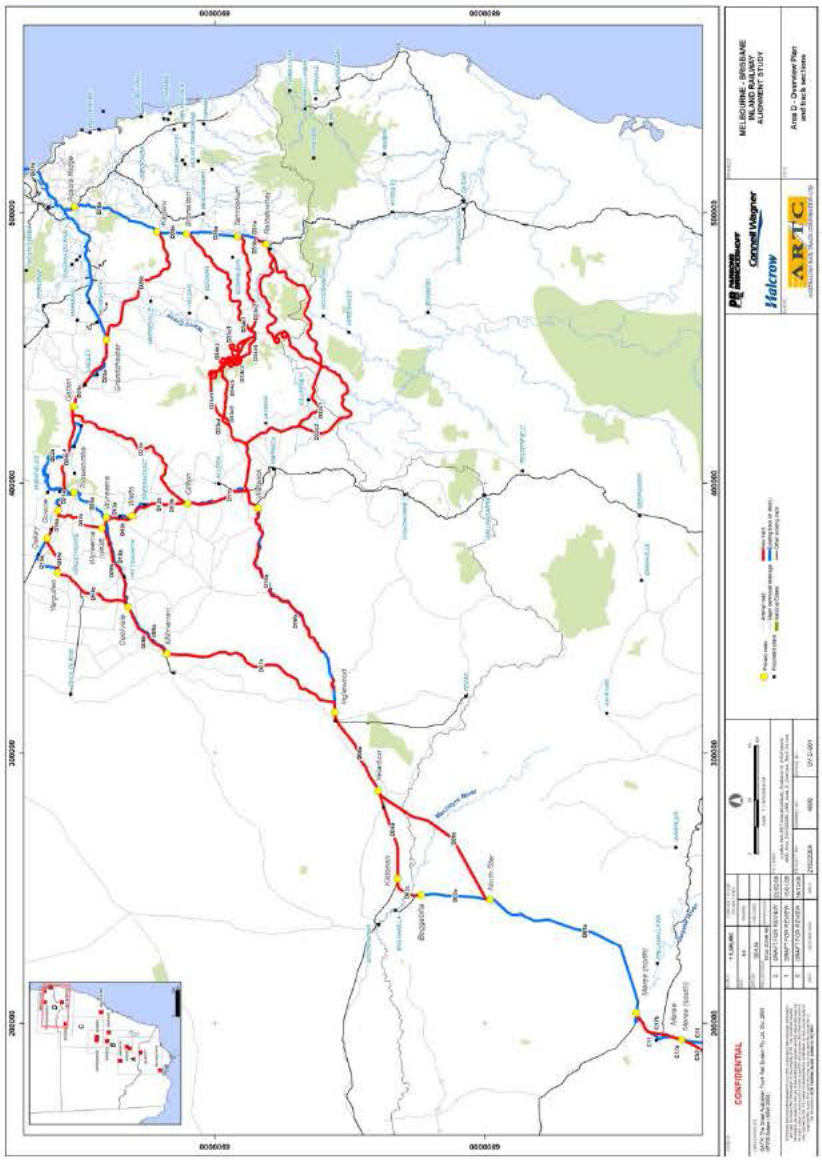
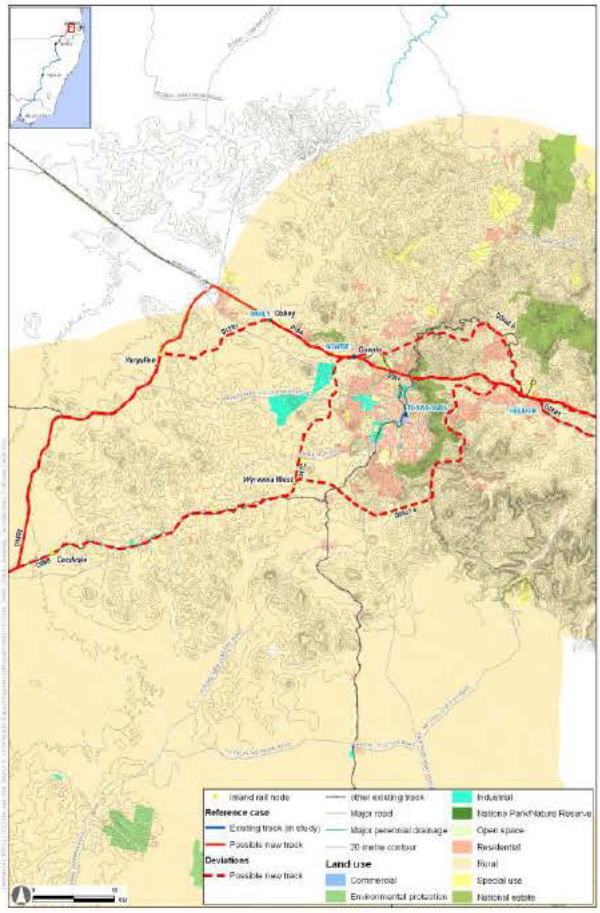


Figure 2 – Toowoomba area



The sequence of route and alignment development was as follows:

- Analysis of the route – the route was analysed in terms of capital cost, environmental impacts and journey time as well as its preliminary economic and financial viability. Options with potential negative environmental impacts and land use constraints were excluded.
- Development of the alignment – the alignment was then developed considering environmental and engineering factors

The approach to refining the alignment is described in Appendix A.

Major route alternatives – via Toowoomba or via Gowrie

In an early stage of route analysis, an examination was made of two high level alternatives:

1. A route via Toowoomba, descending the range from that point to Helidon, thence generally following the existing railway to Calvert, near Rosewood, from which point a new line would be built in a south-easterly direction to join the existing interstate railway at Kagaru;
2. A route via Warwick, continuing to the east and descending the range to reach the existing interstate line. Intensive technical investigations identified 12 routes, to either Bromelton, Rathdowney or Tamrookum. all of which would have involved very heavy engineering works including long tunnels and viaducts, and in some cases spirals. Of these the best route was one which reached the interstate line at Tamrookum.

It was found that a route via Warwick, and descending the range from that point, would add some 25% to the capital cost for the Moree to Brisbane section of Inland Rail; and it would have had lower revenue than the Toowoomba route since it would not capture West Moreton coal traffic, a significant component of Inland Rail's business.

Other alternatives

Another alternative to a route via Toowoomba was a route from Cecil Vale following an existing Queensland Rail line to Wyreema West, thence a descent of the range to reach the existing line near Helidon. This route is shown on Figure 2. By passing to the south of Toowoomba, this alignment would cross the range at a location different from the existing alignment (and ultimately the planned Inland Rail alignment) and would therefore not be able to capture western line traffic. Crossing the range to the south of Toowoomba is also a higher location to cross than the existing alignment location to the north of Toowoomba.

A further alternative was a descent of the range from Clifton to Gatton. This route would have 12km of tunnels and 11.5km of viaducts, and again would not carry western line coal traffic.

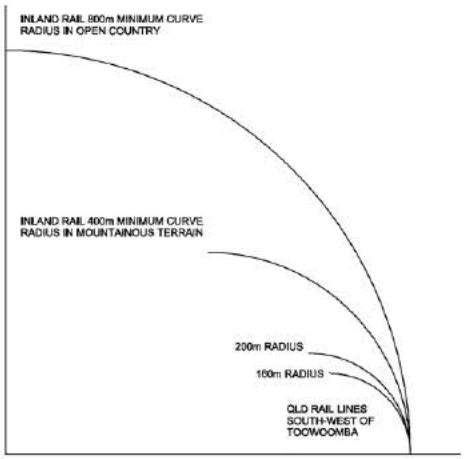
Another route option was to follow the existing QR line from Inglewood to Warwick (with a bypass of that town), thence north to Gowrie, passing to the west of Toowoomba. Greenfield construction would be required from Wyreema west to Gowrie. ~~These ex st ng~~Existing Queensland Rail lines on this route have grades as steep as 1:50, and curves of 160 metres or 200 metres radius. This option was discarded at an early stage of the analysis, being identified as the longest and most indirect way to traverse this section of Inland Rail's route. Use of the existing Queensland rail alignment (where available) from Inglewood via Warwick to Gowrie, would result in a transit time almost three hours longer than the Inland Rail route via Millmerran. Even with substantial deviations to achieve Inland Rail's alignment standards, the Warwick route would be 26km longer, would add 46 minutes to transit time and would cost approximately $450 million more than the route via Millmerran. (All these alternatives include a bypass of Warwick.) It has been decided to re-examine this route in comparison with the 2010 route and alternatives – see the section headed Recent Route Development Work and Next Steps.

Closer to Toowoomba, poor terrain and environmental constraints characterised the existing line from Cecil Vale to Wyreema, from which point a new greenfield link would need to be provided to the vicinity of Gowrie. The line from Cecil Vale to Wyreema has 1:50 grades and 160 metre radius curves.

In 2015 the Queensland Department of Main Roads and Transport received a report on route options between Toowoomba and the Queensland/NSW border. It identified an alternative route from Karara, between Inglewood and Warwick on the existing Queensland Rail line, north to the vicinity of Gowrie. This work was later than the 2010 Study and thus this route does not appear on Figure 1. This route, and the further examination of it now being undertaken, is discussed below in the section headed Recent Route Development Work and Next Steps.

Inland Rail's alignment standards are for a minimum curve radius in mountainous territory of 400 metres (800 metres in open country). These standards are shown in comparison with the curves on these existing QR lines in Figure 3. These lines would require major and expensive realignment to meet Inland Rail requirements.

Figure 3: curve comparison – Inland Rail and existing



Inland Rail's route from Inglewood to Gowrie

As a result of analysis of the options described and shown on Figure 1, the route from Inglewood via Millmerran to Gowrie met Inland Rail's requirements – including transit time, cost, terrain, environmental constraints and land use – better than any alternative. The preferred route involves a mixture of greenfield construction and the use of existing Queensland Railways alignments, most of them currently disused.

The route involves:

- A greenfield section from near Inglewood, on the existing Dirranbandi line, to Millmerran
- Upgrading the existing Millmerran line from narrow gauge to dual gauge between Millmerran and Brookstead
- A greenfield section between Brookstead and the Cecil Plains line near Mount Tyson
- Upgrading the Cecil Plains line to dual gauge from Mount Tyson to Yargullen
- A greenfield section from Yargullen to join the QR western line near Kingsthorpe, west of Gowrie
- Upgrading the railway from narrow gauge to dual gauge between Kingsthorpe and Gowrie

It may be noted that the sections of Queensland Railways alignments included in these routes have easier grades and curves – closer to Inland Rail's standards – than the sections discussed earlier with grades of 1:50 or 1:60 and curves of 160/200 metres radius.

Details of the route and alignment from Inglewood to Gowrie are as follows.

INGLEWOOD TO GOWRIE

The information following is drawn from the 2010 Study. Note that parts of the route have been revised since the 2010 Study, as described below in the section headed Recent Route Development Work and Next Steps.

The Inland Railway alignment leaves the existing QR Dirranbandi line at Inglewood and passes north-east to Millmerran, joining the alignment of the Millmerran branch line to the east of the town.

The route crosses gently undulating terrain, although some rolling hills are present mid-way along the route to the east of the Millmerran-Inglewood road.

The planned alignment for the railway follows the Millmerran-Inglewood road. Between Inglewood and the area of State Forest at the southern end, the alignment passes adjacent to an existing road about one to three kilometres to the east of Canning Creek. The alignment was favoured over an alignment between the Millmerran-Inglewood road and Canning Creek which has restricted space and environmental impacts over significant lengths. The selected local option creates a better fit to property boundaries, is further from the creek and has less of an effect on travelling stock routes.

The alignment crosses Canning Creek and follows the Millmerran-Inglewood road for about 40 km; passing through State Forest and near areas underlain by mining resources and other areas subjected to mining leases (Mineral Development Licence). The proposed alignment passes through an area of mining resources, this being the shortest alignment and one that is located at the side of a major road. As such, the alignment would have less impact on property owners. These benefits were considered sufficiently significant when compared with alternative alignments that avoided the mining resources.

The inland railway proposal would avoid the existing open cut mine in the northern part of this section. It passes to the west of the open cut where there is a better fit to property boundaries, avoids local Regional Ecosystem areas, and is located closer to the road (which makes the route more accessible for construction).

Overall, the proposed alignment has the following benefits:

- There is ready access for construction from the Millmerran-Inglewood road
- Severance of properties would be low
- There are no endangered ecosystems except in State Forest
- Vegetation impacts on sections along existing roads would be minimal and considered less than those for the other options
- There would be less land clearing of sections of Regional Ecosystems which could result in segregation of vegetation corridors
- Property acquisition would be minimal.

Millmerran to Brookstead upgrade

From Millmerran, the inland railway follows the existing narrow gauge QR track to Brookstead. The track would be upgraded to dual gauge and the track structure would be replaced.

Brookstead to Yargullen

To the west of Brookstead, the proposed track moves away from the existing railway and crosses country to join the Cecil Plains line which was placed out of service in 1994.

An alignment passing across the flat land to the north of Brookstead, along the western edge of the hills and along the Cecil Plains line was selected for further refinement. The alignment passes to the west of Irongate Conservation Park, and was refined to generally follow an existing road whilst minimising impacts on houses and dams.

A moratorium exists because of vegetation on the central part of the alignment and the railway would pass to the west of the affected area.

The planned alignment has the following benefits:

- It would require minimal vegetation clearing, with no clearing of mapped Regional Ecosystems or Essential Habitats being required
- It provides a direct route in the low lying, southern part of the section
- It would require only limited earthworks (cut and fill); this would reduce scarring of the landscape and minimise loss of visual amenity
- It is adjacent to a main road in the north and uses property boundaries, thereby reducing impacts to properties and vegetation
- It would minimise impacts on residential and built up areas with impacts being confined to rural properties.

Cecil Plains line upgrade (south of Yargullen)

The inland railway joins the Cecil Plains line to the west of Mount Tyson.

The Cecil Plains line passes through the south-eastern edge of the Mount Tyson settlement. Some curves of the existing alignment would be improved between Mount Tyson and Yargullen.

Yargullen to Kingsthorpe

At Yargullen, the alignment leaves the disused Cecil Plains line and crosses countryside to the south of Oakey before joining the western line west of Kingsthorpe.

An alignment was chosen that avoided the environmental constraints and also minimised earthworks and land use impacts. It follows existing roads and property boundaries so that land and environmental issues are minimised.

The proposed alignment has the following advantages:

- It avoids endangered Regional Ecoysystems and Essential Habitat areas and minimises clearing of vegetation
- It minimises earthworks (cut and fill), thereby reducing scarring of the landscape and loss of visual amenity
- It generally follows property boundaries and roads thereby reducing impacts to properties (noise and access)
- It avoids most houses in the area.

Kingsthorpe to Gowrie upgrade

An upgrade from narrow gauge to dual gauge track along the existing alignment is the most economical solution. A minor improvement of the alignment on a curve to the east of Kingsthorpe is planned.

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RECENT ROUTE DEVELOPMENT WORK, AND NEXT STEPS

The main work described in this paper, of identifying the 2010 alignment, is part of progressive development of Inland Rail's route. With the Australian Government's announcement late in 2013 of its intention to progress Inland Rail, ARTC was tasked with developing a ten-year delivery programme based on the 2010 alignment.

Much of the work to date by the Inland Rail team has focused on undertaking field investigations and engaging with stakeholders and the community.

The purpose of the works and in particular the field investigations is to examine in more detail aspects such as cultural heritage, socio-economic, ecology, geology and flooding.

Community engagement is being undertaken to obtain feedback about these issues and others that need to be considered such as potential impacts on landowners, local flooding history, level crossing access and any other feedback based on local conditions that will help confirm the study area and corridor alignment for environmental and planning approvals. This is essential prior to reference design, corridor reservation and land acquisition.

Work completed to date in the Concept Assessment stage includes the analysis of existing information, identification of potential constraints, technical assessment including Multi-Criteria Analysis covering any sub options to the preferred alignment and preparation of an alignment development and assessment report.

This work reflected the outcome of the field studies and initial community consultation and identified two recommended changes to the 2010 alignment. Firstly the alignment between Yelarbon and Inglewood would be altered so as to bypass Inglewood to the north and then re-join the 2010 alignment between Inglewood and Millmerran. Secondly there would be an adjustment between Yargullen and Oakey to further follow the existing rail corridor before rejoining the 2010 alignment to the west of Oakey.

Discussion then occurred around this developed concept with relevant stakeholders and feedback is now being addressed in further work to address issues raised.

In addition to the work being currently undertaken on the 2010 alignment, ~~two~~ three sections of alternative routes are being examined, as set out below. Examination of these alternatives is being undertaken concurrently.

An alternative route from Karara to Gowrie

In 2015 the Queensland Department of Main Roads and Transport (DTMR) commissioned a report which identified an alternative route from Karara, between Inglewood and Warwick on the existing Queensland Rail line, north through Leyburn, passing close to Wellcamp Airport and then to the vicinity of Gowrie using predominantly the same alignment as the Toowoomba to Karara Road. The report of this work was provided to ARTC, which engaged technical advisors to analyse it in detail. In particular the ARTC work took into account elevations along the proposed route, which had not been considered in the preliminary study undertaken for DTMR. Examination of the route in three dimensions was necessary for analysing the relationship between the railway and surrounding terrain, including consideration of civil works, gradients and structures such as bridges and viaducts.

The conclusion of the more detailed analysis was that the Inglewood/Karara/Gowrie route did not have any distinguishing features or significant drivers that presented a compelling reason to adopt it compared with the ARTC option. The analysis identified the Karara route to Gowrie would have a longer section run time than the 2010 route via Millmerran due to the vertical alignment of the route. Among other factors, the existing Queensland Rail line from Inglewood to Karara has curves of 200 metres radius. The analysis contemplated substantial and expensive realignment to flatten and straighten the railway to meet the Inland Rail standards, for a mountainous section of railway. This resulted in an alignment with steeper grades and sharper curves than the route via Millmerran.

~~I ece t t es te est th s oute has bee ge e ated th ough publ c ty g ve to the DTMR epo t~~Recently a~~.~~ A decision has been made to compare the DTMR route with the 2010 alignment, adjusted as described above, in greater detail. ~~Th s work has recently commenced.~~

A diversion via Wellcamp airport

A proposal has recently been made that Inland Rail should pass close to Wellcamp airport, a facility not built or planned at the time of the 2010 Study. ARTC is examining options for ~~th s~~ a possible deviation of the 2010 route, probably diverting eastwards from a point in the vicinity of Mount Tyson~~route~~. ~~Th s work s be ng undertaken co cu e tly w th the co pa at ve a alys s of the alte at ve oute f o Ka a a to Gow e.~~

A route passing close to Warwick

A decision has been made to re-examine a route option following the existing QR line from Inglewood to Warwick (with a bypass of that town) thence north to Gowrie passing to the west of Toowoomba. This option would follow the existing corridor (except for the bypass of Warwick, and greenfield construction from Wyreema West to Gowrie) but would involve substantial upgrading to achieve Inland Rail's alignment standards.

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Appendix A - Approach to refining the alignment

Edited extract from Appendix E Route Development, report of the Inland Rail Alignment Study (2010 study)

General approach

Noting that more than two thirds of the inland railway is along existing railway corridors, the refinement of the alignment concentrated mainly on the greenfield sections.

In developing the alignment, the aim was to achieve a railway which would cater for required traffic travelling at 115 km/h, over the shortest alignment, at the least capital cost and with an acceptable environmental outcome. Where significant constraints exist, an alignment was selected which balanced these aspirations.

Broad alignment options were discussed at a series of workshops. The workshops were attended by the project team which comprised the engineering, environmental, construction and cost consultants. A broad option was selected and further developed to mitigate local constraints. In deciding on the proposed alignment, qualitative or quantitative assessments were made, based on railway operations, engineering, environmental, land and capital cost issues. The connections of the greenfield sections to existing railway corridors were also considered during the process.

In some locations, such as the crossing of the Toowoomba Range, constraints and issues were potentially critical to the project outcome and more detailed investigations were made than for the less constrained areas.

Development and evaluation of options

Broad options considered for greenfield alignments

For each greenfield section, the study team reviewed aerial photography, the project GIS database and other available desk-top information and considered the major constraints within the study area. Broad options, fitting the natural terrain and avoiding the most significant constraints were developed.

The broad alignment options were assessed at a high level based on capital cost, journey time, environmental and land issues. Initially, major cost drivers such as topography, geotechnical and flooding characteristics, alignment length and land-use were considered. Options having significantly higher capital costs than other options or critical environmental characteristics were not considered further. Where the choice between options was unclear, preliminary alignments were drawn and assessed in more detail. A multi-criteria evaluation matrix was used when the choice between options could not be decided by one or two evaluation criteria.

Workshops

A series of workshops was undertaken covering the following constraints:

- Alignment design
- Engineering
- Environment and land use
- Operational
- Construction
- Costing.

The inland railway route was divided into sections and each section was considered in detail as the design progressed. The approach was generally to:

- Identify and discuss broad options for a section and identify areas where further investigation is required
- Prepare constraints maps and analyse the broad options
- Select a preferred broad option;
- Identify outline alignment drawings to be prepared
- Consider potential impacts to identified environmental and land use constraints and opportunities to avoid these where possible
- Consider the likely engineering solutions and cost of the local options
- Agree refinements of the alignment.

Following the review of the alignment for each route section, the alignment designers and environmental team members collaborated to further develop the alignments to ensure that environmental and land use constraints were avoided as much as possible.

Once the horizontal design of the alignments was finalised, the preferred alignment for each route section was made available for preliminary environmental assessment. The preliminary environmental assessment of the preferred alignment was documented in Appendix H to the report of the Inland Rail Alignment Study.

Environmental and land use assessment methodology

During the alignment development stage, greenfield alignments were reviewed for environmental and land use constraints in order to minimise impacts on constraints as much as practical. The key activities that were undertaken included:

- Preparation of environmental constraint maps using the study GIS
- Alignment workshops to review constraints along each route section
- Iterative development / refinement of alignments.

The environmental issues and key constraints that were generally considered during the alignment development phase of the study are listed in Table 1.

Table 1 Environmental and land use issues and constraints

Issue	Key constraints considered
Protection areas	World Heritage Areas, Ramsar wetlands National parks, nature reserves, conservation areas
Flora and fauna	Vegetation communities (regional ecosystem, endangered ecological communities Threatened species Habitat areas connectivity fragmentation etc
Heritage	Commonwealth heritage and Register of the National Estate Historic heritage (state heritage, local heritage, railway heritage)
Water	Waterways Flood-prone land
Noise	Noise disturbance
Land-use / tenure	Non-rural (residential, townships, industrial) Conservation / recreation areas, community / public facilities Agriculture (irrigation, cultivation, grazing, hobby farms)
Zoning	Residential / townships Environmental protection
Property impacts	Property access (internal and external) Severance
Infrastructure	Roads and other rail Utilities (water/gas pipelines, transmission lines)

From a land use and property perspective, the alignments were developed to take advantage of some existing features and minimise impacts on others. The order of preference was:

1. To use 'paper roads' (i.e. corridors designated as roads, but not used)
2. To provide clearance to residences
3. To run parallel to existing roads where there is minimal impact on property access
4. To run alongside or parallel to a property boundary (to minimise severance) rather than through the middle of a property
5. To run across larger (by land area) properties rather than smaller properties (cost of acquisition is generally lower).

Due to the environmental analysis undertaken earlier in the study alignments generally minimise impacts on environmentally sensitive areas such as State Forest, National Parks, areas of significant vegetation and conservation areas.

Constraint mapping

Constraint maps were generated from the study GIS, displaying the indicative route section alignment as well as environmental and land use information (as listed in the table above), infrastructure (e.g. roads, rail), topography and drainage. The data layers were laid over detailed aerial photography to show further information such as vegetated areas and condition, rural homesteads and agricultural land use (e.g. grazing or cultivation).

Large scale constraint maps were printed out for each greenfield route section, and these were used in the alignment workshops.

Local options considered

After selection of a preferred broad option, the alignment was developed further. The alignment was tailored to the natural terrain, topographic features and environmental constraints. An environmental constraints map was produced to assist the process and ground level data was purchased.

In areas containing significant constraints, such as major existing infrastructure or natural features, local options were considered. Initially a high level assessment was made. Where the choice between options was unclear, preliminary alignments were drawn and assessed in more detail.

Output alignments and engineering solutions

Where it would be relatively inexpensive, large radii curves and flat grades have been adopted to reduce long-term maintenance costs and establish a basis for faster train running times in the future. On sections of track that could be described as 'fast inland alignment', the limits enable a maximum speed of 115 km/h for superfreighter traffic. Where a constraint leads to lower speeds, such as in mountainous terrain, sections of alignments have been optimised for speeds less than 115 km/h.

To allow drainage, a minimum grade through cuttings of 1 in 200 and a minimum grade through tunnels of 1 in 333 was adopted.

The vertical alignment has been developed to allow reuse of earthworks fill, gained from cuttings, in embankment sections. An assumed 10% of excavation is likely to be unusable for fill and would be disposed of. The alignment design has been developed to allow reuse of fill within 5 km of the cutting location where possible, but otherwise up to 20 km away. Balancing of cut and fill becomes more critical in environmentally sensitive areas where there is less opportunity for finding nearby sources of fill or areas for disposal. In areas identified as flood zones, embankments are provided. Alignment selection has attempted to allow the fill to be obtained from nearby cuts.

In parallel with the refinement of the alignment, a range of engineering solutions in the form of typical cross-sections were developed. The typical sections were allocated along the various alignments and provided input to the capital costs estimates.

Australian Government
Department of Infrastructure and Regional Development

FOR: The Hon Darren Chester MP cc: Senator the Hon Fiona Nash Mr Mike Mrdak, Secretary Ms Judith Zielke, Deputy Secretary, Ms Pip Spence, A/g Deputy Secretary Mr Mark Thomann, Executive Director	PDR ID: MS16-001261	For Decision by: 19 October 2016 Reason: Following on from the meeting in Warwick on 5 October

SUBJECT: Inland Rail - Proposed alignment via Warwick

Recommendation: That you:

(a) **Note** that Australian Rail Track Corporation (ARTC) is commissioning further studies on the three south east Queensland alignment options (Wellcamp Airport, Karara and Warwick).

(b) **Sign** the letter to Southern Downs Regional Council responding to their request to divert the Inland Rail alignment via Warwick **Attachment A**.

Key Issues:

1. On 12 August 2016, the Mayor of Southern Downs Regional Council, Ms Tracy Dobie, wrote to you requesting your support for an alignment of Inland Rail from Inglewood to Toowoomba via Warwick **Attachment B**.
2. Southern Downs Regional Council have expressed its views that the alignment proposed by ARTC via Millmerran and based on the 2010 Inland Rail Alignment Study has high cost and impacts on prime agricultural land. The Council also considered that ARTC has not adequately considered the alignment via Warwick nor the Southern Downs' contribution to the Australian economy.
3. This brief provides a draft response to Mayor Dobie **Attachment A** and provides background information on the alignment.
4. Further community engagement on the route has been occurring in the past two weeks, given the importance of having community support for the Inland Rail project and to ensure all relevant considerations are being taken into account.
5. However, we also consider it is important to lock down the route as soon as possible to enable reference design to proceed and give certainty to the public and businesses in the region. Separate briefing will be provided on the process to confirm the alignment.

Cleared by: Richard Wood Date: 10 October 2016 Phone: s.22(1)(a)(ii) / s.22(1)(a)(ii) Branch: Inland Rail Division: Infrastructure Investment	(a) Noted/Please Discuss (b) Signed/Not Signed DARREN CHESTER 17 / 10 / 16

Minister's Comments/Supplementary Tasking:

Inland Rail options proposed and investigated

6. The ARTC has previously considered an alternative Inland Rail alignment via Warwick as part of the 2010 Alignment Study. The proposal put forward by Southern Downs Regional Council, referred to as the 'Southern Connector', is similar to the option considered and ruled out in the alignment study. However, the Council's proposal uses the existing Queensland Rail track alignment rather than the construction of a new track on an improved alignment. This alignment would pass near the town of Warwick and serve the Wellcamp Airport and the proposed InterLinkSQ intermodal facility.

7. A map of these routes are presented in **Attachment C** with Option 1 reflecting the current proposed Inland Rail alignment, Option 2 illustrating the Warwick alignment previously investigated and Option 3 illustrating the proposal presented by Southern Downs Regional Council.

Assessment of Warwick Alignment

8. The Warwick route previously investigated was considered to have substantial shortcomings, including that it adds to the overall distance, increases travel time and has steeper alignment and tight track curves compared to the preferred alignment adding to increased fuel and operating costs.

9. The Southern Connector route, proposed by the Council, utilises the existing rail track but it does not meet the Inland Rail service offering for speed, grade or axle loads and would add three hours to transit time. If left as is, using this route would significantly impact the economic case for Inland Rail by reducing its interstate competitiveness with road.

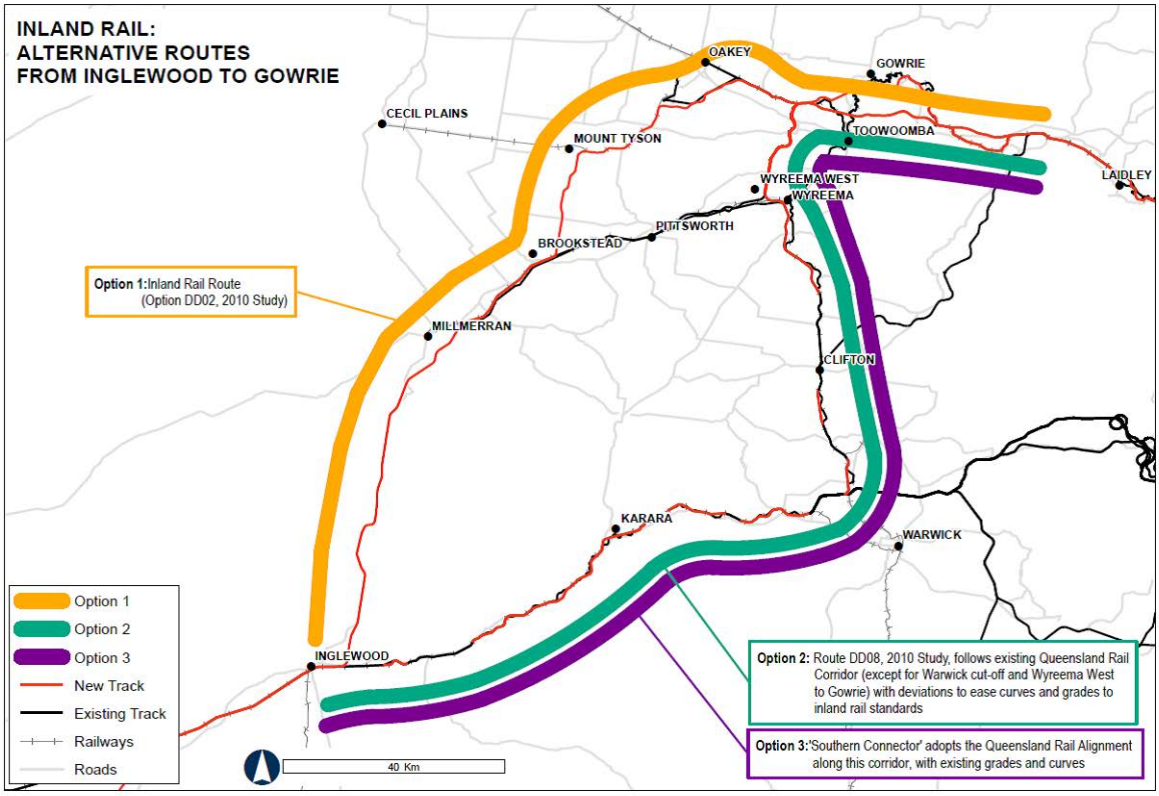
10. There would, therefore, need to be new track constructed in many areas along this route to strengthen the track and ease grading. ARTC has advised that this could be in the order of an additional $450 million while still adding 45 minutes to the transit time, thereby increasing the risk of Inland Rail not meeting the overall service specifications of a transit time less than 24 hours between Melbourne and Brisbane. On this basis, this alignment was ruled out as part of the options analysis.

11. Following your meeting with local Federal and State MPs in Warwick on 5 October 2016, ARTC has undertaken to commission an independent review of the Warwick alignment with clear involvement of a locally based community reference group. The aim is to release the results to the community in an accessible and easy-to-understand format before the end of the year.

Attachments:

Attachment A – Minister's letter to Southern Downs Regional Council
Attachment B – Original Correspondence from Southern Downs Regional Council
Attachment C – Map of Inland Rail routes via Warwick

Map of Inland Rail routes via Warwick



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s.22(1)(a)(ii)

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Sent: Monday, 17 October 2016 10:57 AM
To: WOOD Richard
Cc: s.22(1)(a)(ii) ; s.47F(1) ; s.47F(1) ; s.47F(1)
Subject: Yelarbon to Gowrie options assessment
Attachments: Y2G Corridor Options Assessment 161013 V5.pdf

Hi Richard,
As mentioned to s.22(1)(a)(ii) in the Coordination Hookup today, we now have formal proposal from Aecom to undertake the Y2G options assessment for the three options (Karara, Wellcamp, Warwick) vs the Base Case alignment.
The quotation amounts to s.47G(1) . This incorporates and supersedes the previous Wellcamp studies.
We are working on a formal variation to get to you ASAP.
Regards

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Document 55

Engineering and Environmental Services Phase 1 - Concept

Variation to Scope – Corridor Options Assessment

Revision 1 – 13-Oct-2016
Prepared for – ARTC – ABN: 75 081 455 754

Engineering and Environmental Services Phase 1 - Concept

Variation to Scope – Corridor Options Assessment

Client: ARTC

ABN: 75 081 455 754

Prepared by

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Aurecon

13-Oct-2016

Job No.: 60492124

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

Quality Information

Document Engineering and Environmental Services Phase 1 - Concept

Ref 60492124

Date 13-Oct-2016

Prepared by s.47F(1)

Reviewed by s.47F(1)

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
1	11-Oct-2016	For Proposal	s.47F(1) Technical Director	

Table of Contents

1.0 Background

Base Case

The Concept Design has been developed around the 2010 Base Case alignment which was the basis of the Business Case developed in 2015. These two initial investigations focused on desktop investigations and design development. Following these initial studies, it was subsequently decided to further inform the design through field investigations and stakeholder consultation in an attempt to confirm or refine the desktop work.

Status: This work has been completed.

Continuity Works

Stakeholder and community consultation that followed the initial concept refinement in this later study stage has indicated a desire for the study corridor to have less impact upon farming land. To this end a Continuity Works phase was entered into where additional alternative sub-alignments to the Base Case alignment have been investigated.

Status: This work is currently in progress through an approved variation with ARTC.

Charlton - Wellcamp Options

An external driver that has not been driven by land and farming impacts has been the consideration of modifying the northern section of the alignment above Brookstead such that it passes in close proximity to Charlton - Wellcamp Airport before re-joining the Base Case alignment near Gowrie, to the west of Toowoomba.

Status: Proposal submitted and agreed with ARTC. Awaiting variation order.

TMR Alternative Alignment

During the Business Case 2015 development a report was provided by the Department of Transport and Main Roads (TMR) which proposed an alternative to the base case travelling via Karara, Leyburn and Felton East, Umbiram, Charlton - Wellcamp Airport, Kingsthorpe to Gowrie. This TMR report is titled “The Melbourne to Brisbane Inland Rail (MBIR) Options Analysis Project Report” (1st July, SMEC), hereon referred to as the TMR report.

ARTC undertook an investigation where the Base Case alignment and the TMR alignment were assessed. (‘Alignment Development and Assessment Report Inglewood to Gowrie (12 October 2015)’)The outcome of this investigation was that there was no compelling reason to adopt the TMR route over the 2015 ARTC preferred Base Case. This was reinforced by the fact that introducing a new alignment would present significant stakeholder risk to the project that would cause delays to and increase the cost of the project.

The TMR Report (prepared within a limited timeframe) has now been made available to stakeholders - a number of whom have expressed concern that not enough attention had been given to the TMR alignment.

Status: Proposal submitted and agreed with ARTC. Awaiting variation order.

Warwick Alignment

The TMR SMEC report investigated a variety of Yelarbon to Gowrie alignment options, with one of them being a route that travelled along the existing South Western Line to Warwick and the headed north towards Charlton - Wellcamp. The alignment considered in the report bypassed Warwick.

Recent stakeholder interactions have necessitated a further consideration of the Warwick Alignment.

There is now a requirement to assess each of these alignment options in a consistent manner to establish a preferred alignment option to take forward into the next phase of the project.

2.0 Scope

To assess the following four possible Yelarbon to Gowrie routes to an equivalent level, these being the:

1. Base Case Modified as derived from the Continuity Works
2. A Base Case Modified – Charlton - Wellcamp route
3. The SMEC/TMR Karara route; and
4. The Warwick route.

The review needs to make sure that there is a consistent approach to considerations on all routes.

Since the initial 2015 study and reports were prepared, further investigations have been conducted including field investigations and community consultation. Whilst the Alignment Development and Assessment Report Inglewood to Gowrie (12 October 2015) undertook a reasonable assessment of the ARTC and TMR options this was done internally and did not involve any interaction with stakeholders. Similarly, the TMR SMEC report was prepared within a limited timeframe and budget and requires an additional amount of development for a like for like comparison.

It is therefore appropriate to include recent and additional knowledge in a more robust assessment of the study corridors.

The Stage 1 assessment of the Base Case followed a four stage investigative methodology:

Stage A – Options assessment and base line of existing studies

Stage B – Identification of potential constraints

Stage C – Technical assessment

Stage D – Finalise preferred study corridor alignment and project area definition (IAS).

It is proposed that a similar process be followed so that a comparative rigor of assessment is performed.

The areas where further work will be required on the Charlton - Wellcamp, SMEC/TMR and Warwick alignments are as follows:-

2.1 Stage A - Options Development

Engineering: To ensure that a robust evaluation is performed, the consultant design team will critically review and revise the existing SMEC Karara and Warwick alignment to suit the IR service offering where required. Two to three options for a Charlton - Wellcamp connection to the Base Case to the north of Brookstead will also be developed, along with a spur connection from the West Moreton Line to the north. These Charlton - Wellcamp options will be assessed through a preliminary MCA for a take forward option comparison against the alternative Y2G alignments.

Study Corridor Survey Data: The Alignment Development and Assessment Report Inglewood to Gowrie (12 October 2015) included development of a 12D string terrain model using Shuttle satellite data which does not have the accuracy of the LiDAR survey undertaken for the Base Case. The Shuttle data has a tendency to smooth the terrain, which can affect the quality of earthworks and material take-offs. It is proposed to review the Shuttle data set used to see if an updated and/or more accurate data set is available. The alignment would be revised to suit a more accurate data set if available and to also meet the required ARTC geometric design standards.

A “like for like” evaluation of the options will be performed, and this includes the level of detail behind the alignment development and assessment. It is therefore proposed to investigate the Base Case alignment earthworks quantities against the same quality Shuttle data to determine the comparative accuracy of the data sets. This will necessitate some slight modification of the Base Case alignment from a vertical perspective.

Operational Modelling and Travel Time: The travel time associated with a revised alignment along the four corridors needs to be determined to assess the potential impact upon the proposed service

offering. Once an initial revision of the alignment and an assessment of likely passing loop locations has been performed, the alignment will be provided to the Technical Advisors operational modelling team to advise the likely run times and impacts. If the alternative alignments prove to be slower, this has the potential to impact upon the proposed service offering or trigger the need for additional passing loops to mitigate impacts. These impacts would then need to be costed and included in the assessment.

2.2 Stage B - Identification of Potential Constraints

Geotechnical: A desktop geotechnical review will be performed so as to appreciate the likely conditions and potential for material availability and impact upon constructability and mass haul. The alignment will also be revised to suit the terrain data set used along with learnings and stakeholder expectations following recent study developments and consultation.

Property Boundaries: The proposed SMEC/TMR and Warwick alignments utilises the existing Queensland Rail corridor as much as possible and if the alignment is revised to cater for the proposed IR service offering design standards, the corridor will not be sufficient to cater for the revised geometric requirements and hence additional land will be required. There also appears to be a significant amount of agricultural land that would need to be crossed by a greenfield alignment, which would likely draw equal scrutiny to the current ARTC alignment study corridor. The study corridors would be assessed through the MCA process with input from the ARTC Property SME.

Hydrology: A significant stakeholder issue for any alignment that traverses from Inglewood to Gowrie will be the Condamine River and associated flood plain. While it is recognised that the crossing for the SMEC/TMR and Warwick corridor is shorter and has a smaller catchment, the flows are likely to be more concentrated. A hydrological assessment is required to the same standard for both the Base Case and the SMEC/TMR alignment. The assessment would address both potential community and stakeholder concerns as encountered in recent consultations, and in particular to ensure that the same level of rigor for capital investment in drainage structures is attained.

Environmental: Environmental constraints will be primarily assessed at a desktop level. An exception to this will be a 4 day ecological survey from publically assessable places to help identify potential constraints or attractants to the study corridor. For efficiency, this ecological survey will consider both the TMR/SMEC option and the Warwick option. Separate Preliminary Environmental Assessment (PEA) Reports (similar to that produced in Stage 1 for the 2010 Base Case) will be prepared for the TMR/SMEC option and the Warwick option. These reports will be prepared to a standard that is suitable for public publication. In addition, a single Ecological Report will be produced to document the findings of the field survey. It is anticipated that the Ecological Report will not be publically published as it will be sufficiently summarised in the PEA Report.

Unlike the Stage 1 investigations, no air-quality or vibration assessment is proposed.

A key element to any study corridor is the consideration of Safety. A Safety in Design (SiD) and risk review has been prepared as part of the Stage 1 Base Case Assessment and it is proposed to perform a similar SiD and review of the alternative corridors to ensure that safety is not compromised.

A high level review of existing and new level crossings will be undertaken for the options. This will involve an indication of at grade passive or active crossings and identification of possible grade separations.

Stakeholder engagement: Stakeholder engagement through the later stages of the Stage 1 study has demonstrated the potential impact upon the study corridor. It has been proposed that engagement with key stakeholder bodies is undertaken through a Project Reference Group (PRG). This PRG will be arranged and coordinated by ARTC and ARTC will provide minute taking and reporting. Fortnightly briefings will be provided by AECOM to the PRG.

As the PRG provides constraints and opportunity feedback into the design, the alignments will be revised if required and the identification of issues will be recorded for input into the ARTC MCA evaluation process.

Constructability: A constructability review will be performed on the alignments with particular consideration given to safety, access, potential staging points, terrain and material sources. Mass haul

will not be performed with the exception of the consideration of potential impacts upon roads and the community.

2.3 Stage C – Technical Evaluation

Following Stages A and B a technical evaluation of the options will be performed.

A more detailed Material Take-Off (MTO) schedule will be completed as per the process used within the Stage 1 assessment to date. Costs can be determined using the same unit rates, values and assumptions across all corridor alignments to ensure that an accurate cost comparison is made. The ARTC cost estimator will prepare an estimate based upon the developed Bill of Quantities.

An MCA evaluation of the four alignment options will be performed using the existing MCA framework. Input from the PRG, engineering and environmental design teams will be used to populate the MCA. It should be noted that the Stage 1 MCA's have identified failings of the MCA templated process. A key risk for the project is if the adequacy of the MCA process is challenged by stakeholders. To mitigate this we propose to inform and attain by-in from the PRG, however advice and clarification may be required by ARTC if the PRG will not agree to the framework and process.

The result of the MCA will be a referred alignment that will be documented within a Corridor Options Assessment Report.

2.4 Stage D - Engineering Documentation

IAS Documentation: A revised IAS will be required to suit the preferred alignment as derived from the MCA process.

The preferred alignment will be documented in a drawing set and reported in the VADAR and CAR.

3.0 Milestones and Deliverables

There are three key milestone stages.

1. Constraints mapping and options development (Stage A & B)
2. MCA Assessment and selection of a preferred study corridor (Stage C); and
3. IAS submission and Engineering documentation (Stage D).

1. The Constraints mapping and options development is proposed to take approximately four weeks. These two stages will include SRF meetings.

   The key deliverable will be a preliminary Corridor Options Assessment Report that will be used to document the features, constraints and attractions of the four key alignment routes.

2. The MCA assessment (Stage C).

   The key deliverable will be an MCA Assessment and finalised Corridor Options Assessment Report.

   Deliverable Date: 2 December, 2016.

3. IAS submission and Engineering documentation stage includes the updating of the IAS to reflect a single preferred alignment as determined through the MCA process. The preferred study alignment corridor will be documented on drawings to the same scale that was used for the original Stage 1 works and in the engineering reports.

   The key deliverables will be:

   - an updated IAS
   - new alignment drawings (if the route changes from the Base Case)
   - a revised VADAR
   - a revised CAR

Deliverable Date: These documents will be developed following the 2nd December issuing of the Corridor Options Assessment Report and will continue into Q1 2017.

4.0 Fee Summary

s.47G(1)

BRIEFING NOTE

TO	Inland Rail Steering Committee
FROM	John Fullerton, Chief Executive Officer, ARTC
DATE	17 October 2016
SUBJECT	Inland Rail Programme: Further Assessment of Alternative Route Options

Purpose:
To obtain approval to proceed with further assessment of alternative route options between Inglewood and Gowrie in southern Queensland, with a supporting communications and engagement strategy.

1. ASSESSMENT OF ALTERNATIVE ROUTES

1.1. BACKGROUND

In 2015 the Inland Rail Implementation Group (IRIG), a high level group established by the Australian Government, produced a report which used as a basis for the Inland Rail Alignment, the 2010 Alignment Study, with some refinements. The 2010 Alignment study had assessed over 50,000 possible route combinations to propose the optimum alignment for Inland Rail based on a number of factors, including less than 24 hour transit time, construction cost and environmental considerations.

ARTC was subsequently tasked to continue pre-construction activities by then Deputy Prime Minister Truss in an approval dated 1 October 2015, up to an approved expenditure ceiling of $141.9m. Successive Project Proposal Reports for the approved pre-construction activities were framed around, initially, the 2010 Alignment Study and subsequently the 2015 alignment endorsed by the IRIG.

Community and stakeholder engagement to support the Concept Assessment Phase of the Inland Rail Programme between Yelarbon and Gowrie in Southern Queensland began in March 2016. The purpose of the engagement was to present the current route (set out in the 2015 IRIG Report) and capture feedback through a series of technical meetings with stakeholders and information sessions for community members.

During this engagement and subsequent to it, the alignment of the route between Inglewood and Pampas (north of Millmerran) became a topic of local landowner concern and campaign by members of the community and elected representatives.

To summarise, this included calls for the route:

- to go via Karara and Leyburn, with proponents citing reduced flooding risk and impact on prime agricultural land,
- to go via Wellcamp Airport, citing freight hub opportunities for the airport and future passenger transportation needs to the terminal
- to go via (closer) Warwick, citing local freight opportunities.

Following discussion at the Steering Committee and funding approval by the DIRD, ARTC confirmed it would proceed with assessments of the Karara and Leyburn route and a Charlton Wellcamp route or connection.

Local stakeholders were briefed of these planned assessments by ARTC on 26 September and 27 September. This included advice to the Southern Downs Council that while a route via Warwick had been discounted as part of the 2010 Alignment Study, ARTC would work closely with the Council to investigate

opportunities for the region to connect to Inland Rail, and undertook to provide further details to explain the basis of the decision around the 2010 Alignment.

Following a meeting with State and Federal MP's in Warwick the following week, there was a strong view expressed that the Inglewood and Gowrie via Warwick should be assessed.

On the basis of this feedback, ARTC considers that the following route assessments should be undertaken in addition to the current alignment via Millmerran:

- A route through Karara and Leyburn and
- A route or connection to the Charlton and Wellcamp areas
- A route closer to Warwick.

1.2. CURRENT POSITION

1.2.1. Scope of Assessment

The purpose of the assessments is to provide a 'like for like' comparison of the alternative route options to:

- respond to landowner, Council, State and Federal member feedback to thoroughly consider the route alternatives; and
- provide the Government with additional information to enable a decision on the preferred route to take through to IAS Submission to the Queensland Coordinator General.

AECOM have been engaged and would undertake the assessment across four stages:

A. Options Development

- Review and revise the proposed Karara and Warwick routes in the context of meeting the service offering
- Develop alternative options for the Charlton Wellcamp route or connection.

B. Identification of Potential Constraints

- Constraints and issues would include the areas of safety, environment, geotech, flooding, property, constructability and community.

C. Technical Evaluation

- Technical assessment of the options identified using a multi criteria analysis (MCA) framework which will compare each route option against the criteria and sub criteria outlined in the table below.

Criteria	Sub-criteria
Technical viability	Alignment Impact on PUP and other assets Geotechnical conditions Impacts on existing road and rail networks Flood immunity/ hydrology Future proofing
Safety assessment of the proposed alignment	Operational safety Public safety Road safety interfaces Emergency response Construction safety
Operational approach, including opex - Impact on cost of train operations and track maintainability	Effect/ Impact on travel time Effect on reliability and availability Network interoperability and connectivity
Constructability and schedule	Construction duration Construction access Construction complexity Resources/ material sources Interface with operational railway Staging opportunities
Environmental and heritage Impacts	Ecological impacts (flora, fauna and habitats) Visual impacts Noise and vibration impacts Flooding and waterway impacts Effect on air quality Effect on greenhouse gas emissions
Community and property impacts	Property impacts Heritage Impact on community e.g. road Community response (community stakeholder risk) Current and future land use impacts
Approvals and stakeholder risk	Planning and approval timescale State/ Federal agency buy in Local government buy in Other statutory and regulatory approvals Service authorities (utilities/ other)

- This is the step that provides the like for like comparative information that can be used as a basis for the decision on a preferred route(s). It will be completed in early December.

D. Engineering Documentation

- Documentation for an Initial Advice Statement and associated technical drawings, developed once a decision on a preferred route or routes is made.

1.2.2. Cost

The estimated cost of the studies of the three additional alternative routes is s.47G(1) .

1.2.3. Impact on Programme Schedule

While the assessment of alternative routes is expected to take around 2 months, the impact on the Yelarbon to Gowrie project and the Inland Rail Programme overall is magnified for a number of reasons as a result of the following assumptions:

- 1 month allocated for review of the assessment by the Inland Rail Steering Group
- 1 month allocated for Ministerial review prior to a determination on the preferred route(s)
- 2 months allocated to community information sessions regarding the preferred route(s)
- The above delays contribute to a significantly delayed submission of the Initial Advice Statement (IAS) and Environment Protection and Biodiversity Conservation Act (EPBC) Referral.
- Concurrently to the above work, 6 months is allocated to the preparation of an updated Concept Assessment Report (CAR) and internal governance prior to releasing a Request For Tender for Phase 2 Project Feasibility.

In total, the incurred delays are:

- Delay to the Yelarbon to Gowrie project: 8 months
- Delay to the Inland Rail Programme: 6 months (to the final commissioning milestone for both single and double stacking operations from Tottenham to Acacia Ridge)

1.2.4. Submission & Decision Making Process

At the conclusion of the Technical Evaluation phase (C), AECOM will produce a Corridor Options Report which will set out the comparative benefits and constraints associated with the route alternatives, using the Multi-Criteria Analysis Framework. The Report will recommend a preferred route based on the assessment.

The Corridor Options Report will be provided to ARTC and, it is proposed, the Inland Rail Steering Committee to confirm the work has been completed in line with scope.

It is proposed that the Report will then be released to the Project Reference Group for their information.

The Project Reference Group is not a decision making entity, but it may on the basis of its review of the Report make a recommendation to the Minister or nominated decision making body. Whether the Group is required to make a recommendation is a matter for further discussion and should be set out in the Terms of Reference.

The final determination on the preferred route to be taken through to the IAS phase is a decision for the Government or nominated decision making body.

It is critical that the submission and decision making process be articulated and approved by Government prior to the announcement of aspects of the communications and engagement strategy, including the establishment of the Project Reference Group.

1.2.5. Communications and Engagement Strategy

An open and transparent communication and engagement strategy is required to support the review of alternative alignment options. It is important that there is visibility of the engineering assessment process and that great rigor is demonstrated in both the studies implemented and the outcome achieved.

The obvious constraint to this is the timeframe over which the assessment will be conducted. With this in mind, the following engagement program has been devised to support the six to eight week investigation period.

However, this is indicative only. Feedback from initial engagement with stakeholders and the Project Reference Group may lead to scope changes, additional work or the requirement for more extensive communication and engagement. It is important that a degree of flexibility is maintained in order for this process to be considered genuine by the community.

Another key consideration is the extent to which current work on the Millmerran alignment should continue. Doing so will be perceived by some parts of the community as an indication that the alternative route option assessments are not genuine, and that ARTC is merely playing lip service to the review. However, pausing work on the alignment will contribute to further delays if that alignment is ultimately selected as the route to progress to planning approvals. If it is not chosen, then the delays stand regardless.

Timing	Action	Details	Aim
Week 1-3	Meetings with stakeholders who have campaigned for further assessment of route options	Face to face meetings to confirm the brief and scope of the alignments being looked at	To ensure stakeholders are comfortable their views have been accurately reflected.
	Councils, MP briefing	Briefing note provided to all relevant Mayors, State and Federal MPs advising of: - Scope of the investigations - Planned communication and engagement activity - Relevant timeframes. An offer of a detailed face-to-face briefing will be provided.	To ensure local political representatives are fully aware of upcoming activity and supportive of the program of communication to ensure they are able to: - Respond to constituent enquiries - Provide support comments to the media in relation to the studies and the process being implemented
Week 4 - 8	Project Reference Group	A group will be established to provide local input into investigations and to provide	This group will be asked to: - Review and comment on the scope of the investigation to

		community visibility of the studies and the findings. The group will meet fortnightly and will comprise invited representatives from peak agricultural, commercial and community groups, with representatives of relevant Councils, State and Federal MPs and Departments invited as observers. Discussions will be held with observers after each meeting to seek feedback on the process and any topics of interest. (see Appendix A for further details)	identify any potential gaps from a community perspective - Collect and provide information from their community and networks as requested to support the studies - Review study findings to provide commentary on their perceived validity or requirement for any further consideration - Provide feedback on the final MCA finding following consideration of the outcomes against each criteria
Week 4 – 6	Community Information Sessions	A series of information sessions will be held across each alignment under investigation. These will involve: - Overview maps showing the various alignments under investigation - Detailed alignment aerial maps showing a 2km study corridor along each alignment - Study inclusion information and assessment process - Feedback forms for formal submission of comments (See appendix B for indicative timeframe, subject to venue availability)	These sessions will provide an opportunity for landowners along each of the alignment options to learn more about the studies, ask questions specific to their area of interest and to lodge feedback on one or more options. To support the delivery of these sessions the following collateral will be required: - Maps - Posters (summary of study inclusions) - Feedback forms - Post card notification (to be dropped to communities surrounding the alignment area advising of the sessions) - Advertising in local papers and on radio to advise of the sessions

Following completion of the investigation is it recommended that additional communication and engagement activity be undertaken, including:

- Council and MP briefings

- Council technical refinement meetings
- Project Reference Group update
- Community information sessions to present the findings of the study
- Supporting media.

2. BROADER ALIGNMENT RISKS

s.47G(1)

[redacted]

3. RECOMMENDATION

It is recommended that the Steering Committee approves:

The purpose, scope and methodology of the assessment of alternative route options;

The submission process;

The supporting communications and engagement strategy

Document 57

Melbourne-Brisbane Inland Railway

Steering Committee Agenda Paper

Issued: 18-10-2016

AGENDA ITEM:	5
SUBJECT:	Inland Rail Programme: Alternative Route Options in southern Queensland, and supportive communications and engagement strategy
SUBMITTED BY:	ARTC
PRESENTED BY:	John Fullerton, CEO

PURPOSE

To obtain approval to proceed with further assessment of alternative route options between Inglewood and Gowrie in Southern Queensland, with a supporting communications and engagement strategy.

RECOMMENDATIONS

That the Steering Committee:

1. **Approve** further assessment of alternative route options between Inglewood and Gowrie in southern Queensland, with a supporting communications and engagement strategy.

DISCUSSION

See attached paper "Inland Rail Programme: Further Assessment of Alternative Route Options"

CONTACT

s.47F(1)

s.47F(1) @artc.com.au

ATTACHMENT

- Inland Rail Programme: Further Assessment of Alternative Route Options

Australian Government
Department of Infrastructure and Regional Development

CHAIR'S MEETING BRIEF

Subject: Inland Rail Steering Committee

Date and Time: Wednesday 19 October, 10:00 - 12:00 pm (ACT/NSW time)

Location: Teleconference National Toll Free 1800 200 232 **HOST PIN:** s.22(1)(a)(ii)

Attendees:

Department of Infrastructure and Regional Development
Mike Mrdak – Secretary, Chair
Pip Spence – A/g Deputy Secretary, Deputy Chair
Mark Thomann – Executive Director Infrastructure Investment
Richard Wood –General Manager Inland Rail
s.22(1)(a)(ii) – Inland Rail Taskforce, Secretariat

Australian Rail Track Corporation
John Fullerton – Chief Executive Officer
s.47F(1) – Executive General Manager, Strategy & Corporate Development
s.47F(1) – Executive General Manager, Corporate Affairs
s.47F(1) – Inland Rail Programme Director

Department of Finance (observers)
Philip Smith – Assistant Secretary, Infrastructure Projects
Clayton Hitch – Assistant Secretary, Budget Group

Apologies: (due to travel) s.47F(1) – Executive General Manager, Interstate

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AGENDA ITEM 1
Welcome: Opening Remarks

Agenda Focus:
This is the sixth Inland Rail Steering Committee meeting.

The key issue for discussion for this meeting is s.22(1)(a)(ii) s.22(1)(a)(ii) and the need for alignment reviews and increased stakeholder engagement in some areas. These will be covered in items 3, 4 and 5.

Contact Name: Richard Wood Contact Number: s.22(1)(a)(ii)
Position: General Manager Branch/Section: Inland Rail

AGENDA ITEM 2
Administration

OUTCOME SOUGHT: **Declare** any conflicts of interest

Agree the minutes from the 6 October Inland Rail Steering Committee

Note any outstanding action items from the last meeting

Note the Dashboard report, particularly red ratings

LEAD: **Chair**

TALKING POINTS:

s.22(1)(a)(ii)

Outstanding Action Items

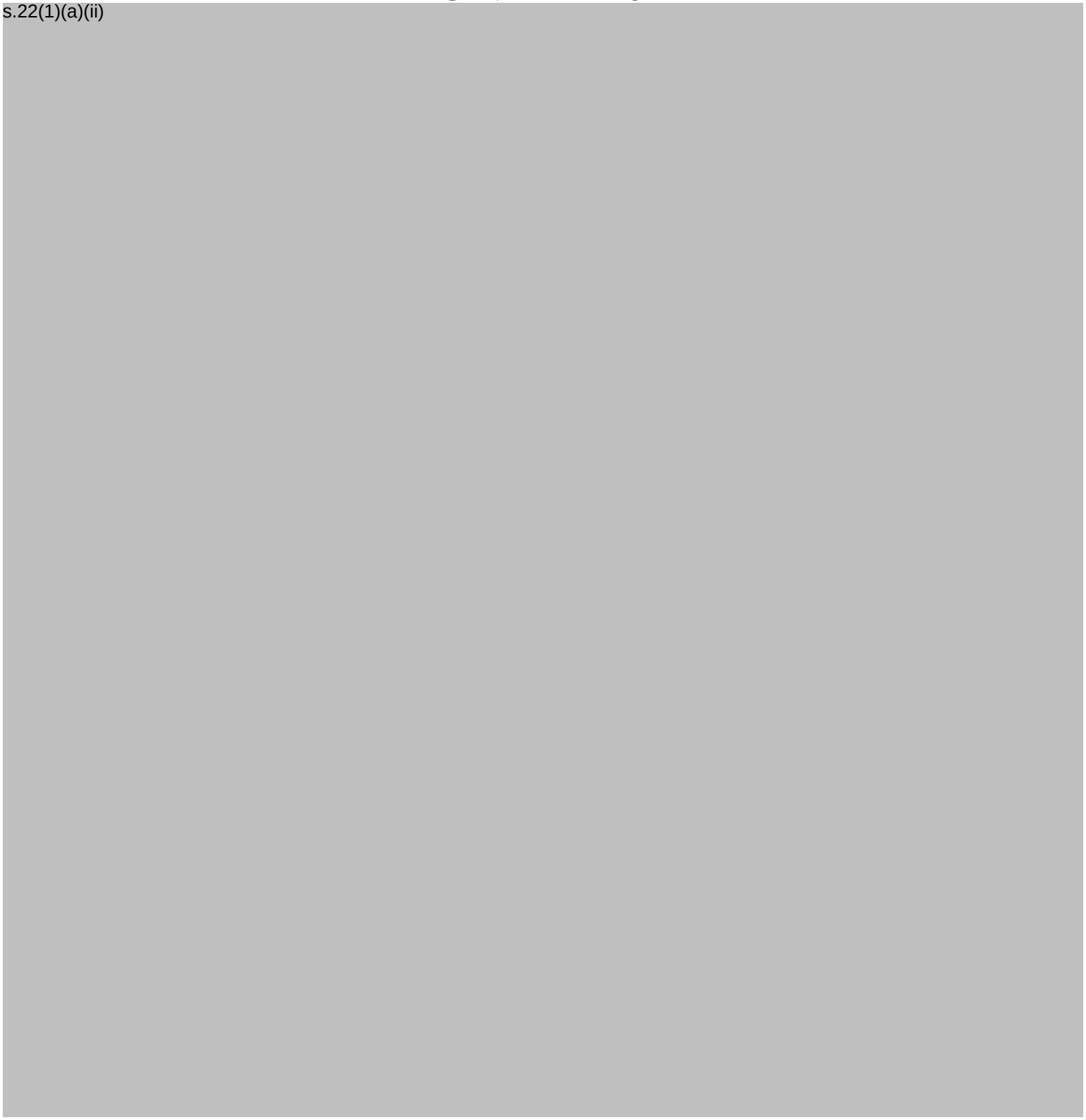
s.22(1)(a)(ii)

- ARTC statement post-Warwick meeting – ARTC was to release a statement by 7 October 2016 about the three alternative alignment reviews in south east Queensland following the Minister's 5 October meeting in Warwick. This has not yet occurred. The Committee may wish to discuss whether there is still merit in issuing such a release.

s.22(1)(a)(ii)

AGENDA ITEM 3

s.22(1)(a)(ii)



AGENDA ITEM 4

s.22(1)(a)(ii)

AGENDA ITEM 5
Alternative Route Options in Southern Queensland and supportive communications strategy

OUTCOME SOUGHT: **Approve** the paper regarding further assessment of alternative route options between Inglewood and Gowrie in southern Queensland, with a supportive communications strategy

LEAD: **ARTC: John Fullerton**

The estimated cost of the studies is s.47G(1). The Steering Committee cannot approve the funding - this will be considered by the Rail and Intermodal Branch in accordance with the Project Proposal Report process.

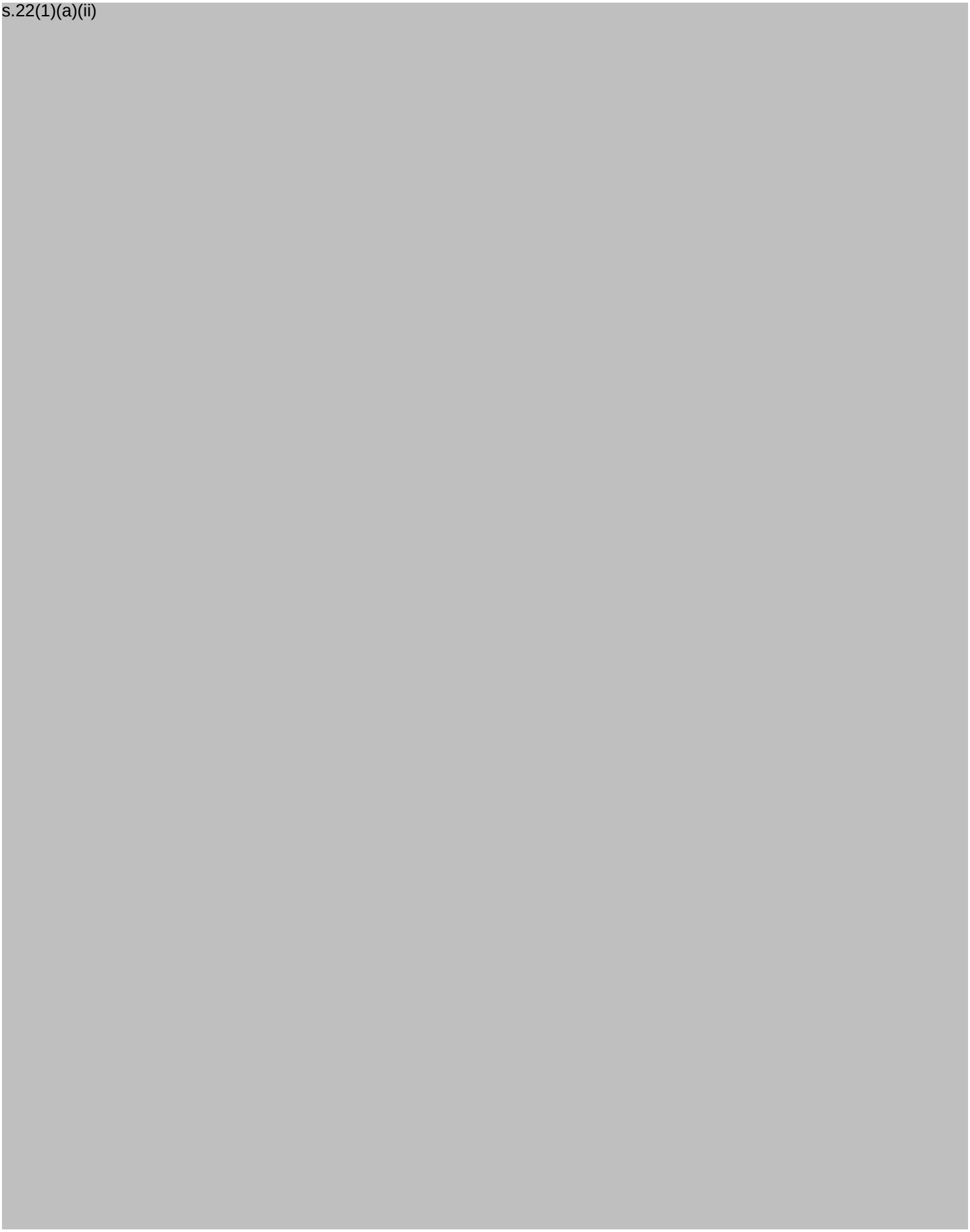
TALKING POINTS:

You may wish to…

- **Invite** comments from Committee Members about the delay risk, which in Infrastructure's view is something we would need to communicate with the Minister given he requested this additional work.
- **Ask:**
  - Whether the criteria at the table under 1.2.1 should include construction cost considerations?
  - Who appoints the Project Reference Group and what their Terms of Reference will be?
  - Why a delay to the Yelarbon to Gowrie project would delay the entire Programme by 6 months, noting that Yelarbon to Gowrie is not on the critical path?
  - What ARTC's recommendation is about whether to proceed with preconstruction works on Millmerran or not (discussed under 1.2.5 Communications and Engagement Strategy, but without a recommended approach)?
- **Note** that the paper seeks to have State agreement to 'lock in' the alignment, but that it is not likely we can get the States' public support for an alignment without an IGA in place.
- **Clarify**
  - that the Steering Committee approves the *approach* proposed in the paper, but that it remains the responsibility of Infrastructure and/or the Minister to approve PPR variations to accommodate the alternative route options.
  - that alignment refinement is about identifying the optimal alignment for Inland Rail, not just stakeholder concerns.
  - that the Government is the ultimate decision maker on the alignment, and that before it makes a decision it will need to take into consideration other streams of work too, including market testing.

AGENDA ITEM 6

s.22(1)(a)(ii)



AGENDA ITEM 7

s.22(1)(a)(ii)

AGENDA ITEM 8

s.22(1)(a)(ii)

AGENDA ITEM 9

s.22(1)(a)(ii)

AGENDA ITEM 10
Other Business

[Committee members to discuss other items that may not have been covered in the agenda]

AGENDA ITEM 11
Next Meeting

The next meeting will be held on Tuesday 1 November 2016 from 10:00 – 12:00 ACT/NSW time in Canberra.

Melbourne-Brisbane Inland Railway

Inland Rail Steering Committee – DRAFT Summary of Outcomes

Meeting: 10:00am – 12:00pm, Wednesday 19 October 2016 (Teleconference)

Members: **Mike Mrdak,** Secretary and Chair, Department of Infrastructure and Regional Development
John Fullerton, Chief Executive Officer and Managing Director, Australian Rail Track Corporation (ARTC)

Participants: **Pip Spence,** a/g Deputy Secretary, Department of Infrastructure and Regional Development
Mark Thomann, Executive Director Infrastructure Investment, Department of Infrastructure and Regional Development
Richard Wood, General Manager, Inland Rail Taskforce, Department of Infrastructure and Regional Development
s.47F(1) Executive General Manager Interstate, ARTC
s.47F(1), Executive General Manager, ARTC – Strategy and Corporate Development
s.47F(1), Executive General Manager, ARTC – Corporate Affairs
s.47F(1), Programme Director, ARTC

Observer: s.47F(1), General Manager, Department of Finance

Secretariat: s.47F(1), Director, Inland Rail Taskforce, Department of Infrastructure and Regional Development

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
1	**Welcome**	The meeting opened at 10.15am	-	-
2	s.22(1)(a)(ii)			

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
3	s.22(1)(a)(ii)			
4				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
	s.22(1)(a)(ii)			
5	**Alternative route Options in Southern Queensland and supportive communications strategy**	Mr Fullerton spoke to Agenda Item 5 meeting paper, developed in response to the call for the three alignment reviews in Southern Downs. s.47F(1) provided further detail on the Aecom engagement noting: • Three teams within Aecom will be working on the three reviews (up to 30 staff). • Information and data will be provided to the stakeholder group ARTC has been meeting with and the Project Review Group (once established). • The reviews will provide like-for-like comparisons and recommendations in a final report. This process and the context for the current parallel Millmerran engineering and hydrology study have been explained to the Millmerran farmers group by ARTC. Members discussed the criteria to be addressed noting that any changes to the service offering and costs in the 2015 business case are key touch points for consideration of the three alignment reviews. The review process must be transparent and clearly show the considerations that have been taken into account on each alignment option – so that stakeholders can see the basis of alignment review	ARTC amend the criteria for assessment as discussed and re-circulate for agreement	Prior to 1/11/16 meeting

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
		comparisons and outcomes. Members noted there may be benefit for the states and C'w to articulate the benefits for regional communities beyond those closest to the final alignment. Members discussed the link between the locally based Project Review Group and the proposed National Spokesperson and Qld Community Advisor (who would ideally chair the Project Review Group). ARTC noted the need for the project delivery team to prioritise the increasing community engagement work. s.47F(1) summarised the engagement steps for the three alignment reviews: • 1st engagement with those directly impacted to table the scope of work and key criteria for the reviews (including the local MPs group from the 5 Oct Warwick meeting); • Project Review Group is the formal mechanism to provide information to the wider community and is critical to the engagement process; • ARTC is engaging with Mayors and local elected representatives for input to the Project Review Group (noting the Group are not a decision making body). ARTC agreed to amend the criteria for assessment to address members' concerns and further clarify the gateway decision process. ARTC also agreed to put on hold all other on-ground pre-construction activities on the Millmerran alignment until the three alignment reviews are complete to avoid any misconceptions.	ARTC put on hold all on-ground pre-construction activities on the Millmerran alignment until the three alignment reviews are complete.	

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
6	s.22(1)(a)(ii)			
7				

Agenda Item	Description	Discussion and Agreed Resolution	Action Items	Due Date
8	s.22(1)(a)(ii)			
9				
10	**Other Business**	Nil	-	-
11	**Next Meeting**	The next meeting is on Tuesday, 1 November 2016, 10:00am to 12:00pm AEDT (face-to-face meeting in Canberra).	-	-

Document 60

The Hon Darren Chester MP
Minister for Infrastructure and Transport
Deputy Leader of the House
Member for Gippsland

PDR ID: MS16-001261

19 OCT 2016

Cr Tracy Dobie
Mayor
Southern Downs Regional Council
PO BOX 26
WARWICK QLD 4370

Dear Mayor Tracy

Thank you for your letter of 12 August 2016 regarding Inland Rail - Proposed alignment via Warwick. I regret the delay in responding.

On 5 October, I visited Warwick to meet with local Federal and State representatives to discuss Inland Rail and alternative alignments. Following this meeting, I have asked Australian Rail Track Corporation (ARTC) to re-examine the route west of Warwick. This will be done concurrently to ARTC's study of the Karara and Leyburn alignment proposed in the 2015 SMEC Report and a route or connection to the Charlton and Wellcamp areas that will examine the possible benefits for Inland Rail going past the Wellcamp precinct.

Inland Rail is a critical investment for Australia and it is important that we get it right. For Inland Rail to succeed, it must be delivered to a standard that attracts interstate freight from road to rail, with factors such as transit time and double stacking capacity playing a key role in achieving this.

Thank you again for taking the time to write to me on this matter.

I have copied this letter to the Deputy Prime Minister, the Hon Barnaby Joyce MP, Senator the Hon Fiona Nash, Minister for Regional Development, Senator the Hon Matt Canavan, Minister for Resources and Northern Australia, and Mr David Littleproud MP.

Yours sincerely

DARREN CHESTER

Document 61

ARTC InlandRail

Richard Wood
General Manager
Rail and Intermodal Branch
Department of Infrastructure and Regional Development
GPO Box 594
CANBERRA, ACT, 2601.
Email: s.47F(1) @infrastructure.gov.au

24 October 2016
01-9000-PG-P00-LT-0006

Dear Richard,

RE: INLAND RAIL – ALTERNATIVE ROUTE ALIGNMENT STUDIES – INGLEWOOD TO GOWRIE

I am writing further to the Inland Rail Steering Committee's endorsement on 19 October 2016 to conduct a further assessment of alternative route options between Inglewood and Gowrie in southern Queensland.

In summary, the additional studies will involve assessment of the following route options:

- A route through Karara and Leyburn
- A route or connection to the Charlton and Wellcamp areas
- A route closer to Warwick

Our studies will compare each route option with the Base Case 2015 alignment recommended by the Inland Rail Implementation Group.

A copy of Aecom's proposal to undertake the additional assessment is attached. The quoted cost is s.47G(1 s.47G(1) . This proposal includes the scope in the Wellcamp Airport alignment studies previously approved s.47G(1) s.47G(1) s.47G(1

To give effect to the Steering Committee's decision, ARTC seeks the Department's agreement to vary the milestones under PPR03 to include the additional scope of work.

To fund the additional scope, ARTC seeks approval to utilise part of the risk contingency held by the Department. This would involve a release of s.47G(1) s.47G(1) s.47G(1)

We have updated the relevant Inland Rail Project Proposal Report 03 Tables to reflect this variation request in red and have attached these Tables for your review.

For any questions, please do not hesitate in contacting either s.47F(1) (PH: s.47F(1)) or s.47F(1) s.47F(1) (PH: s.47F(1)).

s.47F(1)

Programme Director – Inland Rail

Document 62

s.22(1)(a)(ii)

From: Inlandrail
Sent: Friday, 24 March 2017 4:49 PM
To: s.47F(1)@qff.org.au
Cc: maranoa@lnpq.org.au; darren.chester.mp@aph.gov.au; s.47F(1); s.47F(1)@qff.org.au; s.47F(1)@qff.org.au; Inlandrail
Subject: RE: Inland Rail process [SEC=UNCLASSIFIED]

Follow Up Flag: Follow up
Flag Status: Completed

Good afternoon s.47F(1)

The Yelarbon to Gowrie Project Reference Group Secretariat has forwarded your email to me.

I am disappointed to read of the Queensland Farmers Federation's (QFF) concerns regarding the PRG process, particularly given you did not express your views to me during Wednesday's meeting (22 March).

Whilst it is your right to reserve QFF's support I, believe this is premature particularly given that the PRG has not yet reached a position on the review process. In discussions that continued after you had left yesterday's meeting early, Members agreed to seek further clarification on a number of issues. Responses to those issues will be provided for Members' consideration prior to my progressing my report on the PRG process to the Minister.

During Wednesday's meeting, Members agreed that I seek to meet with Minister Chester in the next few days to discuss with him a number of issues that had arisen. Members also agreed to maintain the confidentiality of the MCA and costings information until I have a report back from my meeting.

I would welcome the opportunity to discuss your concerns further prior to the conclusion of the PRG role.

Sincerely

Bruce Wilson
Chair
Yelarbon to Gowrie Project Reference Group

Via s.22(1)(a)(ii)
for the Chair
Yelarbon to Gowrie Project Reference Group
Inland Rail Branch
Department of Infrastructure and Regional Development
GPO Box 594, Canberra ACT 2601
E: inlandrail@infrastructure.gov.au

From: Queensland Farmers' Federation [mailto:qfarmers@qff.org.au]
Sent: Wednesday, 22 March 2017 5:40 PM
To: maranoa@lnpq.org.au; darren.chester.mp@aph.gov.au; Inlandrail <Inlandrail@infrastructure.gov.au>
Cc: s.47F(1), QFF President <s.47F(1)@gmail.com>; s.47F(1) <s.47F(1)@qff.org.au>; s.47F(1) <s.47F(1)@qff.org.au>
Subject: Inland Rail process

Good afternoon,

The Queensland Farmers' Federation (QFF) strongly supports and welcomes overdue improvements to the national freight rail network. The Inland Rail project is an important part of the solution to ensuring Australia has safe, sustainable and efficient capacity to move freight around the country.

However, QFF reserves its support for the position taken by the Yelarbon to Gowrie Project Reference Group (Y2GPRG).

Based on our involvement in the route evaluation process to date, QFF does not consider that the Y2GPRG has been adequately informed on the Inland Rail studies and investigations to a level that will allow it to adequately satisfy the Y2GPRG's terms of reference.

Regards,
s.47F(1)

QUEENSLAND FARMERS' FEDERATION

s.47F(1) **on behalf of** s.47F(1) **, President**
Executive Assistant

T s.47F(1) **E** s.47F(1) @qff.org.au
Level 3 183 North Quay
(PO Box 12009)
Brisbane Queensland 4003

s.47F(1)

Document 63

s.22(1)(a)(ii)

From: Bruce Wilson <s.47F(1) >
Sent: Thursday, 27 April 2017 9:23 PM
To: darren.chester.mp@aph.gov.au
Cc: Inlandrail
Subject: Y2G PRG Report from the Chair
Attachments: 1 Final Y2G PRG Chair Report to Minister.pdf; ATT00001.htm; Att A- Terms of Reference.pdf; ATT00002.htm; Att B - Drop-in locations and Issues Discussed.pdf; ATT00003.htm; Att C - Correspondence (written_phone calls_submissions).pdf; ATT00004.htm; Att D - Alignment History.pdf; ATT00005.htm; Att E - PRG Members Attendance.pdf; ATT00006.htm; Att F - Meeting Agendas.pdf; ATT00007.htm; Att G - Meeing Outcomes.pdf; ATT00008.htm; Att H - PRG Issues Register.pdf; ATT00009.htm; Att I - Jan 2017 Letter from Bruce Wilson to Landholders WITH MAP.pdf; ATT00010.htm

Categories: TRIMMED

The Hon Darren Chester MP

Minister for Infrastructure and Transport

Dear Minister

It is with pleasure that I submit to you my report as Chair of the Yelarbon to Gowrie Project Reference Group (PRG) of Inland Rail. This includes my observations of the PRG process, the views of PRG Members, and my engagement with the broader community. On my behalf, your Department will provide you with bound hard copies.

As I previously discussed with you, from Sunday 30 April I will be on holidays out of Australia for a month. However, should you wish to discuss any aspect of my report with me during that time, I would be pleased to make arrangements so that would be possible.

As part of the community engagement process, I sent a letter to all landholders in the study area to advise people of the investigation underway. As a result of subsequent discussions with the community, including at the "drop in sessions" mentioned in my report, I feel some responsibility to send a follow up letter. The logical time to do this would be after you have made your decision on a preferred route. However, I would not want to pre-empt or detract from any announcements you would make. Could I suggest that Departmental staff liaise with your office about this?

I would very much like to thank you for the opportunity to be involved in such an important, nation building project as Inland Rail.

Yours sincerely

Bruce Wilson

Document 64

WOOD Richard

From: WOOD Richard
Sent: Tuesday, 28 February 2017 8:09 AM
To: s.22(1)(a)(ii) ; s.22(1)(a)(ii)
Subject: FW: Yelarbon to Gowrie options - route via Pittsworth [SEC=UNCLASSIFIED]

UNCLASSIFIED

Fyi

Sent with BlackBerry Work (www.blackberry.com)

UNCLASSIFIED

From: s.47F(1) <s.47F(1)@ARTC.com.au>
Date: Monday, 27 Feb 2017 12:37 pm
To: WOOD Richard <s.22(1)(a)(ii) l@infrastructure.gov.au>
Cc: s.47F(1) <s.47F(1)@ARTC.com.au>, s.47F(1) <s.47F(1) @ARTC.com.au>, s.47F(1) <s.47F(1) @ARTC.com.au>
Subject: Yelarbon to Gowrie options - route via Pittsworth

Richard,

At the PCG meeting on 24 February, you asked how and when a route via Pittsworth had been adopted for the variation of the base case (Millmerran) route to reach Wellcamp, rather than a route east from Mount Tyson as shown on early maps of the four route options.

Initially as you know, we started on a study of a single route variation to run past Wellcamp. A notional route was identified showing a line east from Mount Tyson. We believe a map may have been prepared in haste, to show to the owners of the Wellcamp airport at a meeting. I recall that a Mount Tyson route looked feasible, and I was aware that a Pittsworth option had not rated well in the 2010 study.

Work on the "via Wellcamp" study began. In October 2016 an MCA was held which identified the alternative route via Pittsworth as preferable – but at that point the job was put on hold and was subsequently replaced by the larger study of four options. The Pittsworth preference remained internal to the study team. As a result the early maps showing the four options continued to show the Mount Tyson route.

In hindsight, those responsible for preparation of the initial "four routes" maps should have been aware that the Pittsworth route was already a preference. Several of the team did not know that the initial study had progressed to the point of the Pittsworth route being preferred.

Regards,

s.47F(1)

s.47F(1)
Senior Project Advisor, Inland Rail
Major Projects

ARTC

P.
M. s.47F(1)
E. s.47F(1)@ARTC.com.au

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45 Clarence Street
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