

INLAND RAIL SPONSORS GROUP

OUT OF SESSION PAPER 4/09/2017

NARROMINE TO NARRABRI PREFERRED CORRIDOR

PURPOSE

To seek that the Sponsors Group endorse a Preferred Corridor for the Narromine to Narrabri project and make a recommendation on the Preferred Corridor to the Minister for Infrastructure and Transport.

RECOMMENDATIONS

That IRSG:

1. **Notes** the results of the Narromine to Narrabri (N2N) Preferred Corridor Report as summarised in this paper and included as Attachment C; and

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OUTLINE PROPOSAL

This submission seeks to provide a considered position on the corridor to be adopted for the Narromine to Narrabri project, with sufficient information to allow the Preferred Corridor to be endorsed and recommended to the Minister.

The assessment has applied the Inland Rail Route Refinement Process endorsed by the Inland Rail Steering Committee in October 2016 (Attachment A), which considers:

- The effect on the Inland Rail Service Offering.

- The Preferred Corridor is shown in Figure 1 below.



BACKGROUND

The original base case alignment for the Narromine to Narrabri project was identified in the 2010 Inland Rail Alignment Study (IRAS) following a broad review of options for the Narromine to Narrabri segment of Inland Rail.

The alignment identified in the 2010 IRAS formed the basis of the 2015 Inland Rail Programme Business Case and was endorsed by the then Inland Rail Implementation Committee in August 2015.

Over the 2016 to 2017 period, as part of the formal Phase 1 Concept Assessment (as per ARTC's Project Management Procedure), further significant alignment review work has been undertaken to identify a refined alignment to be taken forward into the Phase 2 Project Feasibility Phase (feasibility / reference design and environmental assessment / approvals).

This review work was undertaken to test the underlying basis of assessment used in the 2010 Inland Rail Alignment Study, seek and incorporate stakeholder feedback and carry out additional engineering and field work to provide a robust process for analysis.

A summary of the timeline and steps undertaken is provided below in Figure 2.

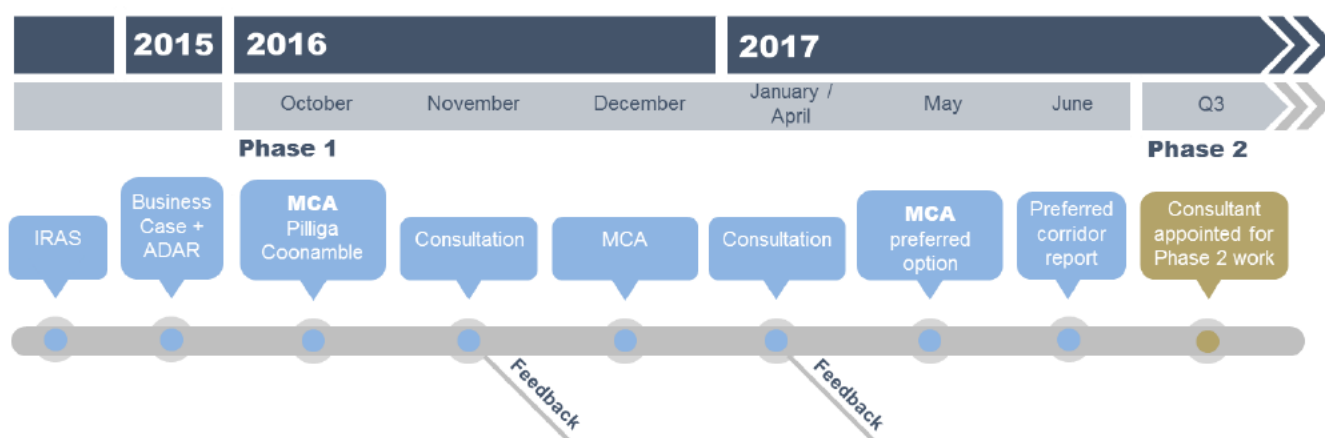


Figure 2: Representation of Corridor development for N2N

OPTIONS

The review process initially considered a large number of alternatives that were progressively narrowed to a short list of options that were assessed in comparison to a Concept Alignment based on the 2010 IRAS alignment.

Since May 2016 approximately fifty (50) alternate alignments have been considered as part of the development and review work undertaken. These options were reviewed internally at an MCA workshop in October 2016 and broad investigation zones, that included the shortlisted options, were presented to the community in November 2016.

Refinements were made based on the feedback from the community information sessions and a further MCA workshop was held in December 2016 that resulted in the shortlisted options being taken back to the community and stakeholders for direct engagement with individual property owners between February and April 2017.

The Final MCA Workshop, that assessed the short listed options against the Concept Alignment, was undertaken on 11 May 2017. The options reviewed in the May 2017 MCA Workshop are shown below in Figure 3.

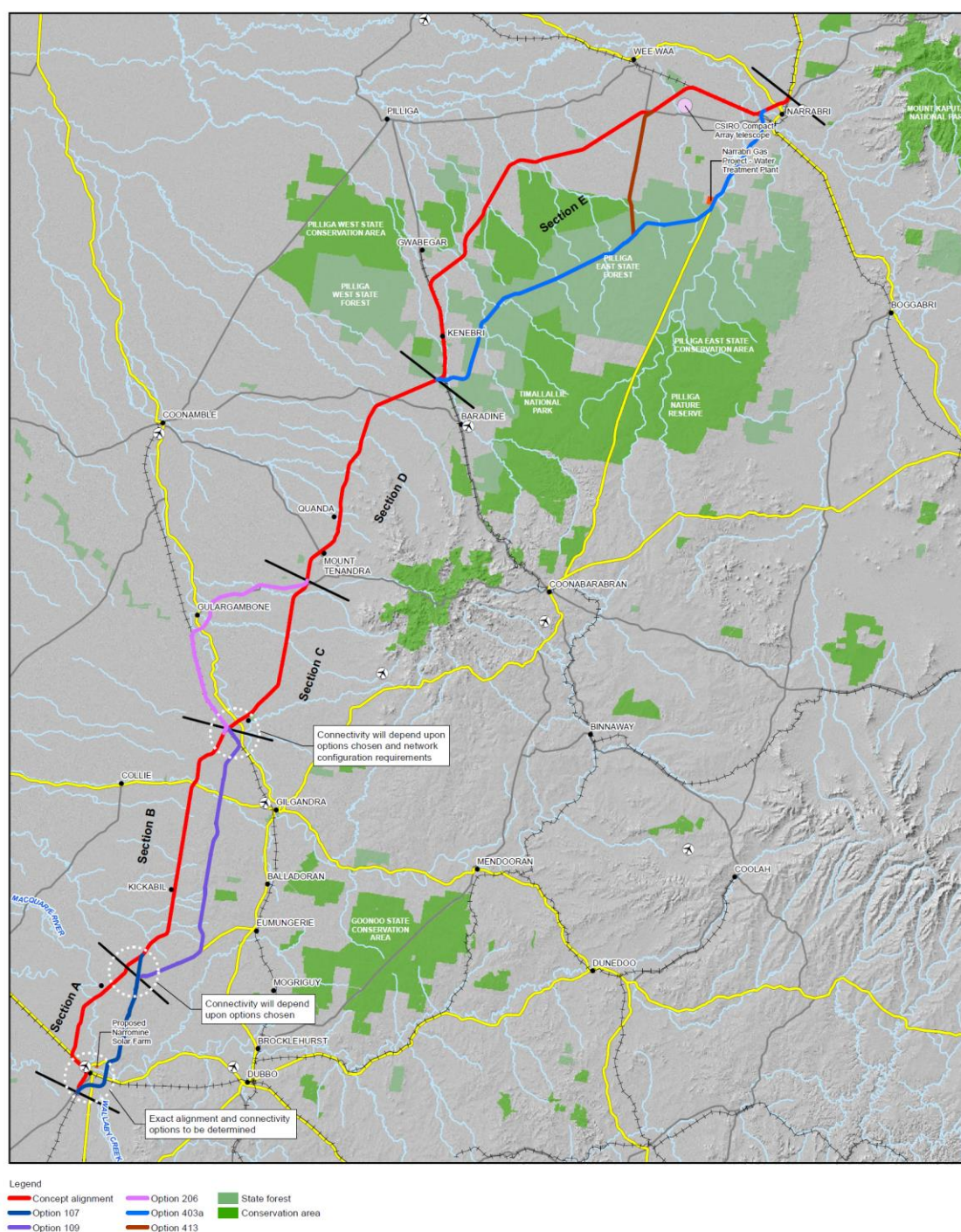


Figure 3: Corridor Options assessed in Final MCA against the Concept alignment

Table 1 provides a summary of the Preferred Corridor in comparison to the Concept Alignment with reference to the criteria in the Route Refinement Process, including the MCA results.

Table 1: Summary of Route Refinement Criteria

ELEMENT	CONCEPT	PREFERRED	DIFFERENCE TO CONCEPT
Service Offering			
Corridor Length (km) ^a	311.72	299.92	-11.80
Transit Time (h:mm:ss) ^d	3:10:18	3:05:40	-0:04:38
Capital cost estimate			
Construction Cost (\$,000) ^b	\$47	\$47	-50,564
Multi Criteria Analysis			
MCA Overall ^c	0	1.06	+1.06
MCA (Technical) ^c	0	1.02	+1.02
MCA (Non-Technical) ^c	0	0.05	+0.05

Notes:

a – allows for a 4.84km overlap with P2N for comparison purposes

b – Included in the construction estimate: direct job costs, construction overheads, clients supply, property costs and an allowance for an overlap with P2N for comparison purposes. The estimate does not include contingency or escalation.

c – the average of the weighted MCA scores for the individual option

d – arithmetic average of the eight (8) cases modelled

The resultant overall capital cost saving is primarily driven by the Preferred Corridor generally traversing better geotechnical conditions and is higher in the catchments, which allows for the increased use of site won material in the formation and the use of less and smaller culverts.

The modelled transit time saving is due to the reduction in overall length of the corridor.

The major refinements in the Preferred Corridor relative to the Concept Alignment are:

- In the southern section of the corridor (Narromine to Burroway), the Preferred Corridor adopts a route to the east of Narromine that offered a number of advantages over the Concept Alignment – the Preferred Corridor was on balance favoured by the community, by avoiding Narromine it avoids future environmental and social impacts, geotechnical conditions are improved, and hydrology/flooding impacts are reduced.
- In the northern section of the corridor (Barradine to Narrabri), the Preferred Corridor adopts a substantially shorter route that avoids impacts on prime farmland and traverses a route through the Pilliga State Forest. The Preferred Corridor was strongly favoured by the local community, and offers transit time savings and capital cost reductions relative to the Concept Alignment. It should be noted that the Preferred Corridor avoids the high conservation value sections of the Pilliga Forest in the Pilliga Conservation Areas and National Parks.

CONSULTATION

Community and landholder consultation

Until mid-2016 the only corridor option for the Narromine to Narrabri project was the 2010 IRAS base case. Following landowner, stakeholders and broad community consultation in early 2016, the community encouraged ARTC to consider alternative route options with the suggestion from the community to consider traversing the Pilliga State Forest and also utilising the upgraded existing Coonamble rail line.

ARTC engaged with the community and stakeholders whilst undertaking further review of the route and in late 2016 held community information sessions to gather more feedback on the new options. Over 17,000 residences received notification of the information sessions via post as well as newspaper advertisements and radio.

Additionally the community and engagement team has established and maintained relationships with landowners who have come forward and requested further information and consultation.

Following the 2016 MCA and further option refinement, Inland Rail community engagement team identified property owners across all route options as well the 2016 modified base case alignment and during February and April 2017 conducted over 700 face to face meetings with landowners across these options. Not all landowners were able to be identified or contact details obtained.

Meetings with key stakeholders such as Councils and Federal MPs were also held to gather feedback on the options under consideration.

Landowners have also written to ARTC and political stakeholders identifying their preferred alignment.

Key issues have emerged that are consistent across every option under consideration:

- Land acquisition process and compensation
- Valuation process for agricultural land given that it is not only a house but also a business
- Impacts on property valuation
- Time frames until there is a clear decision on the route
- Protection of prime agricultural land
- Minimisation of community impacts
- The stress and anxiety this process is causing the landowners
- Creation of connectivity points

Attachment 2 summarises the option specific community feedback

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FURTHER ROUTE REFINEMENT

ARTC will continue to further refine the corridor as work progresses, and such refinements will be communicated to relevant landowners, stakeholders and communities.

It is considered important that the Minister be advised that determination of a preferred corridor to take forward into formal assessment and planning approval processes does not preclude opportunities for future alignment refinement. It is often the case that a particular alignment is refined as a result of feedback received from landowners, community or other stakeholders during the preparation of an Environmental Impact Statement (EIS). It is considered likely that such refinements will occur as engineering work and associated studies (e.g. geotechnical, social - economic, ecological) progress.

FINANCIAL IMPLICATIONS

The Preferred Corridor provides for an estimated \$50.6m reduction in the total N2N project capital expenditure (excluding contingency and escalation), which is a 3.2% reduction over the cost estimate for the Concept Alignment. The Budget will be monitored and refined as the project progresses through the Feasibility and Detailed Design stages.

TIMING

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SUBMITTED BY

ARTC

CONTACT

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Position	Executive Director Inland Rail	Date submitted to Secretariat	4 September 2017

Attachments:

A: Inland Rail - Route Refinement Process

B: Summary of Community and Stakeholder Feedback

C: Narromine to Narrabri Preferred Corridor Report

ATTACHMENT A: INLAND RAIL – ROUTE REFINEMENT PROCESS

PROCESS TO REFINE THE ROUTE

This document describes how ARTC undertakes a 'like for like' comparison of alternative route options and is applied along the entire Inland Rail route. There are three elements.

Alternatives are compared on their ability to meet the
SERVICE OFFERING



TRANSIT TIME
requires a transit time from Melbourne to Brisbane in less than 24 hours



RELIABILITY
requires 98 per cent reliability to freight customers



COMPETITIVE PRICING
requires competitive pricing for freight customers



AVAILABILITY
requires suitable train paths at the times that suit the needs of the market

This is the level of service required by rail operators and freight customers

Alternatives are compared on basis of
COSTS



CONSTRUCTION ESTIMATE



OPERATING COSTS

This is the construction estimate, and track maintenance and train operating costs for customers

And a range of factors is considered in a
MULTI-CRITERIA ANALYSIS



TECHNICAL VIABILITY (17%)
considers the alignment, impact on public utilities, geotechnical conditions, impacts on existing road and rail networks, flood immunity and hydrology and future proofing



ENVIRONMENTAL IMPACTS (12.5%)
considers the ecological impacts (flora, fauna and habitats), visual impacts, noise and vibration impacts, flooding and waterway impacts and the effect on air quality and greenhouse gas emissions



SAFETY ASSESSMENT (16.5%)
considers construction safety, operational safety, public safety, road safety interfaces and emergency response



COMMUNITY & PROPERTY IMPACTS (12.5%)
considers property impacts, Indigenous and non-Indigenous heritage, heritage, impact on community, community response and current and future land use and links to economic impacts



OPERATIONAL APPROACH (16.5%)
considers the impact on travel time, reliability and availability, and network interoperability and connectivity including interfaces with rail terminals and network



APPROVALS & STAKEHOLDER ENGAGEMENT (12.5%)
considers planning and approval requirements, State and Federal agency buy-in, Local government buy-in, other statutory and regulatory approvals and service authorities, such as utilities etc.



CONSTRUCTABILITY & SCHEDULE (12.5%)
considers construction duration, access, and complexity, resources, interface with operational railway and staging opportunities

This is a broad range of qualitative and quantitative criteria that is considered as part of the Multi-Criteria Analysis (MCA). The MCA process is recognised as an industry standard and is widely used in Australia and internationally.

The final step in the process is that ARTC makes a recommendation to the Minister for Infrastructure and Transport through the Melbourne to Brisbane Inland Rail Steering Committee.

This approach is considered to represent industry best practice. It is applied across the entire Inland Rail Programme to ensure a consistent approach to the 'like for like' comparison of all alternative route options.

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ATTACHMENT B: SUMMARY OF COMMUNITY AND STAKEHOLDER FEEDBACK

	SUMMARY OF FEEDBACK	COMMENT
Narromine	<p>Concept Alignment:</p> <ul style="list-style-type: none"> • Flooding and surface water concerns • Impacts on new property developments and new homes • Too close to town • Consulted with 62% of property representatives. <p>Option:</p> <ul style="list-style-type: none"> • Community saw benefit of eastern route from a flooding point of view • Impacts on new housing near the River • Consulted with 69% of property representatives. 	<ul style="list-style-type: none"> • Both options share similar concerns
Burroway to Curban	<p>Concept Alignment:</p> <ul style="list-style-type: none"> • Flooding • Alignment with the road will create issues of farm operability • No consensus from landowners who have property on both options • Impacts on lifestyle and environmental issues such as visual amenity, noise, vibration • Consulted with 90% of property representatives within the concept alignment <p>Option:</p> <ul style="list-style-type: none"> • No consensus from landowners who have property on both options • Impacts on lifestyle and environmental issues such as visual amenity, noise, vibration • Landowners concerned that this option only came about due to landowners on the concept alignment wanting the route further from their houses • Consulted with 92% of property representative within the alternative option 	<ul style="list-style-type: none"> • Both options share similar concerns • No overall preference identified from the consultation completed

	SUMMARY OF FEEDBACK	COMMENT
Curban to Mt Tenandra	<p>Concept Alignment:</p> <ul style="list-style-type: none"> Concern from Council given that the route will impact their high rate landowners Small high production agricultural properties Landowner objections Consulted with 86% of property representatives within the concept alignment option <p>Option:</p> <ul style="list-style-type: none"> Council suggested, and supported, an option that followed Box Ridge Road (Option C). Impacted residents understand the reason for the alignment and willing to work with ARTC. Supported option from a number of landowners on both options. Consulted with 69% of property representatives within the Box Ridge Road option 	<ul style="list-style-type: none"> Preference from community consultation for Option C. Support for Option C from landowners who have property on both options. Impacted landowners keen to discuss compensation.
Mt Tenandra to Baradine	<ul style="list-style-type: none"> Request to work together to find most suitable option and maximise farm operations 	<ul style="list-style-type: none"> Refinement process ongoing Focus on impact minimisation – away from houses, aligning with property boundaries The lack of route certainty is creating significant stress on individuals and the community
Baradine to Narrabri	<ul style="list-style-type: none"> Support for Pilliga State Forest/Newell Highway option Need to keep away from the conservation areas Consultation undertaken with property representatives as follows: <ul style="list-style-type: none"> - Concept Alignment 46% - Newell Hwy option 53% - Pilliga Forest way 86% - 20 Foot Road 73% 	<ul style="list-style-type: none"> Preference from the community consultation for Pilliga State Forest/Newell Highway option.

ATTACHMENT C: NARROMINE TO NARRABRI PREFERRED CORRIDOR REPORT