

Alliance Board Submission
Development and long lead item proposal

Gheringhap to Maroona Passing Loops

ARTC

Downer

Issued By: [Redacted]
VI Alliance Manager

Signed: [Redacted]

VI Projects AMT approval for submission to the Alliance

ARTC VI Projects AMT

[Redacted] Date 13 Dec 10

[Redacted]

[Redacted] Date 13/12/2010

[Redacted]

Downer VI Projects AMT

[Redacted] Date 13/12/2010

[Redacted]

[Redacted] Date 13/12/2010

[Redacted]

Alliance Board Approval to proceed to Implementation: ✓

ARTC Alliance Board Members

[Redacted] Date 14/12/2010

[Redacted]

[Redacted] Date 14/12/2010

[Redacted]

Downer Alliance Board Member

[Redacted] Date 14/12/10

[Redacted]

[Redacted] Date 14.12.2010

[Redacted]

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Executive Summary

The purpose of this proposal is to obtain the approval of the AMT, AB and BIC to order the long lead items and develop the Gheringhap to Maroona loops project to the point where the full Project Implementation Plan can be approved.

The objective of this project is to provide 4 passing loops between Gheringhap and Maroona on the railway between Melbourne and Adelaide capable of staging 1800m trains.

To achieve the full benefits of this objective the existing 'ASW' train authorisation system needed to be replaced with Computerised Train Control (CTC).

This proposal includes the funding for the development and long lead items for both these objectives.

A "Nation Building" budget of **\$32,000,000** has been allocated by the Commonwealth Government for this project.

The Target Cost Estimate for the project is being developed and the scope is being defined at present.

However the project development is needed to fully define the scope and long lead items covered by this proposal will be ordered to match the scope as it is defined.

Recommendation:

The Board approves the proposal for the development and long lead item purchases for the Gheringhap to Maroona Passing Loops Project with an Approved Budget of **\$8,618,000**.

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1. INTRODUCTION

The Federal Government has approved funding for the purpose of providing interstate main line efficiency on the Melbourne to Adelaide corridor, specifically through the development of 4 passing loops for 1800m long trains in the area between Gheringhap and Maroona.

To achieve the full benefits of this objective the existing Section Authority Working system known as 'ASW' train authorisation system, which places significant restraints on line capacity and the ability to grow traffic in both volume and diversity of operators, needs to be replaced. The Computerised Train Control (CTC) used on the rest of the network is the obvious and only practical choice as this system controls the trains on the rest of the ARTC network.

A Project Implementation Plan (PIP) will be developed to document the processes involved in the implementation of the G2M Passing Loops project.

These works are part of the Productivity Improvements for Rail Transport in ARTC's East-West corridor.

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Within the May 2010 Federal Budget, an announcement was made providing the go ahead of these loops.

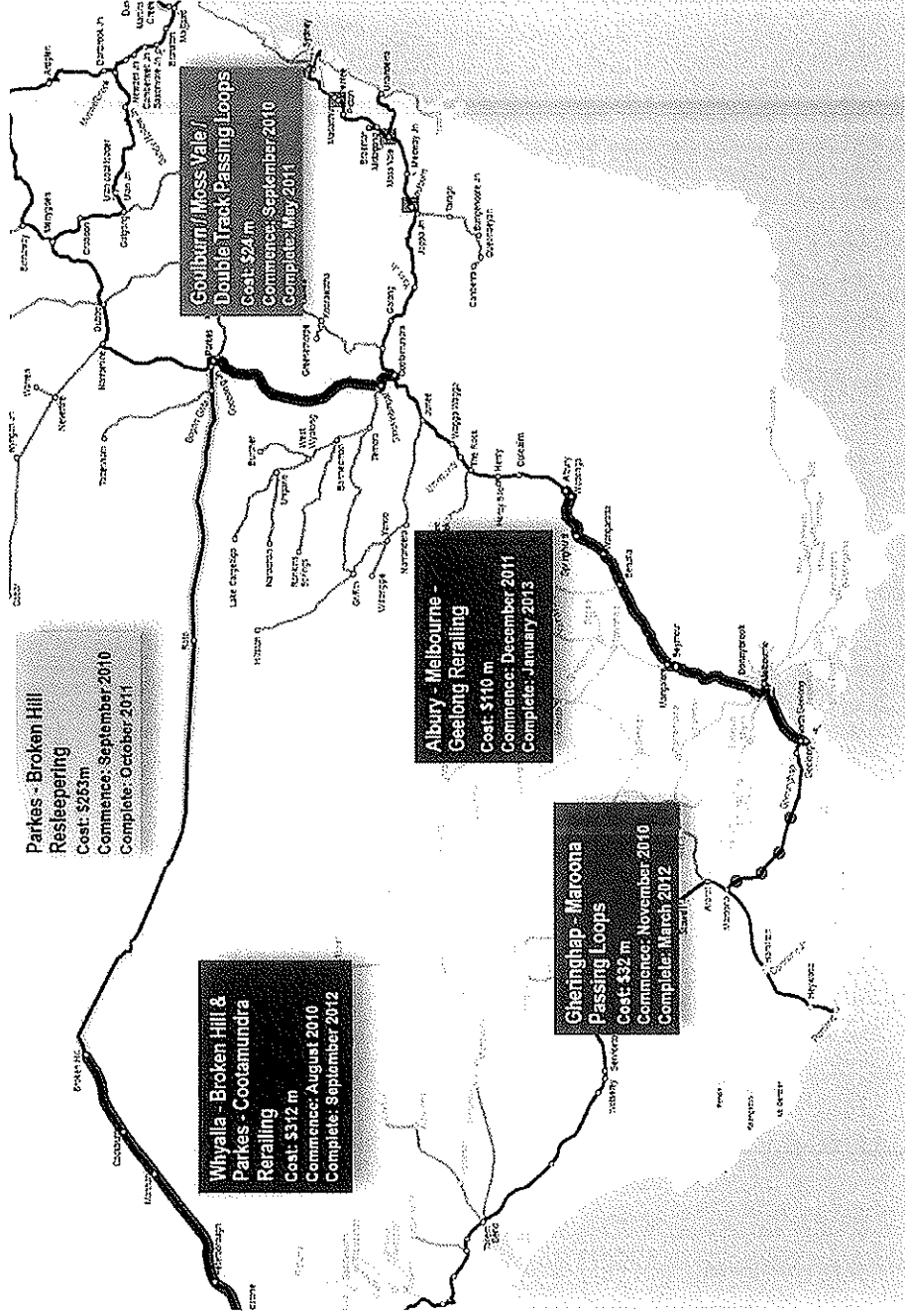
The objective will be achieved by the construction of four 1800m long loops between Gheringhap and Maroona with a suitable train control system.

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1.1. Map of V1 Alliance Productivity Projects



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2. Scope of this proposal

The scope of this proposal is divided into the headline areas:

2.1. PLANNING AND APPROVALS

2.1.1. Environmental

An Environmental consultant will be engaged to conduct the field and desktop investigation works required to complete the necessary environmental and heritage assessment and approvals.

2.1.2. Planning

Planning approvals be sought to allow construction to commence once the full PIP is approved.

2.2. DESIGN

2.2.1. Track and Civil

A design for track and civil works will be procured up to 'For Construction'.

A Track and Civil Design risk assessment will be conducted with Downer, ARTC and the designer to assess the whole of life risks of the design including constructability in line with the obligations of Downer's design management standard.

2.2.2. Survey

A full topographical survey will be undertaken for the areas earmarked for the new loops.

2.2.3. Signalling and Communications

A Signal design will be procured up to 'For Construction' including commissioning support and 'As Builts'.

The designer will commence by developing the Signal Functional Specification. Once this is reviewed and accepted, the designer will develop the detailed signalling design.

A Signal Design risk assessment will be conducted with Downer, ARTC and signalling designers to assess the whole of life risks of the design including constructability in line with the obligations of Downer's design management standard.

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The design will be for implementation of the 4 new loops and full ASW replacement with staging works as necessary to achieve the commissioning of this.

2.3. Long Lead Items

Allowance for long lead items for the new loops and ASW replacement is included in this proposal. The exact types and quantities are still subject to finalisation, but the allowances made cover the likely options for long lead items that will be required as shown in the spreadsheet at Appendix A.

3. COSTS TO DATE AND PIP DEVELOPMENT

This proposal also covers costs incurred to date and the development of the Project Implementation Plan together with the ARTC and Downer core cost allowance for this initial period. The works will be delivered under the V1 Alliance Contract utilising both ARTC and Downer resources on a 'best for project' basis.

3.1. Governance Structure

The Governance Structure for the Gheringhap to Maroona Passing Loops Project will be as for the rest of the V1 projects under the V1 Alliance Board and Alliance Management Team procedures and delegations.

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Appendix A – Long lead items, design and development funding

Long Lead Time Items, design and development funding - VIC G2M Passing Loops

Best Placed to Order	Item	Description	Estimated Quantity	Estimated Unit Rate	Total Cost Estimate	Comments
ARTC	RH Turnout	1:18.5 - 800 turnout to form crossover	4	\$150,000	\$600,000	4-6 months delivery
ARTC	LH Turnout	1:18.5 - 800 turnout to form crossover	4	\$150,000	\$600,000	4-6 months delivery
ARTC	Signal heads	New LED Colourlight Signal heads (various configurations)	32	\$12,000	\$384,000	up to 16 weeks delivery
ARTC	Track Circuit	Not defined	64	\$20,000	\$1,280,000	up to 26 weeks delivery
ARTC	Relays	Not defined	200	\$1,000	\$200,000	Various types required (price averaged), up to 26 weeks delivery
ARTC	CBI	Interlocking	8	\$30,000	\$240,000	New loops
ARTC	Cable	Type TBC	8000	\$5	\$40,000	Approximate only, 11 weeks delivery
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ARTC	Cable	Type TBC	8000	\$5	\$40,000	Approximate only, 11 weeks delivery
ARTC	Cable	Type TBC	30000	\$2	\$60,000	Approximate only, 8 weeks delivery
ARTC	Point Motor Drive	Westinghouse D84M	8	\$20,000	\$160,000	Motor Drive and accessories, 26 weeks delivery
ARTC	Transformers	415V/120V-120V/415V	8	\$5,000	\$40,000	Approximate only, 16 weeks delivery
ARTC	ARTC Support cost	Signalling Project Engineering	1	\$70,000	\$70,000	
ARTC	Signalling design	RSS	1	\$3,600,000	\$3,600,000	
ARTC	Risk Assessment	Sig & Civils	2	\$12,000	\$24,000	
ARTC	Cost to date		1		\$6,000	
					\$7,464,000	
Downer	Survey new loops		4	\$20,000	\$80,000	
Downer	Environmental survey		1	\$30,000	\$30,000	
Downer	Track and Civil design		1	\$600,000	\$600,000	
Downer	TCE PIP and Management		1	\$250,000	\$250,000	
Downer	DEW Core cost		1	\$100,000	\$100,000	
Downer	Cost to date		1	\$54,000	\$54,000	
Downer	Planning and approvals		1	\$50,000	\$50,000	
					\$1,164,000	
	Total				\$8,628,000	