



Murray Basin Rail Project

Business case review summary

Introduction

The Murray Basin Rail Project is a vital project for Victoria's farmers and the freight industry and is already delivering better, more efficient freight services.

To date, freight trains have returned to the Mildura/Yelta and the Murrayville-Ouyen lines with standard gauge access, and to the Maryborough-Ararat line, which has been reopened after 15 years.

The Murray Basin Rail Project is part of a range of investments in Victoria's rail freight network that includes:

- The \$58 million Port Rail Shuttle network;
- The \$4 million extension to the Mode Shift Incentive Scheme
- The \$125 million Port Rail Transformation Project
- Planned intermodal terminals at Beveridge and Truganina.

In 2019, \$23 million of critical maintenance was undertaken on the Manangatang line to replace over 50,000 sleepers and resurface the track between Lalbert and Manangatang. Grain unloading capacity at Geelong Port has increased train capacity after signalling upgrades to Geelong C-Box.

The Victorian Government has recently invested \$83 million in a freight improvement package focused on replacing sleepers, repairing ballasts and renewing level crossing equipment along almost 400 kilometres of freight rail lines.

A review of the original business case for the MBRP was undertaken backed by an extensive program of industry engagement. This has been critical in determining future investment in the rail freight network in the regions.

The review of the business case was completed and provided to the Commonwealth Government in May 2020.

The review proposes a package of works which requires an additional \$244 million with the Victorian Government seeking \$195.2 million from the Commonwealth with a State contribution of \$48.8 million, which is a funding share consistent with the Commonwealth Government's policy of funding 80 per cent of the cost of regional transport projects.

If agreed, this would take the overall cumulative investment in the Murray Basin Rail Project to \$814 million.

The next step is for the Victorian and Commonwealth governments to jointly agree on the next steps.

We will continue to work closely with the Rail Freight Working Group and other key stakeholders as next steps are jointly progressed.

Delivering benefits

Benefits delivered by the MBRP to date include:

- More than 175,000 timber sleepers installed, as well as 3400 metres of rail replaced, and almost 10,000 metres of track refurbished.
- The upgrade of the Murrayville to Ouyen freight line including gauge conversion, sleeper replacement and track repairs.
- Freight trains running on the upgraded Hopetoun line and transporting grain to key markets in NSW.
- Freight trains from Murrayville now able to connect with the upgraded Mildura/Yelta line, a major freight route that plays a key role in transporting, mineral sands, fruit, vegetables and wine to the world via export markets.
- The reopening of the Ararat-Maryborough line at up to 65km/h
- The upgrade of 35 level crossings between Maryborough and Ararat with boom gates, bells and flashing lights to provide increased safety for motorists and train drivers.
- More than 50,000 sleepers laid and extensive track resurfaced between Lalbert and Manangatang.
- Jobs for more than 500 workers, including 220 from regional Victoria.



The original business case

The original business case for the MBRP was first developed in 2012 recognised that certain parts of the Murray Basin freight rail network were in a dilapidated state.

However, the complexity of the project was underestimated, particularly the condition of the track and the extent of investment required to complete the full scope of the project.

In addition, a program of rail upgrades since 2012 has altered the rail landscape in Victoria.

These improvements are detailed in Figure 1.

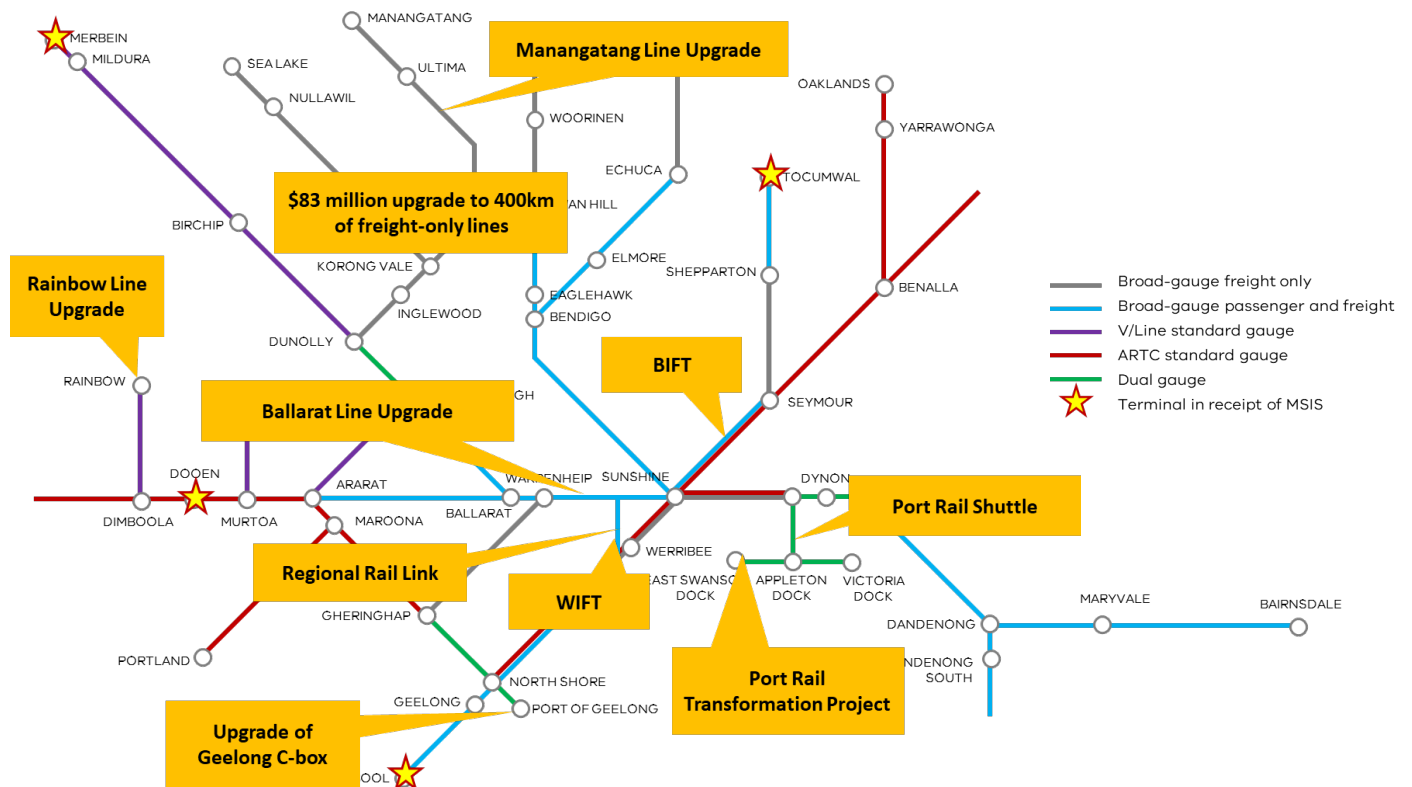


Figure 1 Network improvements since 2012

Reviewing the business case

The business case review has been informed by updated demand drivers, modelling and feedback from the freight industry. In addition, the Department of Transport and Rail Projects Victoria carried out:

- Site assessments including walking the track
- Detailed modelling to ensure the final outcome met the needs of industry
- A review of the original project drivers and objectives including freight demand forecasts, investment logic mapping and economic appraisal.



Consultation

Industry engagement and feedback have been critical in shaping the way forward and establishing priorities. As part of the business case review, the Department of Transport consulted rail freight operators, freight handlers and representatives from farming and local government organisations.

The consultation sought to:

- Re-establish understanding of industry's network needs and drivers
- Seek feedback on a proposed program of freight network improvements
- Test if the proposed program will deliver the service outcomes that meet the current and forecast demands of Victoria's rail freight operations.

The following themes were consistent with operators:

- Speed –improve cycle times from terminals to Port to remain competitive with road
- Weight –21 tonne axle load wagons on smaller wheels with modern locomotives, to remain competitive with road
- Pathways – increased number of pathways and improved management of pathway operations

The following rail freight network infrastructure upgrades and operational improvements were consistent from discussions with operators:

Theme	Scope
21 tonne axle loads	Re-railing of Maryborough to Ararat
Siding capacity	Sidings at Maryborough, Ouyen, Donald, Dunolly and cement siding at Merbein
Passing loops	Additional loop at Maryborough (or possibly Avoca) with some support for an additional one at Sutherland, and consideration of longer loops to enable longer trains
Further standardisation	Gauge conversion of the Manangatang and Sea Lake lines should not be undertaken unless the line between Maryborough and Gheringhap is converted to dual gauge
Optimisation of additional lines	Re-opening of lines outside the original MBRP scope
Operational Improvements	Opportunities such as Electronic Train Orders and improved train pathing systems

In addition to the above engagement, a freight demand update was undertaken based on data and stakeholder consultation with over 40 stakeholders from a cross-section of industry and local government.

The Department of Transport and Rail Projects Victoria conducted a number of site visits in most instances accompanied by freight operators and handlers.

Briefings on modelling and network requirements were also conducted with freight operators and handlers.

The Victorian Government established the Rail Freight Working Group, bringing together members of the freight and primary industries as well as government agencies to focus on network priorities.



Freight demand

The freight demand update revealed that there are significant prospects in horticulture industries in the Murray Basin region with increase in exports of between 15 to 20 per cent expected in the next two to three years.

Growth in mineral sands exports has been slower than expected with the forecast estimated in the original business case not expected to be reached until 2025.

Grain still comprises more than 60 per cent of the forecast freight volume across the network, with mineral sands and grapes the highest volumes of the other commodities.

The business case review reflects this contemporary demand information, advising that the current network can support the expected freight demand.

Review outcomes

The current network provides a standard gauge connection from Mildura/Yelta to the Port of Portland, as well as Melbourne and Geelong. This has increased Murray Basin freight access to the Port of Portland. Furthermore, recent investment in the Geelong C Signal Box has increased train capacity in the Geelong grain terminal unloading loop.

The review recommends that future works focus on optimising the current standard and broad-gauge network to improve capacity as well as provide additional network resilience.

It found that some of the benefits of standardisation can be met through enhancements to the current network.

The review found that since the original business case, significant investment had resulted in the potential for conflict with passenger services. The Ballarat line has been upgraded with new stations, duplicated sections of track, passing loops and signalling upgrades. The upgrade will enable additional passenger services to be introduced. These services will add to the 153 new services since 2015 as a result of the opening of the Regional Rail Link and other operational improvements.

The review found that further standardisation would require additional investment, extensive construction activity in the Ballarat precinct and disruptions to Ballarat line passenger services. Future increases in passenger services between Melbourne and Ballarat would result in further conflicts between freight and passenger services.

The results of operational modelling concluded that standardising the entire network and routing all trains via Ballarat would not increase network capacity beyond the currently available 28 weekly return paths.



Proposed package of works

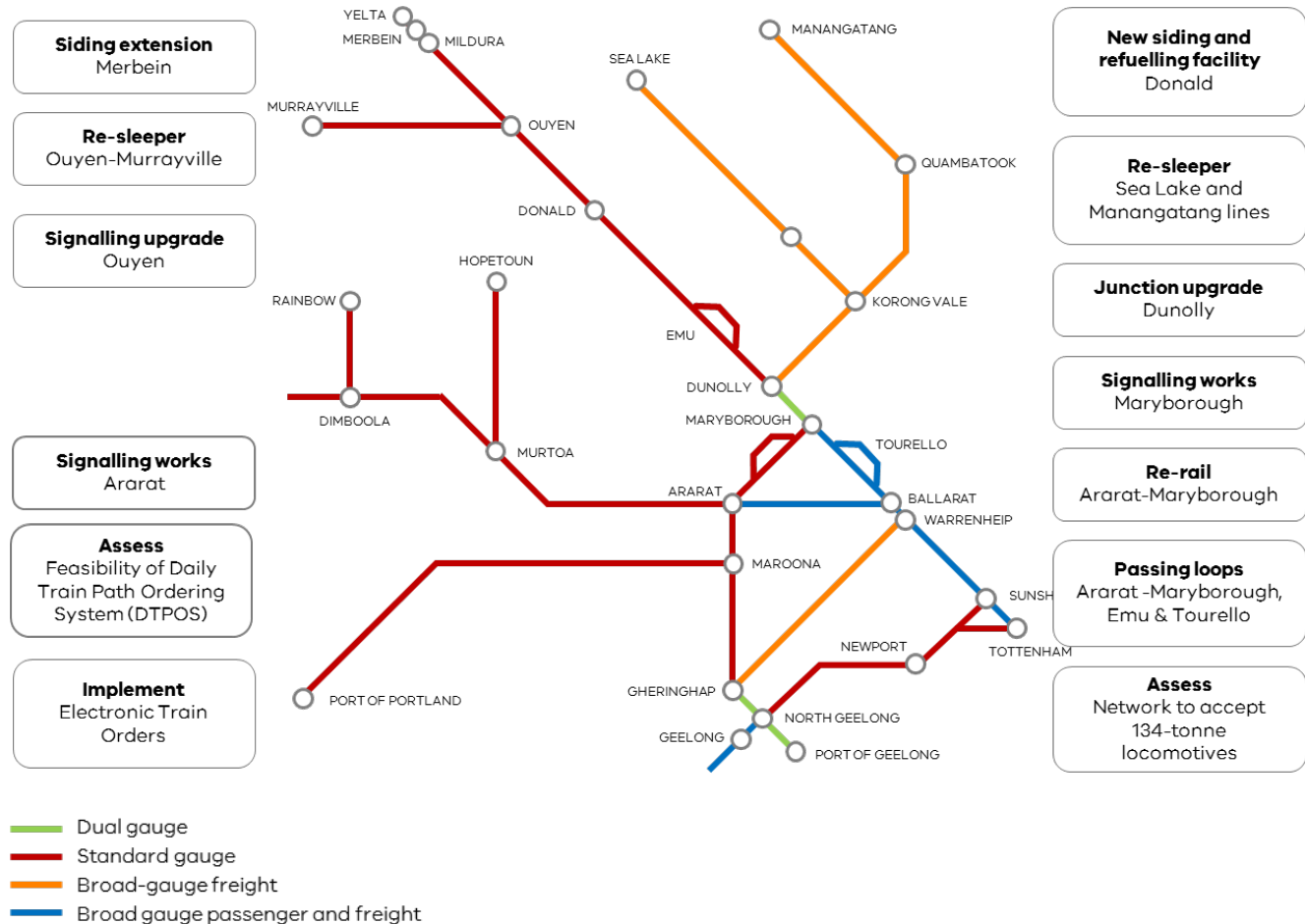


Figure 2 Proposed package of works

The review sets out a package of works to reduce cycle times and increase network reliability, capacity and resilience.

The scope of works aims to address key operational issues that have been identified by industry as well as optimise the current standard and broad-gauge networks.

Under the proposed package of works, a greater number of freight paths is achievable than was originally envisioned.

The review prioritises works to improve the Ararat-Maryborough corridor to allow for journey time improvements and extend 21 tonne axle loading (TAL) to all rolling stock wheel types on the Mildura/Yelta line. Key elements of the package and their benefits are detailed below.



Element	Benefit
Re-railing the Maryborough-Ararat line to accept 21-tonne axle load at 65kmh	Full hour-plus transit time saving each way Higher loading capacity benefits extended to all trains
New or upgraded sidings at Maryborough, Donald, and Merbein	Trains able to stage/hold for oncoming trains.
A new passing loop on the Maryborough-Ararat line, a new passing loop at Tourello, and lengthening of the existing passing loop at Emu.	Increases train paths per week on the Murray Basin network from 28 path to 49 Enables 1200m trains to pass each other on the Mildura line. Capacity to cope with late running of trains. Paves way for additional passenger services from Maryborough.
Upgraded signalling at Maryborough and Ararat junctions.	More efficient train control to fully realise capacity uplift.
New turnouts and re-signalling at Dunolly junction	More efficient train control to fully realise capacity uplift.
Re-signalling of Ouyen yard	More efficient train control to fully realise capacity uplift.
Re-sleepering of broad-gauge sections on the Sea Lake and Manangatang lines	Removes temporary speed restrictions
Re-sleepering of sections of the Mildura-Yelta line with concrete sleepers	Removes temporary speed restrictions
Re-sleepering/rail adjustment of the Ouyen-Murrayville line to boost speeds	Removes temporary speed restrictions
Mobile refuelling point at Donald	Provides refuelling opportunity for all operators
Structural assessment to ascertain works needed to introduce 134-tonne locomotives	Paves the way for heavier, more efficient locomotives to run on the Murray Basin Network.
Siding extension at Merbein and reinstatement of Road 2 at Donald	Allows operators to load more wagons without blocking the mainline Enables out-of-service locomotives/wagons to be parked at Donald for repair
Electronic Train Orders	More efficient train control to fully realise capacity uplift.
Assessment of feasibility of Daily Train Path Ordering System	More efficient train control to fully realise capacity uplift.