

Railing Ahead:

*Rail Issues and Opportunities
and
Future-Proofing in the
Loddon Mallee Region of
Victoria*



March 2012

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DISCLAIMER

Views policies and proposals are set out in this report as ideas for consideration, and do not necessarily represent the policies or opinions of any of the organisations or individuals who have assisted in the preparation of this report.

Preface

This study has been prepared on a modest budget to stimulate discussion about rail issues among leaders in the Loddon Mallee region, according to Terms of Reference provided by Regional Development Australia and Regional Development Victoria.

While every care has been taken in presenting this information, in-depth research or fieldwork has not been possible. Therefore the Report should be understood for what it is: a limited survey, not deeply researched conclusions.

The assistance of Council CEOs, officers of State Departments and of V/Line and VicRoads is noted with appreciation. Particular thanks to Mr Alan Beavis of VicRoads Bendigo for the production of the excellent maps and diagrams contained in this report and to Ms Sandra Wilson, Transport Co-ordination Manager for the Loddon Mallee Region, Department of Transport Bendigo, Project Co-ordinator

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**Regional Development Australia/Regional Development Victoria in co-operation with
The Department of Transport, Victoria**

FRONT COVER PICTURE:

Loading Containers of Pulses at Donald intermodal terminal on the Mildura Line. (Photo: ewr)

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Introduction

In November 2011, the Loddon Mallee Regional Development Australia Committee sponsored the Regional Strategic Plan Leadership Group to commission this paper to support Railing Ahead. *Railing Ahead* is one of five Regional Change Ideas developed through a process recently undertaken to identify the top five priorities that could collectively transform the region over a 10 to 20 year period.

The Loddon Mallee region is richly endowed with beautiful food producing districts and communities that offer outstanding lifestyle opportunities. It also has as a legacy of past investment in an extensive but neglected rail network that can play a vital role in providing highly efficient low carbon passenger and freight transport in coming decades.

In the past 5 years, the Bendigo to Melbourne railway has become Australia's fastest growing regional rail route, with growth of patronage at over 114%, reflecting investment in renewed track and trains, and the faster and more frequent services such upgrades provide for. There is now strong demand from all parts of the Loddon Mallee community for similar fast and frequent passenger trains to be provided, so that people in all districts can readily access the employment, educational, medical, retail and leisure opportunities of Bendigo and beyond, with less reliance on motor cars.

The region also uses rail extensively to move the food and mineral products it produces, and in coming years, bulk and containerised grains, rice and export food products as well as mineral sands will move through the region in increasing quantities. In this area, substantial investment is needed to improve efficiency, to standardize tracks and to enhance connectivity within the region and to ports and other parts of Australia.

This study aims to provide the region's leadership groups with an inventory of issues and opportunities to guide and shape the regional transformation that an updated rail passenger and freight system promises. It also addresses the need for future proofing, that is, taking decisions today that will keep key rail corridors and links available to us in future years.

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1

Issues

This summary identifies 26 issues needing consideration, actions or advocacy to improve rail functioning in the Loddon Mallee Region

This Chapter lists key rail issues for the Loddon Mallee Region in relation to infrastructure, freight, passenger, state-wide issues and future-proofing. Each issue is briefly stated, More detailed analysis of key issues is provided in Chapter 2, “Opportunities”, together with suggested actions where appropriate. Chapter 3 makes suggestions for Future Proofing.

Issues in Brief

Infrastructure

- Melbourne-Bendigo line capacity is constrained by the single line between Kyneton and Bendigo, preventing introduction of 30 minute frequency trains
- Capacity on the Swan Hill and Echuca lines can be improved by adding passing loops and improving level crossing protection standards
- The capacity of the grain rail network to move harvests can be increased by 25% by adding passing loops, removal of speed restrictions, level crossing improvements, strengthening track for heavier axle loads, and providing better rail access to ports.
- Standardization of the North West lines (Mildura, Kulwin, Robinvale), would greatly improve grain train productivity, enhance competition, and allow a Standard Gauge connection to Bendigo heavy industries now served by road
- A comprehensive assessment should be undertaken of each corridor to ascertain future infrastructure enhancements needed to deliver more productive freight train operations and faster and more frequent passenger train services

Passenger

- There is significant scope for faster and more frequent trains on the Melbourne to Bendigo Main Line, with the goal being half-hourly frequency once necessary investment is made
- Train services from Bendigo to Swan Hill can be made faster and more frequent (3 to 5 return services a day) with relatively modest investment, including the provision of two passing loops and crossing protection improvements,

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implemented in stages as proposed by V/Line in its Long Term Strategy

- Train services from Bendigo to Echuca can be made faster and more frequent (3 to 5 return services a day) with relatively modest investment, including the provision of two passing loops and crossing protection improvements, implemented in stages as proposed by V/Line in its Long Term Strategy
- Reintroduction of the Mildura Passenger Train Service is strategically important to Mildura, Ouyen, St Arnaud and other communities on the western side of the Loddon Mallee Region; the recent feasibility study is to be referred to the new body Public Transport Victoria for peer review
- The Geelong-Ballarat Bendigo Rail Revival Project offers opportunities for significant improvements to rail access and connectivity; there are options as to the form implementation could take
- Rail commuting to Bendigo from Echuca and Castlemaine has become important but opportunities to improve it remain; for example, service patterns preclude commuting from Pyramid Hill or Kerang
- Concept planning for a rail link from the Bendigo line to Melbourne airport should proceed, providing for airport connection, future high speed train connection, and for avoiding delays to regional trains from suburban trains in the section between Sunbury and Sunshine following Sunbury electrification

Freight

- The productivity of grain trains serving the region can be improved by at least 25%, allowing very large amounts of grain (wheat and rice) that remain in silos and future harvests to be efficiently railed to market
- Investigations as to the possibility of transporting mineral sands from NSW deposits via the Euston bridge and from Victorian mineral sands deposits should include the possibility of a railhead at Robinvale or Manangatang, the standardization of the Robinvale line and the rehabilitation of the existing standard gauge Maryborough to Ararat link, whereby mineral sands can reach Hamilton and Portland
- Container train traffic through the region is limited, and could be fostered by good policy decisions; Manangatang has potential as a significant future rail super site for grain, mineral sands and containers, and for the break-up of road trains from New South Wales via the Mallee Highway, as the concentration of traffic would help the Business Case for investment in the line
- Bendigo currently lacks a standard gauge connection to the national rail network and plans should be developed for providing this
- A Mildura to Menindee standard gauge connection (and associated standardization) offers significant potential and an in depth study of this should be commissioned

Statewide Issues affecting Railing Ahead in the Loddon Mallee

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- There is no annual maintenance allocation for the freight rail network and this is needed to prevent the condition and productivity of the network declining; an annual allocation of \$20m should form part of Victoria's transport budget now that the tracks have returned to state ownership
- Rail access to the ports of Melbourne and Portland remains inefficient and further improvement of port/rail connections is imperative
- An efficient means of rail access from northern food producing areas to the new wholesale fruit and vegetable markets at Epping needs to be devised

Future Proofing

- The reinstatement of double track between Kyneton and Bendigo should be planned and progressively implemented to cater for imminent and future traffic growth
- The rail corridor between Castlemaine and Maryborough needs to be protected to facilitate future V/Line passenger services whether resulting from the current Rail Revival Study or a subsequent decision
- The rail corridor between Bendigo and Inglewood needs to be protected to facilitate a future standard gauge connection for Bendigo industry at Marong or North Bendigo once north western standardization has been implemented
- The rail corridor and track between Echuca and Toolamba needs to be protected as it provides an alternative freight route from Echuca, Deniliquin and Moulamein avoiding passenger traffic south of Bendigo
- The O'Keefe rail trail (former Bendigo to Melbourne line via Heathcote and Kilmore) needs to be protected as a long term rail option, and in the short term, a new corridor for this route through Kilmore needs to be identified and protected in the context of the development of the Kilmore bypass.
- Vic Track and V/Line should refer proposals for the removal of passing loops, sidings or other rail infrastructure or the sale of land surrounding stations to a suitable Loddon Mallee regional body for comment prior to action as there may be regional and local knowledge or strategic intentions that need to be taken into account before infrastructure is removed or alienated.

2

Opportunities

2.1 Infrastructure

2.1.1 Bendigo Line Capacity

Since the introduction of Regional Fast Rail in September 2006, Melbourne to Bendigo rail passenger services have been transformed by faster and more frequent trains. The traffic growth of over 100% is one of the strongest passenger growth performances of any Australian railway.

The most recent timetable improvements have seen the introduction of an hourly frequency between Bendigo and Melbourne. Services are well patronised and the next frequency hurdle to be considered would be a half hourly service.

Regrettably, at the time of the introduction of Regional Fast Rail, the decision was made that the line between Kyneton and Bendigo (which had been a double line since its opening in 1862), should be reduced to a single line. This decision was recognised as a mistake at the time¹, and is more clearly understood to be a mistake now as it restricts the capacity of the line and prevents a half-hourly frequency being introduced north of Kyneton.

The Bendigo corridor provides extremely popular residential locations in attractive communities. In consequence, it is also a fast developing rail commuter corridor, with commutes both toward Melbourne and toward Bendigo for workers, students, shoppers and people attending sporting and cultural events.

However many developing communities along the line such as Riddell's Creek and Malmsbury (or stations accessed by car, for example Clarkefield station, which serves Lancefield residents by car), receive very few trains each day, while others like Harcourt, still have no service. A half-hourly service frequency would allow improved services to these locations.

On the other hand, the current hourly frequency (excellent as it is compared to services in the 1990s), means that long distance trains from Echuca and Swan Hill have to make stops that could be avoided if more trains were run. It also means that the flagship non-stop high speed services between Bendigo and Melbourne, originally envisaged, are not provided.

The frequency of V/Line passenger services on this line restricts freight movements, particularly during the day, as freight trains are much slower than passenger trains and are less reliable. This also requires that alternative freight routes be maintained (such as the Echuca to Toolamba line, and the route from Bendigo to Maryborough via Inglewood) so that if rail freight grows as expected in future years, the density of

¹ The former Deputy Prime Minister, Mr Tim Fischer and the author of this report addressed a packed public meeting at the Theatre Royal, Castlemaine on this subject on 6 August 2004. The meeting was titled *Rail for the 21st Century*.

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passenger traffic on the Bendigo to Melbourne route will not impede rail freight movements.

Action Required

The goal of a half-hourly train service from Bendigo to Melbourne should be adopted and be the subject of advocacy.

Local governments should focus on planning schemes to station precincts at all major stations on the Bendigo line to ensure adequate commuter parking, safe and active environments, connecting bus and taxi access, and an appropriate balance between retail and medium density development opportunities in these locations.

The line between Kyneton and Bendigo needs to be returned to double track on a progressive basis.

The Geelong Ballarat Bendigo Rail Revival Study will consider capacity on the Castlemaine to Bendigo line and it will be important that this opportunity is used to highlight the importance of action on this matter regardless of whether a Geelong to Bendigo service is introduced.

Alternative rail freight routes that avoid this densely trafficked corridor must be maintained (e.g. Echuca to Toolamba; Bendigo to Maryborough via Inglewood)

2.1.2 Echuca and Swan Hill Lines Capacity

Capacity constraints imposed on better passenger train speeds and frequencies are not restricted to the busy mainline south of Bendigo, but also apply to the two passenger lines north of Bendigo, the Echuca and Swan Hill lines.

V/Line has identified the following constraints in its recent Northern Lines Long Term Strategy, presented to councils in the region in 2011²:-

- No suitable crossing loops between Bendigo – Swan Hill and Bendigo – Echuca - This means that currently two passenger trains cannot pass each other between Bendigo and the terminus of either service, a major constraint on adding extra trains. (In the past, stations such as Kerang, Elmore and Rochester were staffed and had passing loops, but these were removed during the years when rail was starved for funds and run down by government).
- Class 3 track Bendigo to Swan Hill and Class 4 track Bendigo to Echuca
- Remaining passively protected level crossings between Bendigo – Swan Hill and Bendigo – Echuca need to be upgraded for 130 kph V/Locity operation

As demand for better return services to Bendigo (and Melbourne) builds, it will be important to address these issues.

2.1.3 Grain Rail Network Capacity

Capacity constraints also exist on those parts of the rail network that carry V/Line's rapidly growing passenger train services. There are also significant capacity constraints on the lines on which the wheat harvest is moved, especially the North

² V/Line, (2011), Long Term Strategy, Northern Corridor, PowerPoint presentation

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Geelong to Mildura line. These capacity issues were recently listed by the Grain Logistics Task Force³, and include the following:

- The lack of a crossing loop between Gheringhap and Ballarat (there was formerly a crossing loop at Lethbridge)
- The lack of a crossing loop between Ballarat and Maryborough (there was formerly a crossing loop at Tourello, between North Creswick and Clunes)
- Passenger train congestion around Ballarat
- The lack of capacity for trains to cross (pass each other) on the double line section between Ballarat and Warrenheip
- Inadequate safe working systems between Ballarat and Maryborough to enable multi train running between these locations
- 97 Track Speed Restrictions on the grain rail system including 69 between Gheringhap and Yelta (the Mildura line)
- Re-opening of the Shepparton to Dookie line.

These improvements, particularly the first 5 of them, were estimated by the Task Force to be capable of providing a 25% improvement in grain train efficiency by reducing the cycle time from 48 hours per round trip to 36 hours, allowing each of the 9 grain trains in service to transport 300,000 tonnes of grain per annum. If the cycle time could be reduced to 24 hours, each train could transport 500,000 tonnes per annum (providing silo opening hours, rail infrastructure and port unloading facilities allowed this.) In short there is capability if rail infrastructure works are undertaken, to transport 4.5 million tonnes of the 6 million tonne harvest by rail.

2.1.4 Standardization of the North West Lines

(Mildura, Sea Lake (Kulwin) and Robinvale Lines)

In 1996, standardization was extended as far as Dunolly, at the south end of the region, as a prelude to the standardization of the Mildura, Kulwin and Robinvale lines. Dual gauge level crossings were installed. The next stage will be to implement standardization of these three lines. The following table indicates the order of cost of this gauge conversion:

Yelta-Mildura-Geelong	\$73.9m
Ouyen-Pinnaroo	\$17.7m
Dunolly-Sea Lake	\$27.3m
Korong Vale-Manangatang	\$23.4m

Source: Victorian Freight and Logistics Council (2010), *Freight Forward: Victorian Rail Gauge Standardization Rapid Appraisal*, p.56

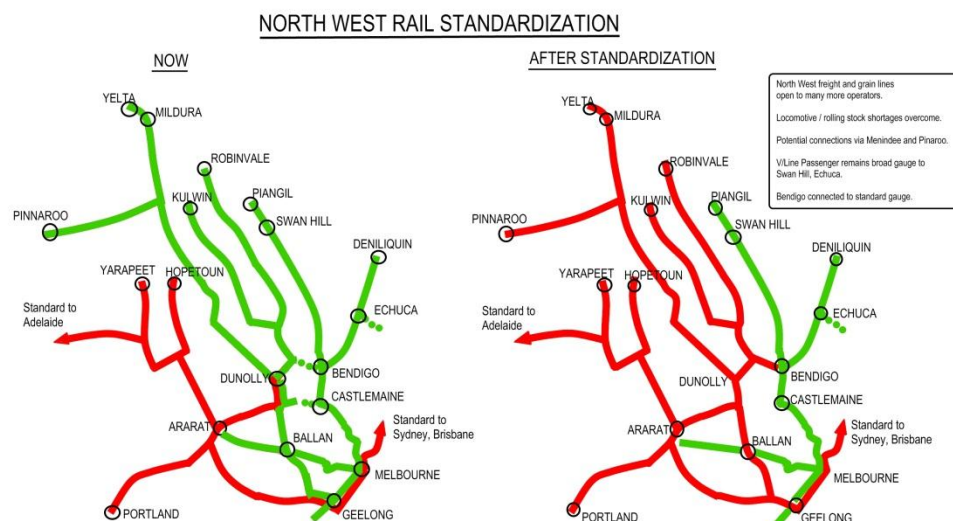
In addition, to allow standard gauge freight trains from these lines to reach Hamilton and Portland, there will be a need to rehabilitate and re-open the standard gauge link from Maryborough to Ararat, and provide a direct connection at Ararat from this line to the Ararat-Hamilton line, to avoid the need for trains to shunt and reverse direction at Ararat. Vic Track owns the land needed for such a connection. The estimated cost of providing this connection and rehabilitating the Maryborough to Ararat line is \$23m.⁴

³ Victoria, (2011) Grain Logistics Task Force Report

⁴ \$15m for rehabilitation and \$8m for the new link.

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Added to the above figures this suggests a cost of standardizing the three lines and the Ararat connection at \$165 million.⁵



Standardization has been repeatedly addressed by many reviews and studies of the subject, including:

- The 1921 Royal Commission⁶
- The Clapp Report (1945)⁷
- The Rail Freight Network Review (2006)⁸
- Victorian Freight and Logistics Council⁹
- Alliance of Councils for Rail Freight Development
- Grain Logistics Taskforce Report (2011)

These studies either recommended that standardization should proceed, or that it should occur when economically justified.

Action Required

A timetable and plan for the resumption of North West rail standardization is needed. This will require development of a rigorous Business Case for consideration by government.

⁵ There may be flow on costs at other locations around ports and junctions; these have not been estimated here.

⁶ Australia (1921) Royal Commission on Uniform Railway Gauge

⁷ Sir Harold Clapp, (1945) Report on Standardization of Australia's railway gauges

⁸ Victoria (2006), *Switchpoint: Rail Freight Network Review* (The Fischer Report)

⁹ Victoria Freight and Logistics Council (2010), *Freight Forward: Victorian Rail Gauge Standardization Rapid Appraisal*, p.56

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Loddon-Mallee could assist the preparation of this business case by locally documenting the economic benefits and untapped freight opportunities on this group of lines.

Mildura Rural City Council in 2010 engaged GHD consultants who in their report Mildura Derailed demonstrated the economic importance of rail to Mildura.

Similar work is needed to build the Business Case for the other lines. The massive tonnages of mineral sands and grain that can be moved on these lines needs to be highlighted.

It is also significant that some grain from Piangil, Woorinen, Swan Hill and the adjoining catchment in New South Wales is now moved on the Robinvale line via Boort, Ultima, Quambatook or Manangatang, adding to the case for investment in these lines¹⁰.

2.1.5 Comprehensive Corridor Assessment

While the above sections refer to the need for capacity enhancements required for various corridors and specific operational needs, it would be highly desirable if a program of corridor studies could be undertaken. These studies would examine each corridor and identify required works. Similar studies of main highways undertaken by road authorities in the region have led to planned upgrades being achieved, and this concept needs to be applied to rail corridor upgrades.

Action Required

A comprehensive assessment should be undertaken of each rail corridor in the Loddon mallee Region to ascertain future infrastructure enhancements needed to deliver more productive freight train operations and faster and more frequent passenger train services

2.2 Passenger Services

Experience both in Victoria and elsewhere has shown that increases in train frequencies can deliver significant patronage growth and in doing so address a range of outcomes regarding improved access to services and social inclusion. Such increases in frequency are normally recommended following comprehensive market research looking at travel needs and regional trends, and through developing timetables that better reflect community needs. Suggested service improvements and associated infrastructure improvements could include:

2.2.1 Faster and more frequent services on the Bendigo main line

In its Northern Corridor Strategy¹¹, the subject of consultation with Councils in the region in 2011, V/Line identified the following as its strategic plans for the improvement of services on the Bendigo Main Line:

¹⁰ Document from former GEB Chairman and Gannawarra Councillor Mr Graeme Mann, p.3

¹¹ V/Line, (2011), Long Term Strategy, Northern Corridor, PowerPoint presentation

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Stage 1 Half hour off peak frequency to and from Kyneton (9:00 – 15:00)
Estimated Funding Required: \$3M p.a. opex

Stage 2 Duplicate the track from the down side of Castlemaine to the Harcourt Loop. Expected to deliver 3 trains per hour from Bendigo in the peak direction with 1 train per hour in the counter peak direction (i.e. an extra peak direction service per hour)

Estimated Funding Required: \$100M infrastructure, \$7M p.a. opex

Stage 3 Duplicate the track from the down side of Kyneton, through Malmsbury to the Taradale Loop. Expected to deliver 4 trains per hour from Bendigo in the peak direction with 2 trains per hour in the counter peak direction (i.e. an extra peak direction service and counter peak direction service per hour)

Estimated Funding Required: \$70M infrastructure, \$4M p.a. opex

The most significant costs involved are the capital costs involved in reinstating double track between Castlemaine and Harcourt (\$100 million), and between Kyneton and Taradale (\$70 million). These are reasonable costs, similar to the cost of about 10 kilometres of freeway. They offer very substantial travel time savings and frequency benefits to Loddon-Mallee communities. An interim stage toward duplication between Kyneton and Bendigo could be the provision of additional crossing loops as a precursor to duplication.

The reintroduction of double track will mean that at many stations two platforms will need to be used instead of a single platform as at present. At many locations on the Bendigo line, safe and/or Disability Discrimination Act compliant means of crossing to secondary platforms do not presently exist. This currently includes major stations such as Bendigo and Castlemaine. At Bendigo, disabled passengers must be moved by taxi if a departure is scheduled from Platform 2. While few trains leave from this platform at present, many more will do so as services are improved. The costs of providing modern lifts and overbridges that are safe and DDA compliant are substantial – but have been met in major new stations and upgrades in the metro area including Flinders St, North Melbourne, Footscray etc. Similar investments need to be prioritized for Bendigo line stations.

2.2.2 Improved Swan Hill line services

The Swan Hill Line currently receives only two passenger train services per day, making it impossible for visitors and business people to travel by train to Kerang or Swan Hill for business meetings or visits to the Swan Hill Pioneer Settlement within a single day. Similarly, Pyramid Hill and Kerang residents can't commute by train to work or study in Bendigo.

Market research has indicated that a service leaving Melbourne around 3.00pm to 3.15pm would significantly enhance opportunities for commuting from locations north of Bendigo on the Swan Hill line and provide more attractive evening arrival times into Swan Hill and further north, while still enabling the later timed service to address other travel markets.¹²

V/Line has proposed to introduce three services a day as follows:

Stage 1 Move to 3 return services per day (no infrastructure upgrades required). Additional return coach link to / from Mildura
Estimated Funding Required: \$5M p.a. opex

¹² Advice from Department of Transport.

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Stage 2 Provide two crossing loops between Bendigo and Swan Hill. Provide additional stabling at Swan Hill. Allows for four or five return services per day and corresponding coach links to Mildura. This also requires the release of a loco set from Shepparton services

Estimated Funding Required: \$19M infrastructure, \$10M p.a. opex

Stage 3 Upgrade the track to class 2, signalise sidings. Upgrade 70 passive crossings and 20 crossings with flashing lights to boom barriers. This will allow conversion of the service to V/Locity vehicles and 130 / 160 kph operation.

Estimated Funding required: \$126M infrastructure, \$60M rolling stock: \$2M p.a. opex

High speed operation and more frequent trains would be of significant benefit in providing quicker business and tourist access to Swan Hill, Robinvale and Mildura, as well as, in the other direction, extended opportunities for Gannawarra Shire residents to access work, study, medical treatment and shopping in Bendigo. The costs are reasonable.

2.2.3 Improved Echuca line services

V/Line has also proposed specific measures to improve train speeds between Bendigo and Echuca. This track is currently classified Class 4, and V/Locity trains are restricted to 80 kph, resulting in a longer than desirable journey time. The V/Line proposal is:

Stage 1 Move to 3 return services per day (no infrastructure upgrades required)
Estimated Funding Required: \$4M p.a. opex

Stage 2 Provide a crossing loop near Elmore. Modify stabling at Echuca to cater for additional vehicles (additional dewatering, lighting, pathways etc.). Upgrade the track to class 2, signalise sidings. Upgrade 22 passive crossings and 7 crossings with flashing lights to boom barriers
Allows for 4 or 5 return services per day and 130 / 160 kph operation.

Estimated Funding Required: \$56M infrastructure, \$30M rolling stock, \$4M p.a. opex

Four or five return services per day with a journey time reduced as a result of high speed operation would provide many opportunities for residents in this part of the Loddon-Mallee catchment to more easily access employment, shopping and leisure activities in Bendigo and Melbourne. The overall cost is reasonable, and the capital cost compares with the cost of a single freeway overpass.

2.2.4 Reintroduction of Mildura Passenger Train

Reintroduction of the Mildura Passenger Train Service is strategically important to Mildura, Ouyen, St Arnaud and other communities on the western side of the Loddon Mallee Region. There has been very strong support in affected communities, especially around Mildura, for this train service to be reintroduced.

In 2010, the Victorian Government commissioned a consultancy report on the feasibility of reintroducing passenger train services to Mildura. The consultants' report on this study identified nine options for consideration, and following a period of public comment, these are now under consideration by Public Transport Victoria. Currently a daily passenger train service extends as far as Maryborough on the Mildura line, with other V/Line services in the study area (with the exception of the Swan Hill line) being provided by V/Line contracted road coach services.

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The Feasibility Study assigned high costs and other difficulties to the reintroduction of the passenger train; these findings were questioned by the community and the Minister has indicated that they will be the subject of peer review.

High Speed Mildura Train Option

One of the options examined by the consultants was a High Speed rail service to Mildura, to be created by building a new fast (220 kph) track between Swan Hill and Mildura via Ouyen or via New South Wales. As there is already 160kph operation between Melbourne and Bendigo, and planning for 160 kph operation from Bendigo to Swan Hill is part of V/Line's long term strategy, the further extension of higher speed trains under this option needs to be kept in view. It could allow a Mildura to Melbourne journey, via Bendigo, in less than 5 hours, instead of a slower journey (8 hours plus) via Ballarat.

The New South Wales route for such a high speed train would require two Murray River crossings, one of which could be incorporated into the design of the proposed new Karadoc crossing mentioned in Section 2.3.5 below. While such a project may seem speculative at present, high speed rail costs are likely to decline in relative terms over time, as with all new technologies. Rolling stock could in future be mass produced (particularly as China accelerates its high speed rail development) and construction techniques could be streamlined. The viability of a Mildura high speed rail option could be supported if regional airline costs and viability continue to be threatened by high aviation fuel prices and other factors.

Referral to Public Transport Victoria

The Minister for Transport has indicated that the findings of the Mildura Passenger Train Feasibility Study will be referred to the newly created Public Transport Victoria for peer review following its creation on 1 April 2012.

2.2.5 Geelong-Ballararat-Bendigo Rail Revival

On 23 August 2011, the Minister for Transport commissioned a two year \$2 million study *Geelong Ballararat Bendigo Rail Revival* of the feasibility of introducing a passenger train service from Geelong to Ballarat to Maryborough to Castlemaine to Bendigo¹³.

Such a service would offer a number of important benefits both within the Loddon-Mallee region and elsewhere, including:

- A passenger service between Geelong and Ballarat would allow cross commuting by workers, students and others between those two centres
- Growing communities in Golden Plains Shire such as Bannockburn and Lethbridge could regain rail access
- The existing Maryborough to Ballarat service (of one train a day) could be expanded to a more realistic service level providing enhanced travel options for Creswick, Clunes and Maryborough residents and a better return on the investments in track and new stations that have been made there recently

¹³ Minister of Transport Press release 23 August 2011

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- Maryborough, Carisbrook and Newstead would regain rail access to Castlemaine and the Bendigo line in a manner that would give them options of accessing medical, education, employment shopping and leisure activities in Bendigo
- Rail based goldfields tourism products could be developed.

Much of the rail route is suitable for passenger trains now:

- The Geelong to Ballarat line is intensively used and was re-laid three years ago
- The Ballarat to Maryborough line has recently seen the return of passenger trains, level crossing upgrades and new stations at Creswick and Clunes
- The Castlemaine to Bendigo section is part of the Regional Fast Rail system and is intensively used, albeit this section is part of the route that was reduced from double to single track as part of the RFR project.

On the other hand, the Maryborough to Castlemaine section is in poor condition and would require effective reconstruction:

- The section from Maryborough to Moolort has been used as a source of ballast from the Moolort quarry.
- The section from Moolort to Castlemaine has not been since December 2004 when it was closed between Moolort and Maldon Junction (near Castlemaine) to permit safe running of heritage trains on the Victorian Goldfields Railway between Castlemaine and Maldon.

These issues will be studied and analysed by the current review.

Looking to the medium term, an alternative approach to the Maryborough to Bendigo section via Inglewood should be considered for three reasons:

- If the North Geelong to Mildura line is standardized, it will no longer be possible for a broad gauge train originating in Bendigo to travel towards Geelong beyond Maryborough
- While the Maryborough to Castlemaine route has been disused for some years and will require significant investment, the route between Maryborough and Bendigo via Inglewood offers a route that has more recently been in use, and would be little longer in transit time.
- The route via Inglewood (if the Mildura line is standardized) could provide standard gauge access to Bendigo industry (see Section 2.3.3 below)

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- Although Carisbrook and Newstead would not be served, rail service would be reinstated to Dunolly, Inglewood, Bridgwater and Marong. Bridgwater has in the past been the source of significant grain traffic¹⁴, while Marong has been considered as a possible inter-modal terminal for Bendigo (which if connected to standard gauge could receive containers from the ports of Melbourne and Adelaide and elsewhere).

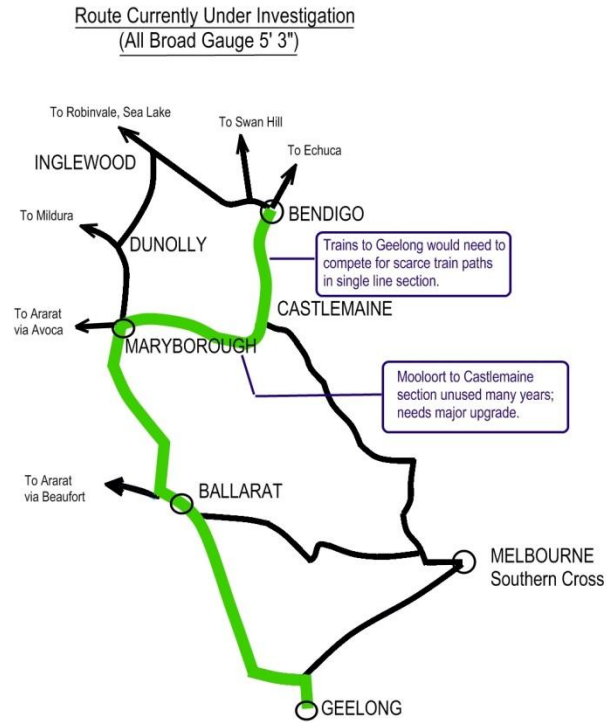
The diagram below sets out the alternatives.

Action Required

City of Greater Bendigo and the Loddon Mallee region consider the merits of a standard gauge connection to Bendigo from Inglewood if North West lines are standardized, in relation to the proposed Geelong Ballarat Bendigo Rail Revival project. This would allow trains under the Rail Revitalisation Project to operate on standard gauge via Inglewood between Geelong and Bendigo, and provide a standard gauge freight link to Bendigo industry.

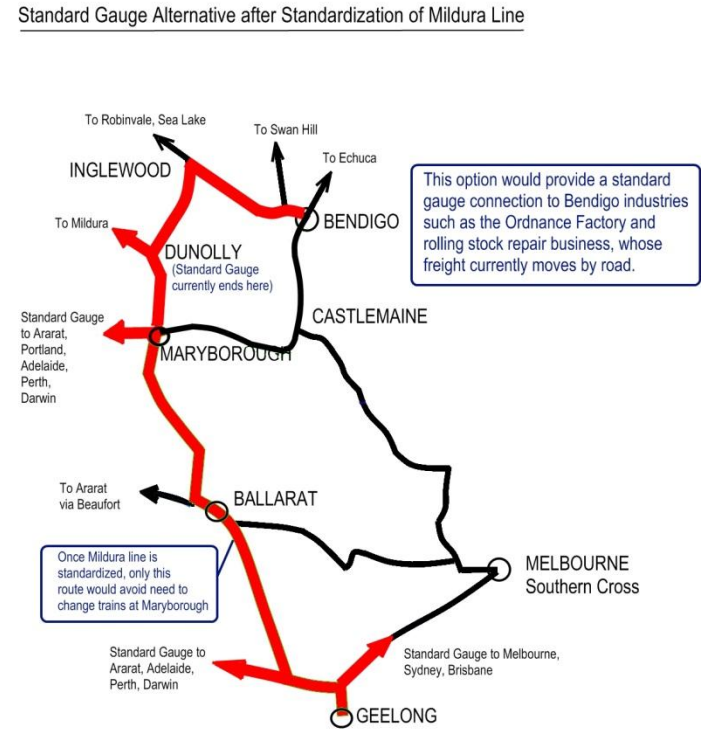
¹⁴ Interview with DoT officers and residents

GEELONG - MARYBOROUGH - CASTLEMAINE - BENDIGO



GEELONG - MARYBOROUGH - CASTLEMAINE - BENDIGO

GEELONG - MARYBOROUGH - INGLEWOOD - CASTLEMAINE



GEELONG - MARYBOROUGH - INGLEWOOD - CASTLEMAINE

2.2.6 Improving Commuting to Bendigo

The reintroduction of passenger train services to Echuca provides an example of how rail commuting opportunities can be established and fostered between Bendigo and regional towns. In the Echuca example, this was achieved by reinstating passenger trains that allow residents in regional towns to work, study, shop and have medical procedures in Bendigo.

The example of Echuca has special significance for towns affected by economic restructuring – such as those in the Gannawarra area affected by water trading and those north of Bendigo where food processing industries have closed or relocated. In such instances, the ability to efficiently commute to Bendigo may immediately help provide employment and contribute to the economic prospects of regional towns. Unfortunately, service patterns currently do not provide for such commuting from Pyramid Hill or Kerang.

In the 1990s, Bendigo's capacity as a service centre providing comprehensive financial services, medical services, educational opportunities and retail opportunities was not fully developed. Since then, Bendigo has become headquarters to a major national bank, has developed world class medical facilities, and its schools, university and colleges have developed significantly.

At that time, train services even on the Bendigo main line were minimal and were too slow and infrequent to allow regional residents the capacity to spend a useful day at Bendigo at work, in study or undergoing medical treatment. Neither Castlemaine nor Echuca residents could catch a train that would deliver them to Bendigo at the start of the business day. Train services to Echuca had been cancelled, and a consultant's report was scornful of the proposal that any train service be reintroduced and exaggerated the likely costs.

However, passenger train services were progressively brought back, beginning with a weekend return train for tourists from Melbourne, and subsequently extended by popular demand, to a more comprehensive service. This more comprehensive service fostered commuting to Bendigo by Echuca residents.

The Echuca to Bendigo train service is no longer an aspect of the Echuca to Melbourne train service, but has become an important means by which Echuca residents can fully access the potential of Bendigo as a full service regional capital.

Today, there is a train from Echuca at 7.20am weekdays, arriving at Bendigo at 8.35am; with a return service at 5.20pm that arrives at Echuca at 6.36. From Castlemaine, there are trains to Bendigo at 7.45 and 8.47 weekdays, with return options throughout the day including 4.20, 5.18 and 6.44.

The first of these Castlemaine trains offers a guaranteed coach connection from Maryborough, but the Maryborough to Castlemaine coach journey is 52 minutes with a further 13 minutes connection wait as well as the 29 minutes rail journey from Castlemaine to Bendigo. The total elapsed time for a public transport journey from Maryborough to Bendigo therefore can be 94 minutes, which is excessive for a daily commute. It also compares adversely with the 51 minute Maryborough to Ballarat morning train journey.

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The following table sums up current commuting times to Bendigo:

Daily Commuting Opportunities to Bendigo from surrounding towns

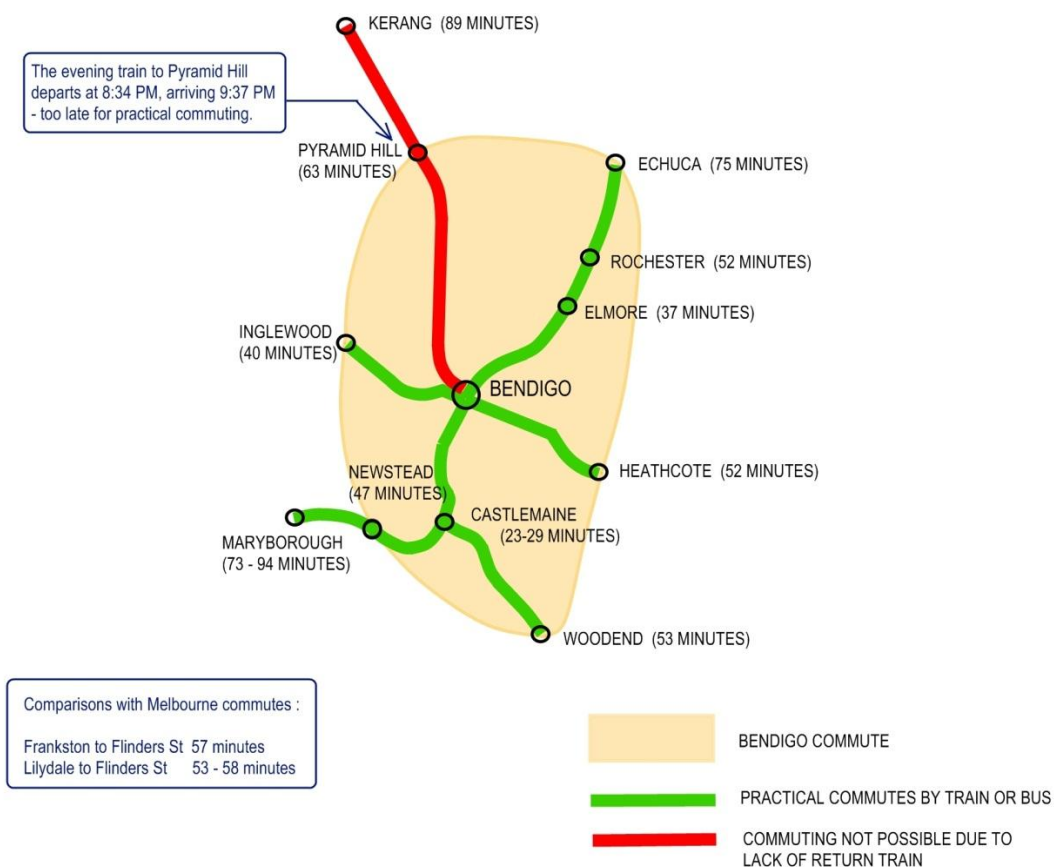
Town	No of available return services ^{15*}	Typical one way journey time (mins)	Mode
Castlemaine	>2	23-29	Train
Cohuna	Nil	155-165	Bus/train
Echuca	1	75	Train
Elmore	1	37	Train
Heathcote	2	52	Bus
Inglewood	1	40	Bus
Kerang	Nil	89	Train
Kyneton	>2	48	Train
Maryborough	1	73-94	Bus/train
Newstead	1	47-66	Bus/train
Pyramid Hill	Nil	63	Train
Rochester	1	52	Train
Woodend	>2	53-61	Train

Thus there are 13 significant towns within theoretical daily public transport commuting reach of Bendigo, but 4 of these are not currently feasible due to service design:

- Pyramid Hill and Kerang are not feasible commutes because the return train from Bendigo is too late at night
- Journey time from Maryborough to Bendigo is excessive and significantly longer than that from Maryborough to Ballarat. This could be reduced if a train service results from the current Geelong Ballarat Bendigo Rail Revival Study.
- Journey time from Cohuna is excessive.

¹⁵ This column defines available return services for commuting as services arriving Bendigo between 7.00 am and 9.15 am, and leaving Bendigo between 4.00 and 7.00pm weekdays.

COMMUTING TO & FROM BENDIGO



Action Required

Provision of a bus or train service that would permit commuting from Pyramid Hill and Kerang to Bendigo is highly desirable and should be pursued

Improvement of the journey time between Maryborough and Bendigo should be examined and is a possible outcome of any reinstatement of train services on the Castlemaine to Bendigo line as a result of the current Rail Revival Study.

2.2.7 Rail Link Bendigo to Melbourne Airport

High Speed Rail Study

In October 2010, the federal Minister for Infrastructure Mr Anthony Albanese announced Terms of Reference for a \$20m study of the potential of High Speed Rail on the East Coast of Australia, and on August 4, 2011 he released the Report of Stage 1 of this study. The study, undertaken by Aecom Consultants, short-listed two route

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options within Victoria, one via Canberra and Gippsland, and one via the Hume Highway corridor (with a possible option via the Goulburn Valley).

Stage 2 of the Study is currently in progress. It is highly likely that either option would involve a connection to Melbourne Airport.

An issue for the Loddon Mallee Region and Bendigo in particular is how such a link might be connected to the Bendigo line and the region.

Melbourne Airport Rail Link

Apart from the High Speed Rail studies, there is also mounting pressure for the provision of a Melbourne Airport to Southern Cross Rail Link. When this issue was last the subject of a report to government, a route via Albion was proposed. Such a link could provide rapid access to the City via the Regional Rail Link currently being constructed, which will provide access for regional trains to the city via new tracks not obstructed by suburban trains.

One option for the provision of a rail link to Melbourne Airport would be the construction of a link from Albion to the Airport. Such a link could be connected to the Bendigo line by an 18km link from the Airport to a junction with the Bendigo line south of Clarkefield. This would improve journey times on the Bendigo line and provide for a future connection to a High Speed rail link to Sydney if constructed. Airport travellers could join regular long distance trains or interurban trains on this line, as is the case at European airport locations such as Frankfurt, Amsterdam and many others.

Avoiding Suburban Train Congestion between Sunbury and Sunshine

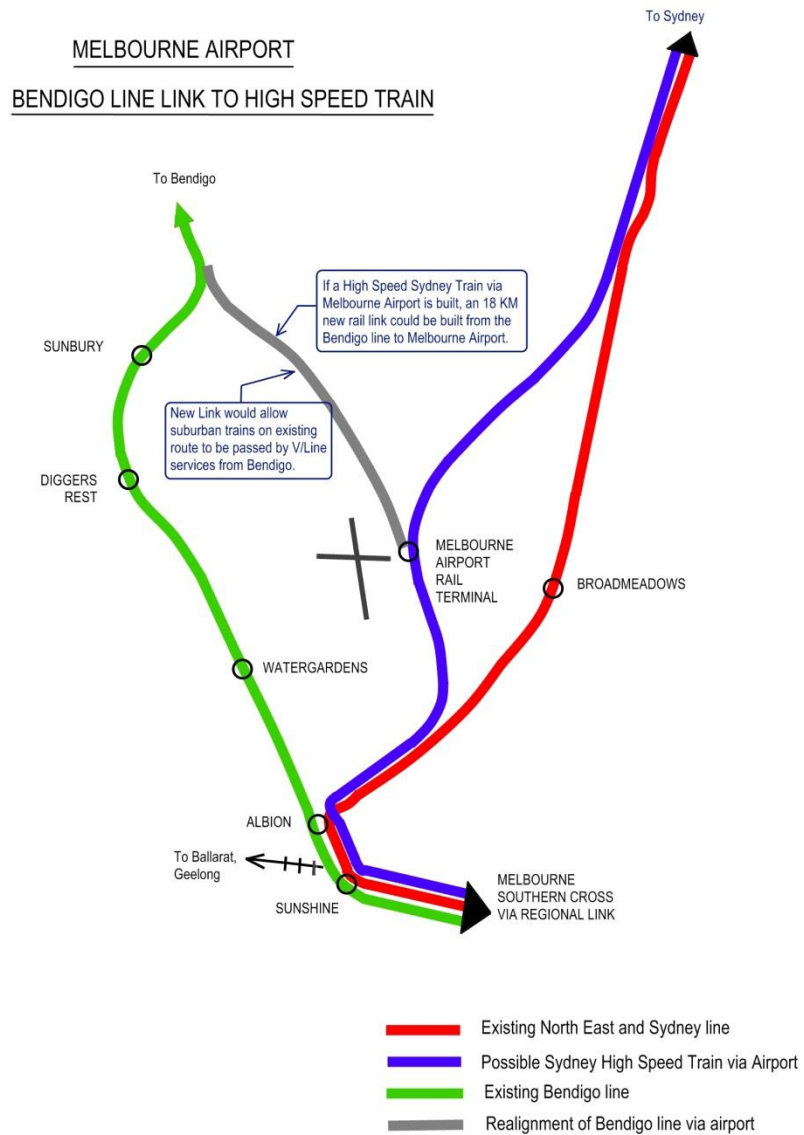
A further key issue is that suburban growth and the density of suburban trains is increasing rapidly in the Sunbury corridor. The electrification of the Bendigo line to Sunbury is nearing completion and a frequent suburban train service will follow. Bendigo line regional trains are likely to be affected by congestion from these services on the Sunbury to Sunshine section of the journey, (with high speeds able to be resumed between Sunshine and Southern Cross once the Regional Rail Link is completed).

Case for a new Link from Bendigo Line to Melbourne Airport

If the above developments lead to a concrete plan to construct a Melbourne Airport Rail Link, there would be a good case for building a rail bypass from the Bendigo line south of Clarkefield to the new Melbourne Airport Terminal, and providing for Bendigo line regional trains to use this route to by-pass suburban congestion between Sunbury and Sunshine. While the national High Speed train study is not yet complete, and proposals for a Melbourne Airport rail link are yet to become clear, consideration should be given now to how a Bendigo and Loddon Mallee link could be provided for, and whether a potential corridor should be identified and/or protected in planning schemes.

The following diagram represents in broad terms one version of such a link. It is based on the assumption that a High Speed Train route is recommended via the Hume Corridor and Melbourne Airport, and thence via the Albion and Regional Rail Link corridors. All these assumptions are highly speculative. However the issue will emerge and regional advocates need to be prepared with submissions and/or planning studies.

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2.3 Rail Freight

2.3.1 Improved Grain Train Productivity

In August 2011 the Victorian Government established a Grain Logistics Taskforce to recommend improvements in the efficiency of Victoria's grain storage and handling system¹⁶.

The Task Force made recommendations on rail, road, ship and other aspects of grain handling.

The Rail recommendations were:

1. Consistent with recommendation 12 of the 2007 Rail Freight Network Review, the State Government should ensure there is an appropriate level of investment in the rail freight network to provide sufficient rail freight network capability, including track speeds, which supports efficient grain train cycle times from silo to port and return
2. The Victorian Department of Transport work with track managers, rail operators and grain companies to
 - a. Review and assess the merits of funding the rail infrastructure issues referred to;
 - b. Assess opportunities to standardise the rail network where economic circumstances justify gauge conversion;
 - c. Assess the benefits and costs of increasing axle loads on the Victorian regional rail network to at least 21 tonnes to improve rail freight efficiency and reduce transport costs while maintaining grain train cycle times to port and return;
 - d. Work with the Port of Melbourne Corporation to improve train turnaround times in the port precinct as well as train stabling facilities.

The rail infrastructure issues referred to are listed at Section 2.1.3 above.

2.3.2 Mineral Sands Opportunities

Mineral sands deposits in the region are very extensive. It is estimated that the mineral sands in the Murray Basin include reserves of from 80 to 150 million tonnes, and will be mined for 50 years into the future¹⁷. To date two supply chains have developed.

¹⁶ Victoria, (2011) Grain Logistics Task Force Report

Within Victoria, the key processing plant for Iluka Resources is at Hamilton, and the inter-modal supply chain involves trucking the resource from ore-bodies in the Mallee at locations such as Kulwin to Hopetoun for rail to Hamilton on the standard gauge network. Astron Resources also has proposals for sand mining in Buloke Shire. In New South Wales, BeMax Resources mines mineral sands at Pooncarie and other locations, from which they are conveyed by road train to Broken Hill for processing¹⁸.

There is substantial potential for mineral sands from New South Wales to be transported via the Victorian rail system. This regular traffic would be important in supporting the business case for the standardization and upgrade of the line to be used, most likely the Robinvale line, with new loading facilities at a location such as Robinvale, Annuello or Manangatang.

Action Required

Investigations as to the possibility of transporting mineral sands from NSW deposits via the Euston bridge and from Victorian mineral sands deposits should include the possibility of a railhead at Robinvale or Manangatang and the standardization of the Robinvale line (and in consequence the rehabilitation of the existing standard gauge Maryborough to Ararat link, whereby mineral sands can reach Hamilton and Portland)

2.3.3 Intermodal Opportunities in the Region

Road transport is generally more efficient for handling containers on a door to door basis for distances under 300km, but for distances over 500 km, it is usually more efficient for an inter-modal transport chain to operate, where containers are trucked to a rail hub, conveyed in a long train over a long distance, and then trucked for the final shorter journey to delivery. Over the Sydney to Perth route, for example, rail has a cost advantage of some 40% over road and currently enjoys a market share of around 80-90%.

On many Australian routes the length of the journey for which an intermodal supply chain presents efficiency advantages has been reducing over recent years, reflecting such factors as the greater fuel efficiency of rail transport and improvements in the efficiency of rail operations caused by a variety of factors (including investments in infrastructure, simplified regulatory and operational arrangements, reductions in journey time, etc.). However within Victoria the reduction in rail freight journey times and increase in rail market share experienced elsewhere in Australia have yet to be realised.

As a result in the short term, container trains in Victoria have been subsidized by the state government¹⁹, and new generation inter-modal terminals are being developed in the expectation that the underlying economics will come to resemble those elsewhere. In particular, new intermodal terminals have been developed at Horsham, Merbein and Shepparton. Those at Horsham and Merbein (as well as a potential inter-modal terminal in the Swan Hill area) are beyond the 300km line of distance from the Port of Melbourne.

¹⁷ Meyrick and Associates (2006), *Rail Freight Task Victoria*, p. 28

¹⁸ NSW Department of Planning (2006), *Assessment Report, Proposed BeMax Gingko Mineral Sands Project*

¹⁹ The \$5m Rail Freight Support Package was extended to 2011-12 on 31 May 2011. It supports intermodal container traffic on the Mildura, Tocumwal, Warrnambool and Horsham lines. 35,000 containers are shifted annually.

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There are currently few intermodal terminals in the Loddon Mallee region capable of efficiently handling and or transferring containers from rail to road and vice versa. The main intermodal facility serving the region is at Merbein, and there is a small specialised facility at Donald, exporting containers of pulses.

Creation of additional intermodal facilities in the Swan Hill region, and the Bendigo region (such as at Marong) have been discussed. For such facilities to be created, strong demand for containerised exports needs to be present, as well as capable entrepreneurs and a willingness of state and local government to provide assistance.

Manangatang's Potential

Looking to the future, consideration should also be given to the merits of locating a new intermodal terminal in the region at Manangatang. Manangatang is already a significant grain terminal, and it could also potentially serve High Productivity Road Freight Vehicles originating in New South Wales, if the Tooleybuc Bridge were replaced and the Mallee Highway designated for such use. The intrusion of very large vehicles from New South Wales could be limited in consequence to a single designated route away from urban settlement. Manangatang is also a potential railhead for mineral sands.

The combination of grain, mineral sands and container traffic from Manangatang could provide the justification for standardization and the upgrading of infrastructure standards, axle loads and safe-working on this line. Freight on a future standard gauge line from Manangatang could proceed to port or the proposed metropolitan intermodal freight terminals²⁰ (such as Somerton or Altona), over freight only lines not compromised by busy passenger train services. As mentioned elsewhere in this report, the Somerton intermodal terminal could provide access to the nearby Epping wholesale fruit and vegetable markets now under construction.

Marong

The development of an intermodal terminal at Marong or a similar location in the Bendigo area may be feasible at some future date. Key considerations would include the development of strong demand to despatch containerised goods to destinations around Australia, as the journey to the Port of Melbourne is probably too short for an intermodal supply chain to efficiently operate. If however an industry were to develop in the Bendigo region that required nationwide despatch of goods in containers, and the standard gauge connection to Bendigo described in Sections 2.2.5 and 2.3.4 of this Report were to be provided, an inter-modal facility at Marong or another Bendigo location might be feasible..

The relative advantage of rail freight with regard to fuel use and its lower emissions, and lower external costs in relation to congestion, road accidents and pollution, provide sound arguments for further intermodal freight chains to emerge in coming years. For them to survive, a variety of problems in the rail industry in relation to gauge standardization, port access, uniform safety regulations and working arrangements, road pricing and governance will need to be progressed.

2.3.4 Standard Gauge Freight Link to Bendigo

There is currently no link between Bendigo based industries and the national Standard Gauge rail network. Indeed the only rail freight link from Bendigo and regions on the Echuca and Swan Hill lines currently in use is the broad gauge Bendigo main line, the

²⁰ The metropolitan intermodal freight hubs were a central recommendation of *Freight Futures*.

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capacity of which was reduced by singling of the line during the building of the Regional Fast Rail network, and which is likely to be fully utilised 18 hours per day by burgeoning passenger traffic. The Bendigo main line also is compromised as a freight route by tunnels and heritage structures that constrain the dimensions of loads that can be carried.

An important issue for the future is to consider alternatives that could provide for a standard gauge rail connection to Bendigo avoiding this route. Such a connection could be of strategic importance in wartime given Bendigo's continuing role in defence production.

There are three possibilities that could be considered:

- Conversion of the Bendigo to Inglewood line to standard gauge as part of the standardization of the northwest group of lines, discussed in Section 2.1.4 above
- Use of the former Bendigo to Melbourne via Heathcote rail route, which could provide connection to the standard gauge network near Kilmore.
- Utilisation of the Echuca to Toolamba line could become a possibility if in future the Tocumwal, Deniliquin and Bendigo to Echuca lines were to be standardised.

Of these options, the first would be the most cost-effective, as the others depend on extensive investments for which no plans or rationales are currently on the horizon.

Standardization of the Inglewood to Bendigo route in the context of North West standardization could:

- Provide an alternative route for Geelong-Ballarat-Maryborough passenger trains as discussed in Section 2.2.5 above
- Provide a direct connection to heavy industry in the Bendigo area such as the Thales (former Ordnance factory) location as well as the SSR (North Bendigo workshops) facility. Both of these plants handle or produce very heavy equipment ideally suited to rail transportation but currently transported by road.

2.3.5 Mildura to Menindee Rail Link Proposal

In 2006 Sunraysia-Mallee Economic Development Board and the Mildura Airport commissioned a Mildura Region Transport Study, conducted by consultants GHD, which identified the strategic merit of a standard gauge rail link from Mildura to Menindee, as well as scope for the re-routing of rail and highway links around Mildura and the creation of the new Thurla Industrial area²¹. The concept was further developed by GHD for Mildura and Ballarat councils in 2010.²²

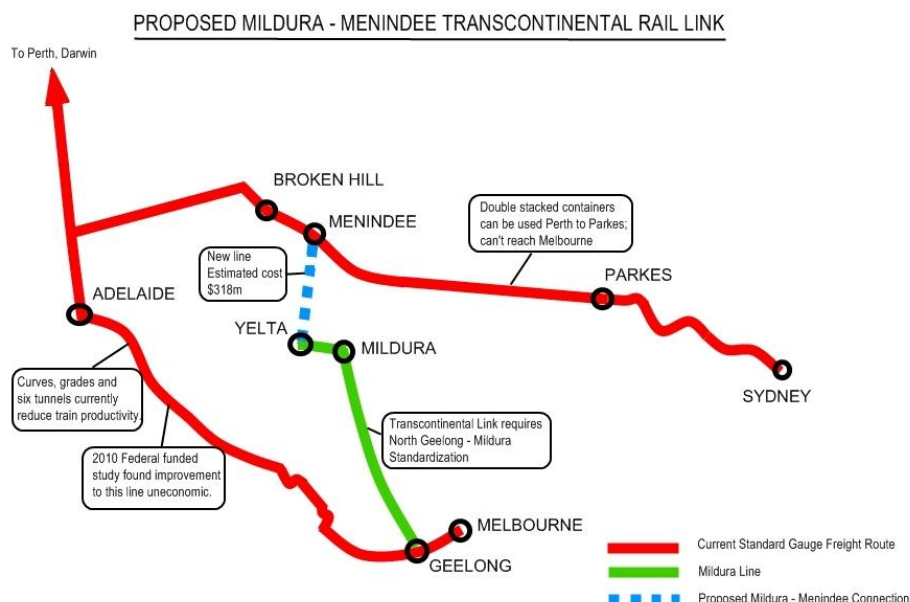
²¹ Mildura Airport Management Committee and Sunraysia Mallee Economic Development Board, (2006), *Mildura Transport Plan for Long Term Regional Development*

²² Mildura Rural City Council and Ballarat City Council (2010), *Preliminary Report Mildura to Menindee Transcontinental Rail Link* (Presentation by GHD)

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A key impact of the completion of the Mildura to Menindee standard gauge link would be to provide for standard gauge trains of double stacked containers to, from and through the North West region to reach Melbourne, Sydney, Adelaide, Perth, or Darwin.

Double stacked container trains (approx. 5.7 metres in height) can travel from Perth to Parkes, but they cannot reach Melbourne as a result of six tunnels in the Adelaide Hills, and one in Footscray. The Mildura to Menindee link would allow double stacked container trains to travel to and from Melbourne ports via the national standard gauge network. (To achieve this, such trains might terminate at the proposed Western Intermodal Freight Terminal at Wyndham, avoiding the need for provision of a standard gauge rail freight bypass of the Footscray (Bunbury St) tunnel)



Currently all rail freight between Melbourne and Adelaide and Perth travels by the ARTC standard gauge corridor Melbourne Geelong Ararat Dimboola Murray Bridge Adelaide. This route also involves steep grades and heavy curves through the Adelaide Hills. These characteristics slow trains to about 35 kph compared with an 80 kph corridor target (adding about 90 minutes to journey times) and reduce rail productivity.

The tunnels and bridges in the Adelaide Hills make the current route unsuitable for double stacked containers.²³ There is also substantial resident opposition from Lofty Ranges residents to freight trains in their area on amenity grounds. The line passes through many towns in this area and there are 41 level crossings with substantial local traffic.

²³ GHD Report of the Adelaide Rail Freight Movements Study (2010), p.20

Adelaide By-pass Alternative not Viable

The line currently carries 4.8 million tonnes of freight per year, and has a capacity estimated by GHD at 10.7 million tonnes per year, estimated to be sufficient until 2025. The Adelaide Rail Freight Movements Study was undertaken in 2009-10 by GHD for the Federal Department Transport and Regional Services, to examine options for increasing the efficiency and capacity of the freight rail network leading into and through Adelaide. These possible options ranged from upgrading the existing alignment through to considering alignments to the north and south of Adelaide.

The study examined six options; undiscounted cost of each is shown in brackets:

- Upgrading of the existing alignment via the Adelaide Hills. (\$700 million)
- A northern by-pass of the Adelaide Hills north of Truro (\$2.9 billion)
- A northern by-pass south of Truro (\$2.4 billion)
- A southern bypass (including a 15km tunnel) (\$3 billion)
- Combination of upgrading of the existing track and a bypass south of Truro (\$3.2 billion).

After applying a cost-benefit test to these options, the study found that the capital outlay required would outweigh the benefits, and that the operational improvements would be modest and the social benefits marginal.

The Study did not compare these options with the cost and effectiveness of a connection via Mildura and Menindee. In 2010, the same consultants (GHD) in a report to Mildura Council advised that the capital cost of a Mildura to Menindee connection would be \$318 million.²⁴

However the \$318 million figure should not be compared directly with the costs contained in the Adelaide Rail Freight Movements Study.

Thurla Logistics Centre near Red Cliffs and rail/road deviations

Part of the proposal for a Mildura to Menindee rail link is for the restructuring of logistics in the Mildura Region, focussing on a new logistics centre at Thurla, west of Red Cliffs.

This proposal involves a deviation of the Sturt Highway via a proposed new Murray River crossing near Karadoc, re-joining the highway west of Cardross. This would remove heavy through truck traffic (currently around 2000 vehicles per day) from central Mildura, where it currently is concentrated on Deakin and Benetook Avenues.

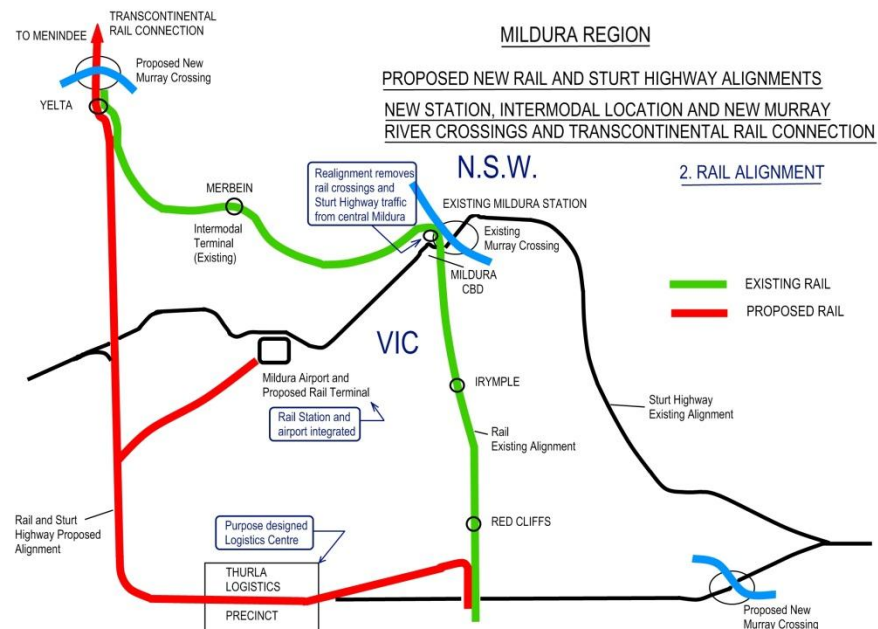
It also involves deviating the Yelta (and future Menindee) railway west at Red Cliffs and then north to Yelta. Once again, this would remove freight trains from the current alignment which lies between the town and the Murray foreshore. It would also remove a number of level crossings from the urban area.

Proposed New Rail Terminal at Mildura Airport

A third feature of the plan is that it could provide for a new passenger rail terminal at Mildura Airport. This might permit an integrated terminal and even some integrated services. The following diagram indicates how the railway would deviate away from central Mildura under this proposal:

²⁴ GHD (2010), *Mildura Derailed*, Report to Mildura and Ballarat Councils.

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On the other hand, the plan is expensive. It would require relocation of the existing Merbein intermodal terminal into which substantial private and state money has been invested. It would remove the good access the rail passenger terminal currently has to Mildura CBD hotels, motels and tourist facilities. And a new Murray Crossing at Karadoc may not have priority with NSW authorities.

This issue could be studied as part of the proposed investigation of the Menindee Link. A comprehensive study would need to examine likely freight tasks, costs and benefits and engineering and social issues of the Menindee link at a similar level of detail to the \$3M Adelaide Freight Movements study. The Study should include assessment of Mildura line standardization and the Thurla freight facility (and rail and Sturt highway deviation and possible Karadoc Bridge over the Murray).

Action Required

The proposed \$4m study of the Mildura-Menindee Rail link, including Mildura line standardization and Thurla freight facility and new Mildura passenger rail terminal (and rail and Sturt highway deviation and possible Karadoc Bridge over the Murray) should be expedited.

2.4 Statewide Issues

2.4.1 Rail Freight Lines Maintenance Allocation

There is currently no regular budget allocation for the basic maintenance of the rail freight system. Rail freight lines maintenance can be undertaken within reasonable costs. Such an allocation has been recommended by the Rail Freight Network Review the Grain Logistics Task Force and the Alliance of Councils for Rail Freight Development.

The engineering firm Worley Parsons provided the Victorian Essential Services Commission with a Benchmarking report on maintenance of the Victorian rail freight network in 2006.²⁵

The Report found that maintenance costs should be estimated in a range between \$12,551 per track kilometre per annum for class 4-5 freight lines through to \$20,656 per track kilometre per annum for Regional Fast Rail Lines. Within these costs, approximately half the expenditure is routine maintenance normally carried out by gangs with hand tools.

ARTC reports typical rail maintenance employment costs at about \$53,000 per worker per year and about \$80,000 per supervisor per year.

A budget of \$10 million dollars applied to routine maintenance on bronze lines, on the basis of one supervisor per 6.4 workers, would allow for the full time employment of 150 base grade workers and 25 supervisors.

On the basis of \$12,551 per track kilometre, a \$20 million budget would provide for the maintenance of 1580 kilometres in a year.

Action Required

A successful future for rail freight in the region requires regular maintenance funded by an annual state budget allocation. For *Railing Ahead* to be sustainable, it will be important to advocate such a provision to state government.

2.4.2 Rail Port Access

Despite improvements to rail freight infrastructure within the region, good rail access to ports remains a critical issue. Rail congestion at ports can increase train cycle times (especially in the grain industry), lower train productivity and increase unit costs.

There have been several reports as to necessary actions and there has been investment in a new access bridge over Footscray Road. There has also been investment in improved rail access at the Port of Geelong. The removal of the wholesale fruit and vegetable markets will enable redesign of the Swanston/Dynon area.

Nevertheless, the Grain Logistics Task Force recently reported that further improvements in rail access at ports are needed. For example, broad gauge trains

²⁵ Worley Parsons, (2006), Benchmarking Report to the Victorian Essential Services Commission on maintenance of the Victorian rail freight network.

once discharged cannot be stabled at Appleton Dock, causing delays and increased costs while they are moved elsewhere to be stabled. At Portland, grain trains must be broken in order to be unloaded as the grain siding does not reach the end of the grain wharf. And there is no standard gauge access to the Port of Hastings.²⁶

2.4.3 Rail Access to Epping Wholesale Markets

Vegetables produced for human consumption in the Loddon Mallee region were valued at c. \$41 million, of which the bulk were grown in the Mallee sub region. Key crops included carrots (\$11.5 million), mushrooms (\$7 million), potatoes (\$3.75 million) and capsicums and zucchini/squash (\$1.5 million).

Northern Victoria is increasingly becoming important in vegetable production due to the growth of Melbourne and the contraction of previously peri-urban horticulture in areas such as Werribee and the sand belt south east of Melbourne. In addition, the production risks from weather and local disease can be spread and the land costs are cheaper.

Fruit production is strong in the Mallee sub region. Non grape fruit production is worth c. \$172 million, comprising citrus (\$62 million), stone fruit (\$66 million) and nuts (\$39 million, of which almonds are \$34 million). There has been significant growth in the last five years in the production of olives and almonds. Olive production has increased by 112 per cent and almond production by approximately 60 per cent since 2005 – 2006. It is likely that production will increase further as plantations reach maturity and show a yield.

In the past, fruit and vegetables from the Loddon Mallee region were railed directly to the Footscray wholesale market by a daily train from Mildura known as the Fruit Flyer, described at the time as "Australia's fastest goods train". (Age July 8 1959)

Relocation of the wholesale fruit and vegetable market away from the rail system is part of a project being managed by Major Projects Victoria, the cost of which is now estimated at \$670 million, by which a new market is under construction at the corner of Cooper St and Edgars Rd in Epping. The new market is expected to be operational by 2014.

The nearest rail access to this point is approximately 5 km away at the Somerton intermodal terminal.

Rail access from Somerton intermodal terminal to the site would require a corridor to be identified, such as beside O'Hern's Road and alongside the Hume Freeway (Craigieburn Bypass). However, costly bridges would be needed across Sydney Road (former Hume Highway) as well as the Hume Freeway and these would likely be prohibitively expensive.

This is a good example where foresight (future proofing) could have provided a rail corridor to the proposed market at the time the Craigieburn bypass was designed.

In consequence, rail access to the fruit and vegetable market would require a road movement over the last 5km, from Somerton intermodal terminal (or some alternative arrangement).

²⁶ Grain Logistics Task Force Report, pp. 20

3 Future Proofing

Future Proofing means taking far-sighted action now that protects our ability to efficiently act in the future.

In the context of infrastructure, typical future proofing actions include:

- Forward and strategic planning of land use and infrastructure
- Reserving and protecting important corridors and zones that may be needed for roads, rail or other infrastructure in the future from being built over or sold
- Avoiding the disposal, removal or sale of existing disused infrastructure if there is a reasonable likelihood that it will need to be re-activated in the future as population grows and needs change.

The current Geelong to Ballarat Rail Revival Study would have been far less possible had the disused Castlemaine to Maryborough Railway been dismantled and sold.

Our capacity to provide rail services to centres like Doncaster, Rowville and Kilmore has been compromised by past disposal of rail corridors that had been reserved – the proceeds of the land sales being many times less than the cost of providing corridors now.

In the Loddon Mallee region, a number of opportunities for future proofing in relation to rail infrastructure exist. Identifying these opportunities does not mean that they will result in projects in the short term. But in some instances there are strategic steps that can be taken now that will keep options open in the future.

These include:-

3.1 Re-instatement of Double Track on Bendigo line

The reinstatement of double track between Kyneton and Bendigo should be planned and progressively implemented to cater for imminent and future traffic growth. This issue is discussed in more detail in Section 2.1.1 above.

3.2 Castlemaine to Maryborough line

The rail corridor between Castlemaine and Maryborough needs to be protected to facilitate future V/Line passenger services whether resulting from the current Rail Revival Study or a subsequent decision. This issue is discussed in more detail in Section 2.2.5 above

3.3 Bendigo to Inglewood Line

The rail corridor between Bendigo and Inglewood needs to be protected to facilitate a future standard gauge connection for Bendigo industry at Marong and North Bendigo once north western standardization has been implemented.

In the past wheat, general goods (and passengers) from the Robinvale and Sea Lake (Kulwin) lines traversed this route to Bendigo and Melbourne, however all grain traffic is now diverted south to Maryborough and Ballarat at Inglewood via the Inglewood to Dunolly link. The section between Inglewood and Bendigo has been disused since May 2007, even though there is an important mill at Bridgewater on this route that was formerly a rail customer.

This line offers important strategic potential for Bendigo once the north-western lines are standardized, as the standardization of this short section from Inglewood to Bendigo could provide standard gauge connection to Bendigo industries, especially heavy industries. This connection would be even more valuable if the Mildura to Menindee standard gauge link were constructed.

There is potential defence significance in this since Bendigo remains an important defence materiel centre, with over 700 people still employed in defence industries. In wartime Bushmasters, Hawkeiis, or even tanks manufactured in Bendigo could be railed direct to Perth, Darwin and other strategically important defence sites.

3.4 Echuca to Toolamba Line

The rail corridor and track between Echuca and Toolamba needs to be protected as it provides an alternative freight route from Echuca, Deniliquin and Moulamein avoiding passenger traffic south of Bendigo.

The Victorian line extends northward from Echuca to Deniliquin (as well as a branch to Moulamein) and both these lines have traditionally served rice traffic. Rice traffic on rail through Echuca from Deniliquin has recently recommenced, and it is understood that there is a very large amount of product at Deniliquin to be shifted.

Until recent weeks, it was expected that the Echuca to Toolamba line would be re-opened to allow rice trains from Deniliquin to be routed via Toolamba and Seymour to Melbourne, avoiding capacity constraints on the Bendigo line. However this plan has been suspended as agreement on commercial terms between the parties could not be achieved.

However, the potential of this line remains, and it is important that it should be available in the future, particularly as passenger services south of Bendigo grow rapidly. It is also important as the only remaining connection outside Melbourne between lines north and west of Bendigo and the north east group of lines (Shepparton, Tocumwal, Oaklands and Albury/Sydney)

3.5 Bendigo to Melbourne via Heathcote corridor

The O'Keefe rail trail (former Bendigo to Melbourne line via Heathcote and Kilmore) needs to be protected as a long term rail option, and in the short term, a new corridor

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for this route through Kilmore needs to be identified and protected in the context of the development of the Kilmore bypass.

The majority of this route, on which a popular bike trail has been built, is still in public hands. If it became strategically necessary, a rail line could be reinstated while retaining sufficient space for a bike trail. However in the Kilmore area, some of the route has been alienated, and VicRoads is planning a new bypass of the town. As part of this planning, space could be left for a future reinstated Bendigo to Melbourne via Heathcote rail route, and it is understood that some preliminary work on this issue has been undertaken by the Department of Transport.

The strategic importance of this route has been heightened by the progressive standardization of much of the Victorian regional rail network but the retention of broad gauge (and heavy investment in broad gauge) for the Regional Fast Rail Network (of which Bendigo is a key centre).

Once the North West lines are standardized, there will be no connection between them and the north east (Albury and Shepparton lines) except through busy lines in Melbourne. The only point of connection in the Loddon Mallee Region currently is the disused Echuca to Toolamba link, and the Heathcote corridor, which was closed between Bendigo and Heathcote in 1958 and between Heathcote and Heathcote Junction (near Kilmore) in 1968 and subsequently dismantled.

Like the Inglewood to Bendigo line if standardized, there is potential defence significance in this since Bendigo remains an important defence materiel centre, with over 700 people still employed in defence industries. In wartime, the Heathcote corridor could be re-activated so that Bushmasters, Hawkeiis, or even tanks manufactured in Bendigo could be railed direct to Puckapunyal.

The broad gauge main line south of Bendigo is now densely used 18 hours a day by V/Line passenger trains. Rice, wheat or other goods trains on this line are largely confined to the hours between midnight and dawn. The Heathcote corridor could become an important grain corridor serving northern Victoria, as well as Deniliquin and Moulamein in southern NSW, as the relative price and emissions equation shifts away from road toward rail, especially for longer and bulk consignments.

3.6 Sale or Dismantling of Disused Rail Assets

Vic Track and V/Line should refer proposals for the removal of passing loops, sidings or other rail infrastructure or the sale of land surrounding stations to a suitable Loddon Mallee regional body for comment prior to action as there may be regional and local knowledge or strategic intentions that need to be taken into account before infrastructure is removed or alienated.

At several stations in the region, VicTrack has sold land close to stations to commercial developers, resulting in competition for parking opportunities for rail users. On the other hand, in the Melbourne metropolitan area there are several instances where VicTrack has sold land near stations for the development of residential units, supporting transit oriented development. Such issues are important for the long term, and strategic as well as immediate planning considerations should form part of decisions.

It is understood that such proposals currently are referred by VicTrack to V/Line and the Department of Transport, (and relevant local government planning authorities). However regional input from Loddon Mallee is also desirable.

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Aside from the issue of development of station surrounds, there have been many cases where core rail assets have been removed by track managers (V/Line or in the past, Pacific National) with significant consequences, such as the removal of the Tourello Loop near Maryborough and the Lethbridge loop between Geelong and Ballarat. Passing loops provide the only means of trains passing on single lines, and their removal can greatly reduce the capacity of a railway, depending on how far apart and how long the passing loops are.

Sidings are also important and many have been removed in recent years. Without a siding, it is difficult and very costly if not impossible to attract new rail freight customers, and there is little evidence to suggest that thorough and forward looking surveys of potential rail freight business have been undertaken before the removal of sidings in recent years.

At a more basic level, the removal of passenger toilets from stations in the metropolitan area in recent years has made the introduction of security staff more costly and difficult, while decreasing passenger amenity. In the region, an example of the reduction of passenger amenity has been the realignment during the Regional Fast Rail project of the line through Malmsbury, where passengers must now use the secondary platform (lacking a large veranda, waiting room or toilet) while the main platform with its large buildings no longer serves a track. With the future reinstatement of double track at this location, it is to be hoped that this deficiency will be overcome, but it illustrates the principle that important infrastructure should not be decommissioned without thought for the future.

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