

MORE TRACKS, SLOWER TRAINS

The Victorian Regional Rail Link project is hobbled by inefficient planning and wasteful spending, says **John Nestor**

The Victorian government has blindly plunged into a \$5.3 billion¹ Regional Rail Link (RRL) project whose stated aim is to separate metropolitan (electric) train services from the non-metropolitan services to reduce delays to the latter in the Melbourne area. Sadly, this aim will be only partly realised and can be achieved by far less costly investments. Moreover, the stated aim is being used to cover up the construction of a new metropolitan railway that will absorb a large proportion of the \$5.3 billion, do nothing to achieve the stated aim of the project, and may actually slow down trains on the busiest non-metropolitan route.

Western Melbourne has grown extensively in the last 40 years, and metropolitan electric train services have been continually expanded to meet the increased demand: metropolitan electric trains have been extended to Werribee on the Geelong line and Sydenham (Watergardens) and will be soon extended to Sunbury on the Bendigo line. (See Figure 2) At the same time, the non-metropolitan Vline train services have grown significantly with faster and more frequent trains, particularly in the 'interurban' lines radiating from Melbourne to Traralgon, Geelong, Ballarat, Bendigo and Seymour—lines that benefit daily commuters and therefore require (unlike longer-distance services) morning arrivals and afternoon departures during busy peak hours. Hence, congestion is delaying interurban train services in the peak hours in the Melbourne metropolitan area.

The standard solution would be to build additional tracks to separate the faster non-metropolitan services from the slower metropolitan services: If trains are segregated

by average speed, many more can run on a given section of the line than if trains of varying average speeds (metropolitan versus non-metropolitan trains in the metropolitan area) use the same line. This will involve determining the minimum new tracks needed to meet the expected growth patronage after analysing the cost of extra tracks at various possible locations and possible timetables. The aim is to use cost-benefit analysis to find the best possible journey time improvements to the expected passengers per dollar spent.

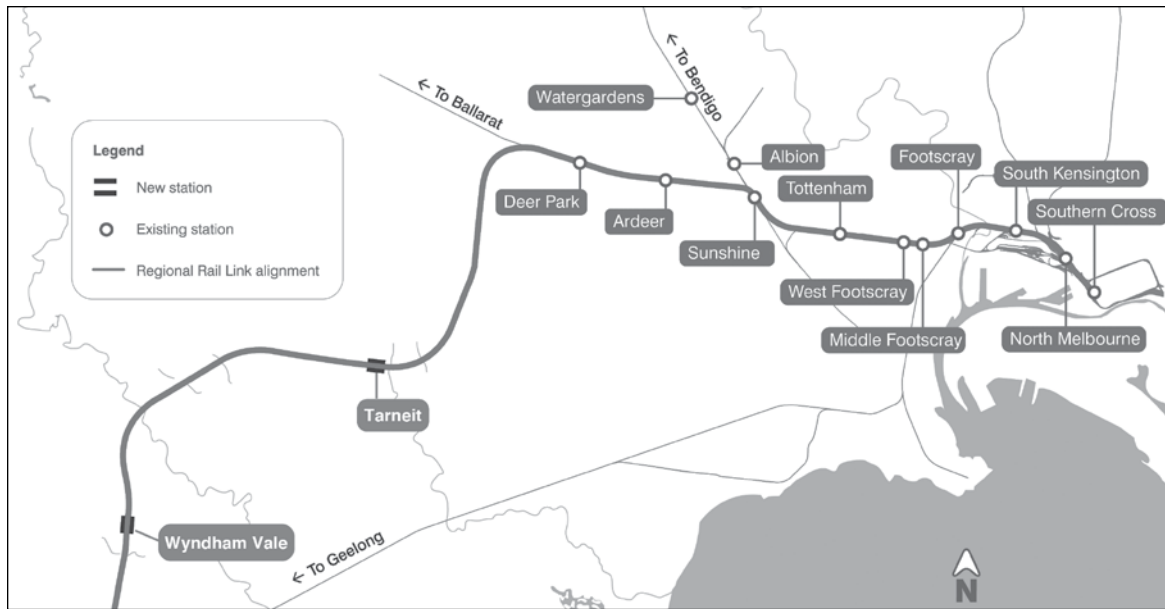
But most importantly, investments in additional tracks must not be made without determining how the additional tracks will be used. In recent years in various parts of Australia, railway proposals involving major investments have been made, and in some cases built, but seem to have neglected the realities of how railways operate—resulting in little to no real benefits. Spending large sums of money does not guarantee beneficial results. With such precedence of inefficiency, waste and limits inherent in such projects, the Victorian proposal needs to be carefully scrutinised about what it might realistically achieve.

The RRL project involves two additional tracks from North Melbourne to Sunshine (about 12 kms), duplication of the single track

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Endnotes for this article can be found at www.policymagazine.com.

Figure 1: Proposed Victorian Regional Rail Link (RRL) track route



Source: Department of Transport (Melbourne: Government of Victoria, 2011).

Figure 2: Existing Vline track routes



Source: www.vline.com.au.

from Sunshine to Deer Park West (about 8 kms), two new platforms on the southern side of Southern Cross (formerly Spencer Street) station in Melbourne, various flyovers, and a completely new double track railway (25 kms) from Deer Park West to a point on the Geelong line south of Werribee. (See Figure 1)

Although the stated aim of the project is to avoid delays to non-metropolitan trains near Melbourne by separating them from Metropolitan services, two of the five non-metropolitan lines are completely unaffected

by this project: the Traralgon/Sale/Bairnsdale line and the Seymour/Albury/Shepperton line. These two lines will experience delays that will gradually get worse as metropolitan services increase to meet expected travel growth. These two lines already experience the largest timetabled delays² of individual non-metropolitan trains because of the need to fit slower metropolitan services; admittedly, the delays are to fewer passengers than on the other lines.

The most expensive part of the Victorian RRL project is the construction of a new 25km double track line from Deer Park West to the Geelong line south of Werribee. This new line is supposed to reduce delays to trains on the Geelong line entering and leaving the Melbourne metropolitan area. Currently, these trains run to and from Melbourne via Werribee, Newport and Footscray.

The proposed line increases the distance that the Geelong line trains have to travel by at least 12 kms, an increase of over 35% through the metropolitan area. This alone makes it difficult to understand how these trains can get to and from Southern Cross Melbourne any quicker; currently, the worst evening peak Geelong service is timetabled only three extra minutes because of metropolitan congestion.³

But there is more: The new Geelong line via Deer Park West line includes two new metropolitan stations: Wyndam Vale and Tarneit.⁴ But how can metropolitan trains be separated from non-metropolitan trains (the stated aim of the RRL project) by building a new non-metropolitan line that incorporates metropolitan stations? Realistically, this major new metropolitan railway (25 kms) has nothing to do with faster or more reliable services to and from Geelong, and will almost certainly make them slower. It is difficult to justify it even as merely a metropolitan development, given that both the proposed stations are fewer than 6 kms from existing frequently served metropolitan electric train stations.

Thus two of the five non-metropolitan lines (Seymour and Traralgon) would be unaffected by the RRL project, while the third line—the Geelong line (by far the most patronised)—would likely receive slower services. Admittedly, the RRL project would reduce delays to Ballarat and Bendigo peak train services by a few minutes, and by more if extra metropolitan services are introduced in the future, as seems likely.

In terms of its stated aims of ‘faster, more comfortable, more reliable’ non-metropolitan train services, the RRL project in Melbourne is unlikely to achieve its aims.

That such vast investments could be initiated without any assurance of achieving the proposal’s aims is incredible, especially after the debacle of another state-federal railway project recently completed in Victoria: the \$613 million North-East Rail Revitalisation project on the Melbourne-Albury line (300 kms). After this major expenditure, and the cancellation of most train services for several years during construction, the fastest Vline passenger train takes more than 20 minutes longer than before the project (and longer than steam trains took in 1937);⁵ the additional track provided between Seymour and Albury sees little interstate freight traffic which has continued to decline, partly due to the years of disruption caused by the project.

Significant construction disruptions are already occurring on the lines affected by the RRL project and are likely to increase in the coming years.⁶ The cost of the project, still listed at

\$4.3 billion on the Vline website (November 2011) has expanded to \$5.3 billion in recent reports.

In spite of the extensive ‘consultations’ expected in these mega-projects, there is not much detail available but there are many puzzling aspects to the project. When I enquired how the new platforms at Southern Cross (on the south side) were to be integrated with the current non-metropolitan platforms on the north side, the reply was that there were two possible options—in other words, they had not decided!⁷ But these questions need to be determined in detail before funds are committed.

One source of delays to interurban services is the train entry to Southern Cross station itself. Great sums of money were spent redeveloping it just a few years ago with futuristic architecture but with little regard to the realities of running a railway. Diesel trains and passengers were put in the same fume-filled, windy and noisy non-space, while no attention was paid to the type of trains Vline was increasingly running—short, frequent trains rather than the long, less frequent services of yesteryear. The track arrangement was not converted from long platforms into several shorter platforms, so trains have to run around other trains. This should have been addressed at the outset and could have reduced delays at a modest cost. The RRL project seems to be making the same sort of mistakes.

There is considerable capacity to move more peak non-metropolitan passengers with the same number of trains—or in some cases reduce the number of peak trains—by running trains of higher capacity. While double-deck trains were tried but found unsuitable for metropolitan services in Melbourne (because of delays in loading and unloading passengers at the closely spaced stations), they would be suitable for peak services from Geelong, Ballarat, Bendigo, Seymour and Traralgon where high patronage exists or is developing. Double-deck, diesel-hauled trains could seat up to 1,000 passengers to reduce the need for additional trains (and therefore additional tracks). Double-deck trains are used in New South Wales, the Chicago suburban area, France and Japan. They would reduce the need for extra trains or extra tracks, and therefore reduce the urgency of the RRL or

similar projects. There seems to have been no consideration of this option.⁸

As a large part of the proposed RRL project—the new railway from Deer Park West to south of Werribee—cannot improve non-metropolitan services, and probably would make them slower, it should be cancelled. Whoever wants to build it—the Victorian or federal government—should admit that it is simply a new metropolitan railway and justify it accordingly instead of calling it a non-metropolitan project.

As for the extra tracks being constructed for the Regional Rail Link between North Melbourne and Sunshine—the useful part of the RRL project here is a much cheaper and less socially disruptive alternative. An under-utilised line from North Melbourne to Sunshine and Albion is used by non-metropolitan passenger and freight services. It is partly double track, and the single track sections could be easily duplicated without encroaching on or acquiring private land (unlike the RRL proposal). There is already a double track flyover connecting this line from North Melbourne to Vline's platforms at Southern Cross station. It would only be necessary to build a flyover near Sunshine to connect it with the line to Ballarat.

This modest project was rejected in favour of the RRL project even though it could have been built at a fraction of the cost of the latter and with almost none of the major disruptions to normal services that the latter will necessitate. Two reasons were given. First, that as interstate freight traffic grew, there would be conflict between freight and passenger traffic. Despite highly optimistic projections, interstate rail freight traffic continues to fall;⁹ also, freight trains do not need to run in peak periods when commuter trains would need the line's full capacity. So this alleged reason holds little weight.

The second reason given for rejecting this cheaper option to the RRL was that the existing lines between Melbourne and Sunshine use a 'mixed gauge' set of tracks: Because most Vline services are 1,600mm gauge while interstate freight (and some Vline passenger) trains run on 1,435mm, each line has three rails to allow trains of both gauges to use it. Because of the close space between the second and third rails on each track,

engineers in Victoria restrict trains to 70kms/hr on such lines in case some small item stuck between the two rails causes an accident. As far as I am aware, this has never happened; also, the same arrangement of rails occurs at every set of points (crossovers) on normal lines¹⁰ over which Vline trains run at up to 160kms/hr—so it might be more of a prejudice than a concern. In any case, this 70kms/hr restriction would apply only to the first few kilometres from Melbourne, which would not significantly affect journey times.

The RRL proposes a station for non-metropolitan trains at Footscray, and the alternative I am suggesting allows for this possibility as well.

This simple alternative to the RRL would give separate access to two of the five non-metropolitan lines into Melbourne: the Ballarat and Bendigo lines. The third—the Geelong line—can be dealt with by adding a bi-directional track (6 kms) between the two tracks from Footscray to beyond Newport, to be used by faster inbound trains in the morning peak hours and outbound trains in the evenings. This track would be somewhat expensive because of the restrictions on the width of the railway corridor in this area, and the need to alter the suburban platforms,¹¹ but it would still cost much less than the RRL project; in addition, it would have the distinct advantage of actually working. It could be connected to the suggested Melbourne-Sunshine-Albion line conversion, west of Footscray by a short tunnel.

The Seymour and Traralgon lines would be unaffected in both the Regional Rail Link project and the cheaper and more effective proposal which I have outlined.¹²

Mega-railway projects seem unstoppable. No doubt they are of great benefit to construction companies, major retail shopping developers,¹³ and politicians who will be safely retired before the results of their largesse become apparent. By all means pour money into railway projects, but how about building some that can actually provide benefits to the transport infrastructure and the wider community? Expensive, poorly planned and executed rail projects are particularly obvious in Victoria. There is no doubt that at \$5.3 billion, the RRL will be the most expensive and worst failure to date.

Endnotes

- 1 The project is still (27 November 2011) listed at \$4.3 billion on the Vline website (www.vline.com.au). \$5.3 billion is the figure given by Transport Australia. The increased figure was reported in April 2011 and the completion date put back from 2014 to 'at least 2016.' The 'go ahead' in this article refers to the decision by the new Victorian government to proceed with the project after questioning whether it should continue. Given the industrial realities of the project, the cost seems likely to rise substantially.
- 2 Determined by comparing peak and off-peak interurban services from the Vline Working Timetable, www.vline.com.au/about/network/infopack.html.
- 3 Data from Vline working timetables, see endnote 2.
- 4 Since the 25km RRL runs through a developing suburban area, it is likely that extra stations would be added in response to community pressure, further slowing Geelong services using the line.
- 5 Comparing the existing Vline public timetables with 2007 Vline public timetables.
- 6 In the first disruption to metropolitan and interurban services as works for the RRL project commenced, Vline reported that 1,364 train services had been cancelled. www.vline.com.au.
- 7 In reply to my email asking how the new Southern Cross platforms 15 and 16 were to be accessed by Vline trains, whose tracks are on the other side of Southern Cross station (and currently use platforms 1 to 8), the 'RRL Project Team' replied on 7 July 2011:

Dear Mr Nestor, Thank you for your email. The current design of the Regional Rail Link tracks means that V/Line trains will have access to platforms 15 and 16 at Southern Cross Station via a new track. They will also be able to access platforms one to eight via upgrades to the existing flyover at North Melbourne. A number of track alignment options for the upgrades in the vicinity of North Melbourne Station have been developed and are being evaluated to enable the best long-term solution for the network. These are currently being finalised in conjunction with the rail operators and the Department of Transport. This email indicates that at the choke point of the whole RRL project—in the vicinity of Southern Cross station—no decision had been made even though at the date of this email, RRL project works had begun.
- 8 A double-deck electric metropolitan train (borrowed from Sydney and fitted with broad gauge bogies) was trialled in Melbourne a few years ago. The trial was not successful because Melbourne's close-spaced stations and shorter average journeys slowed down the service because of longer station stops. This would not be an issue for interurban services because they make relatively few stops. Diesel-hauled trains, as would be used in Victoria, are simpler to design and cheaper to build than Sydney's electric inter-urbans. There are no particular technical difficulties with this proposal.
- 9 For an overview of the steady decline in interstate rail freight between NSW and Victoria, and between Victoria and western states, see for example, the Report of the Bureau of Infrastructure, Transport and Regional Economics of February 2010, especially Table 9.
- 10 Every point (crossover) has a number of short inside 'check' rails which present the same theoretical issue of some stray heavy metal item becoming wedged between it and the inside of the running rail. Neither Vline nor any railway I know regards this as requiring speed reduction, so it is difficult to see the logic in the speed restriction on broad/standard gauge mixed gauge lines. Also, if it had some logical basis, it should not apply to standard gauge trains on such mixed gauge lines (since there is no inside rail presenting to them), yet on Victorian lines, it does.
- 11 Because of the narrowness of the existing rail corridor in this area, and to avoid the social disruption of acquiring additional land, the existing station platforms might need to be staggered, ie, the two platforms for different direction suburban trains would not be opposite each other; this would allow the tracks to curve several metres between the two platforms, to more effectively use the existing rail corridor. The third 'fast train' line would be between the two metropolitan tracks. Another alternative would be to convert to mixed gauge and duplicate, the existing tracks from Newport to Tottenham via Brooklyn.
- 12 The cheaper suggestion I have made also allows the possibility of using the existing broad gauge Albion-Broadmeadows line (which sees little use) for Seymour-Melbourne-Seymour trains during the peak periods. The advantage of this is at present marginal, because of the extra distance from Broadmeadows to Melbourne by this line

(12 km longer than the existing route via Essendon) means there would be no time advantage; but it would allow extra metropolitan electric trains to run from Broadmeadows to Melbourne via Essendon. If as seems likely, the Seymour and Shepperton lines are converted to standard gauge in the future, the double track Broadmeadows to Albion line would necessarily be the entry into Melbourne.; in that case, its existing one broad and one standard gauge tracks would simply be altered to double standard gauge. Trains travelling between Melbourne and Traralgon are likely to suffer increasing delays in the future; the solution here is probably in adding an extra track in the outer metropolitan area where land is available in the existing rail corridor; I have not closely studied this line and it is not in the RRL project either.

- 13 Both proposed stations on the RRL project's Deer Park-Werribee line are adjacent to large retail developments.