

abn: 78 034 374 113

PO Box 1010
Greythorn VIC 3104

m: 0408 351 549

e: eugenie@emsconsulting.com.au

w: www.emsconsulting.com.au



Shepparton Rail Study

Comparative Analysis - Findings

5 February 2018

1. Background

The Committee for Greater Shepparton (C4GS) has engaged emsConsulting to undertake a desktop study to evaluate service levels, historical investment and planned investment in passenger rail, servicing the Shepparton area relative to other Victorian regional centres. This document presents findings that draw on both existing, publicly available information as well as independent research undertaken in the development of this report.

This report is intended for internal use by the Committee for Greater Shepparton.



Methodology

Drawing on publicly available information, desktop analysis was undertaken across three principle areas:

1. Contextual Analysis

Comparison of current service levels, population and historical growth rates compared to similar Victorian regional centres.

- Population data sourced from Australian Bureau of Statistics census data (2016)
- Population data aggregated at “Local Government Area” level (A small number of “unincorporated areas” have been excluded, <5,000 residents from State total)
- Service levels sourced from *existing Connect with Greater Shepparton* materials and PTV timetable information
- Weekday services refer refers to service to Melbourne Southern Cross and excludes return services

2. Historic Investment

Overview of major State Government capital projects that improved service levels, capacity and reliability of regional rail services over the past 15 years.

- Analysis focused on selected, large scale capital projects, excludes maintenance projects and small-scale capital projects
- Information presented as a high-level summary based on public information

3. Current & Planned Investment

Analysis based on the 2017-18 Victorian Budget Capital Program and Services Delivery papers, public transport projects are split across several funding lines and departments, aggregated data set appended to this document.

- Based on a desktop review of the 2017-18 State Government Capital and Service Delivery papers
- The majority of rail investment is delivered via the Victorian Rail Track (VicTrack) program however some projects are delivered within the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) service delivery budget.
- There are some discrepancies between the funding amounts in the Budget papers and other sources such as media releases and the Regional Rail Revival website. For purposes of this analysis these discrepancies are not considered material.
- Capital projects on the North-East line to Seymour, refurbishment and purchase new rolling stock for other lines may have some indirect benefits to Shepparton passenger services, these benefits are assumed to be minimal.
- Shepparton is described as the “benefiting” line for projects that specifically target improvements to passenger services on the Shepparton rail line.

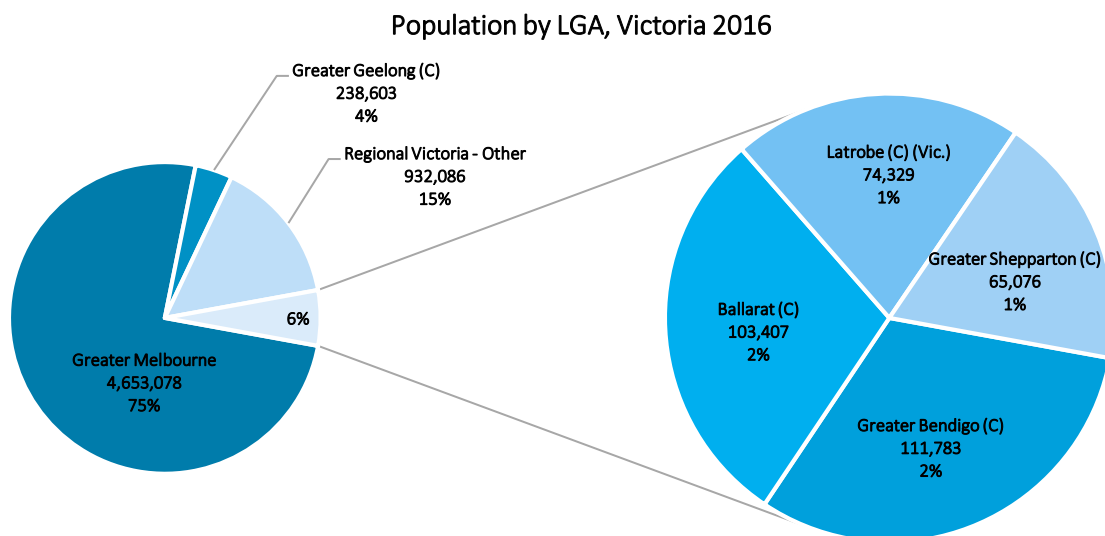
Key Statistics

Population

Narrative: “Shepparton is the fifth largest regional centre in Victoria (by local government area) however Shepparton’s growth rate has lagged behind other regional centres over the five years to 2016”.

LGA/Region	2011	2016	Growth (persons)	Growth (%)
Greater Melbourne	4,108,837	4,653,078	544,241	12.94%
Greater Geelong	215,837	238,603	22,766	10.39%
Greater Bendigo	101,995	111,783	9,788	9.43%
Ballarat	95,185	103,407	8,222	8.50%
Latrobe	73,788	74,329	541	0.73%
Greater Shepparton	61,744	65,076	3,332	5.32%
Regional Victoria - Other	879,662	932,086	52,424	5.89%
Total (VIC)	5,537,048	6,178,362	641,314	11.58%

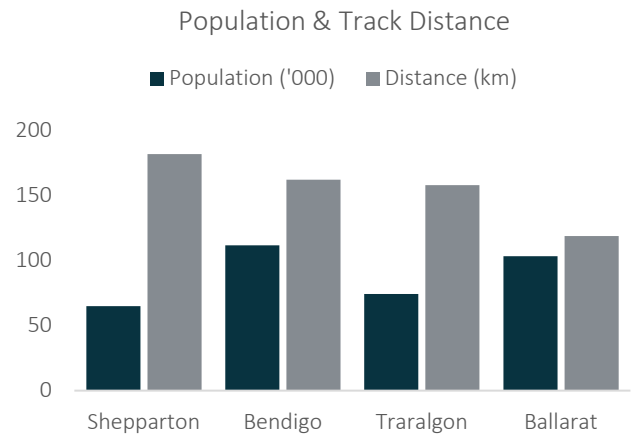
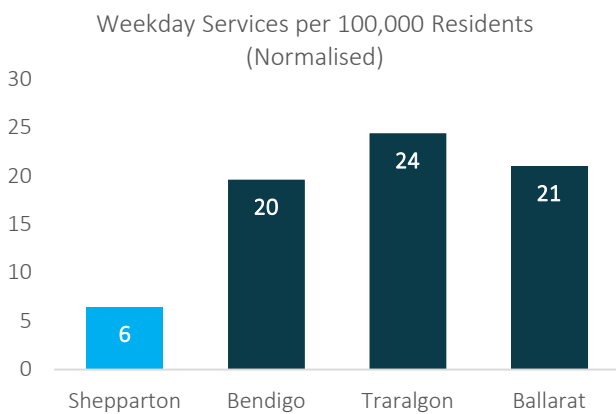
ABS Census 2016



Service Levels

The table below presents metrics that compare service levels from Shepparton to Southern Cross with comparable regional centres in Victoria.

Rail Terminal	Distance (km)	Average weekday services (to SC)	Shortest trip time	Average Speed (Km/h)
Bendigo	162.2	20	1 h 52 min	87
Ballarat	118.8	20	1 h 13 min	98
Traralgon	158.1	18	1 h 41 min	94
Shepparton	181.8	4	2 h 32 min	72



Key Points

- After adjusting for population differences, for every 1 direct, weekday train service from Shepparton to Southern Cross, there will be 3 Bendigo Services, 3.2 Ballarat services and almost 4 services from Traralgon.
- The fastest service between Shepparton and Southern Cross will travel 26 Km/h slower than the equivalent Ballarat service.

Past Investment

The Victorian and Australian Governments have invested in several major capital projects to improve the capacity, frequency, reliability, travel time and passenger comfort on Victorian Regional Rail routes. The table below provides a summary of the largest of these projects delivered over the 15 years from 2002 to 2017.

Summary of Major Regional Rail Capital Projects 2002-2017

Program	Projects	Benefiting Lines	Total Investment
Regional Fast Rail Project 2002 - 2006	Track and signalling upgrades to allow VLocity trains to travel at speeds of up to 160km/h, included the construction of new passing loops, line duplication and passenger facilities	Ballarat Bendigo Geelong Traralgon	\$750,000,000
Regional Rail Link 2009 - 2015	Construction of a major new line running through metropolitan Melbourne to increase capacity and reliability for Geelong, Ballarat and Bendigo services	Ballarat Bendigo Geelong	\$3,650,000,000
Regional Rail Connectivity Project 2017 - 2018	Regional Rail Connectivity Project will significantly improve mobile coverage and connectivity for commuters along the Geelong, Ballarat, Bendigo, Traralgon and Seymour rail lines	Geelong Ballarat Bendigo Traralgon Seymour	\$18,000,000
Total - Completed Projects			\$4.42b

Key Points

- Victorian regional centres have benefited from substantial investment in rail services over the 15 years from 2007 to 2017.
- Based on the data above, when excluding expenditure on periodical maintenance and operations, there has been no investment to materially improve rail services to Shepparton.

Current & Planned Investment

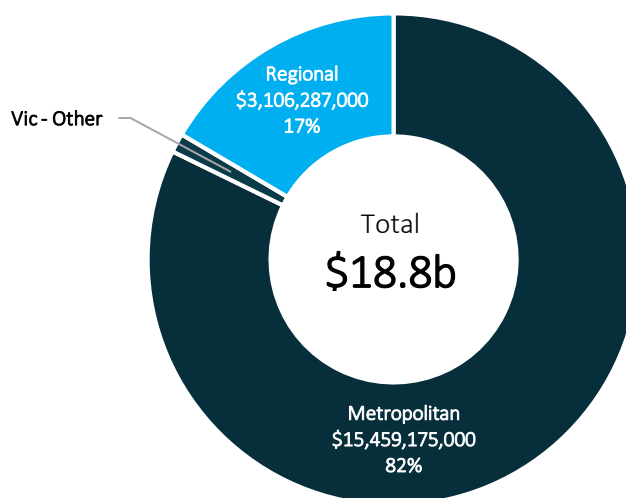
The Victorian 2016-17 State budget outlined approximately \$18.8b of investment in public transport projects across metropolitan and regional networks, major investments include the Metro Rail Tunnel (\$11b), the Murray Basin Rail Project (\$446m) and the Regional Rail Revival Project (\$1.46b). The package of works included around \$2.05b of new funding in addition to existing projects, a detailed summary of the current Public Transport Capital Program is appended to this document.

The budget announced \$33m of new funding for line upgrades and additional services on the Shepparton line in addition to \$10.5m of existing funding in the 2016-17 budget, bringing the total investment amount to \$43.5m.

Key Points

- The funding split between regional and metro projects is broadly in line with the regional/urban population split of 20%/80% (regional/metro Melbourne)
- Includes new projects and previously announced/budgeted projects
- “Vic Other” refers to projects that benefit both metro and regional services and projects where the investment region is not defined

Vic. Budget 2017-18 - Public Transport Investment



Regional Public Transport Funding

The Regional Rail Revival was announced as a part of the 2017-18 State Budget, the Regional Rail Revival is a \$1.48b package of

works consisting of both new and existing projects, as well as projects contingent on the allocation of Federal funding committed through the Asset Recycling Initiative. The following table details regional rail projects, split between Regional Rail Revival and Other regional rail projects.

Source: Department of Treasury and Finance, 2017-18 Budget, 2017

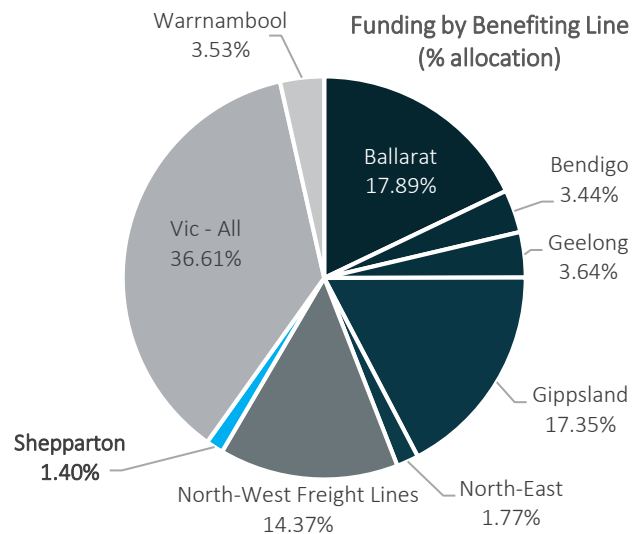
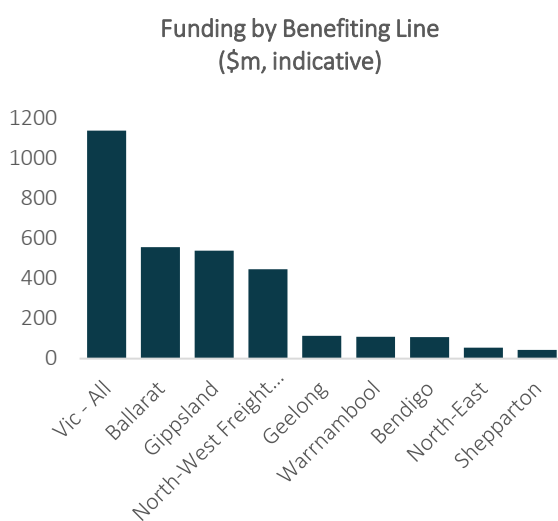
Regional funding by Program & Project

Program	Project	Benefiting Lines	Total Estimated Investment
Regional Rail Revival	Ballarat Line Stage 2 (Ararat and Maryborough)	Ballarat	\$39,000,000
	Ballarat Line upgrade	Ballarat	\$516,724,000
	Bendigo and Eaglehawk station upgrades	Bendigo	\$15,800,000
	Bendigo/Echuca Line Upgrade	Bendigo	\$91,000,000
	Gippsland Line Upgrade Stage 2 (Avon River Bridge)	Gippsland	\$95,000,000
	Improvements to the North-East Line	North-East	\$55,000,000
	North East Line	North-East	\$40,000,000
	Regional Rail Revival – Gippsland Rail Upgrade	Gippsland	\$435,000,000
	Surf Coast Rail Stage 1	Geelong	\$110,000,000
	Warrnambool Line Upgrade	Warrnambool	\$100,000,000
Regional Rail Revival Total			\$1,457,524,000
Program	Project	Benefiting Lines	Total Estimated Investment

Regional Rail - Other	Track duplication between South Geelong and Waurn Ponds planning	Geelong	\$3,000,000
	Gippsland corridor station upgrades	Gippsland	\$9,000,000
	Murray Basin Rail Project	North-West Freight Lines	\$446,500,000
	Co-investment for upgrades to State owned rail sidings	Vic - All	\$8,500,000
	Major periodic maintenance on the regional rail network	Vic - All	\$287,913,000
	More regional trains	Vic - All	\$516,720,000
	New VLocity carriages for the regional network	Vic - All	\$257,078,000
	Non-urban train radio renewal	Vic - All	\$54,352,000
	Sustaining the V/Line train fleet	Vic - All	\$12,500,000
	Warrnambool line level crossing upgrades	Warrnambool	\$9,700,000
	Shepparton line upgrade and additional services	Shepparton	\$43,500,000
Regional Rail – Other - Total			\$1,648,763,000
Regional Rail - Total			\$3,106,287,000

Funding by “Benefiting Line” (indicative)

The following charts illustrate the distribution of funding by “Benefiting Line” as outlined in the current Victorian State Budget. Projects categorised as “Vic All” are generally comprised of rolling stock procurement (VLocity carriages) and projects and do not target works on specific regional lines.



Benefiting Line	Funding (\$m, indicative)
Vic – All	\$1,137.0
Ballarat	\$ 555.7
Gippsland	\$ 539.0
North-West Freight	\$ 446.5
Geelong	\$ 113.0
Warrnambool	\$ 109.7
Bendigo	\$ 106.8
North East	\$ 55.0
Shepparton	\$ 43.5

Regional Rail Revival Program

The Regional Rail Revival program will invest approximately \$1.47b in major upgrades to regional passenger lines across Victoria. The program is made up of a mix of new and existing projects as well as projects that are contingent on Federal funding linked to the Federal Asset Recycling Initiative.

Existing/New	Funding Source	Project	Total Estimated Investment
Existing Projects	Victorian Government Funded	Ballarat Line upgrade	\$516,724,000
Existing Projects	Victorian Government	Bendigo and Eaglehawk station upgrades	\$15,800,000
Existing Projects	Victorian Government	Improvements to the North-East Line	\$15,000,000
Budget 2017/18 - Existing Projects Sub-Total			\$ 547,524,000
New Projects	Dependent on Federal Funding	Ballarat Line Stage 2 (Ararat and Maryborough)	\$39,000,000
New Projects	Dependent on Federal Funding	Bendigo/Echuca Line Upgrade	\$91,000,000
New Projects	Dependent on Federal Funding	Gippsland Line Upgrade Stage 2 (Avon River Bridge)	\$95,000,000
New Projects	Dependent on Federal Funding	North East Line (federal component)	\$40,000,000
New Projects	Dependent on Federal Funding	Surf Coast Rail Stage 1	\$110,000,000
New Projects	Dependent on Federal Funding	Warrnambool Line Upgrade	\$100,000,000
New Projects	Victorian Government Funded	Regional Rail Revival – Gippsland Rail Upgrade	\$435,000,000
Budget 2017/18 - New Projects Sub-Total			\$910,000,000
Regional Rail Revival - Total			1,457,524,000

Key Points

- While the Regional Rail Revival is a significant program of works, it predominately made up of existing projects and projects contingent on Federal Funding.
- While there is some conflicting public information, based on the 2017-18 Victorian State budget papers there is no direct funding for the Shepparton line as a part of this Program.

2. Appendices

Appendix A: Victorian Government – Summary of Current Public Transport Projects

New/Existing	Region	Program	Project	Total Estimated Investment
Budget 2017/18 - Existing Projects	Metropolitan	Infrastructure Upgrades and Replacement	Upfield, Somerton and Wallan service enhancement planning	\$5,000,000
			Additional X'Trapolis trains	\$97,870,000
		Bayside rail improvements	\$115,000,000	
		Caulfield to Dandenong conventional signalling and power infrastructure upgrade	\$608,281,000	
		City Loop fire and safety upgrade stage 2 and intruder alarm	\$132,863,000	
		Fisherman's Bend urban renewal area – phase one initiatives	\$5,000,000	
		Flinders Street Station redevelopment	\$100,000,000	
		Frankston Station Precinct Development	\$50,000,000	
		High Capacity Metro Trains	\$55,000,000	
		Metropolitan Network - Capital Projects	Huntingdale Station bus interchange project	\$5,000,000
			Huntingdale Station car parking improvement project	\$2,577,000
			Hurstbridge rail line upgrade	\$135,905,000
			Life extension for Comeng trains	\$75,000,000
			Mernda rail extension project	\$596,714,000
			Metro Tunnel	\$11,031,000,000
			Metropolitan rail infrastructure renewal program	\$699,891,000
			New E-Class trams	\$294,770,000
			Nine additional X'Trapolis trains	\$175,000,000
	Southland Station		\$25,950,000	
	Tram procurement and supporting infrastructure	\$804,456,000		
	Regional	Current Projects - other	Gippsland corridor station upgrades	\$9,000,000
			Track duplication between South Geelong and Wauran Ponds planning	\$3,000,000
		Infrastructure Upgrades and Replacement	Co-investment for upgrades to State owned rail sidings	\$8,500,000
			Non-urban train radio renewal	\$54,352,000
		Murray Basin Rail Project	Murray Basin Rail Project	\$446,500,000
		New Trains	More regional trains	\$228,835,000
			New VLocity carriages for the regional network	\$257,078,000
		Regional Rail Revival (Vic Funding)	Ballarat Line upgrade	\$516,724,000
Bendigo and Eaglehawk station upgrades			\$15,800,000	
Improvements to the North-East Line			\$15,000,000	
Shepparton line upgrade and	Shepparton line upgrade and additional services	\$10,500,000		

New/Existing	Region	Program	Project	Total Estimated Investment
		additional services		
	State-wide	Current Projects - other	myki ticketing services retender	\$68,500,000
			Railway crossing upgrades	\$44,934,000
			Railway Station Car Parking Fund	\$19,920,000
			Road and rail minor works fund – rail	\$37,370,000
Budget 2017/18 - Existing Projects Total				\$16,751,290,000
Budget 2017/18 - New Projects	Metropolitan	Airport Link (Dependent on Fed Funding)	Airport Rail Link	\$10,000,000
		Metropolitan Network - Capital Projects	Additional station car parks and upgrades	\$8,700,000
			Frankston Line stabling	\$187,400,000
			Improving public transport accessibility	\$11,286,000
			Mernda stabling and Broadmeadows government land purchase	\$11,050,000
			More E-Class trams and infrastructure	\$215,462,000
	Regional	Current Projects - other	Sustaining the V/Line train fleet	\$12,500,000
			Warrnambool line level crossing upgrades	\$9,700,000
		Infrastructure Upgrades and Replacement	Major periodic maintenance on the regional rail network	\$287,913,000
		New Trains	More regional trains	\$287,885,000
		Regional Rail Revival (Dependent on Fed Funding)	Ballarat Line Stage 2 (Ararat and Maryborough)	\$39,000,000
			Bendigo/Echuca Line Upgrade	\$91,000,000
			Gippsland Line Upgrade Stage 2 (Avon River Bridge)(c)	\$95,000,000
			North East Line (federal component)	\$40,000,000
			Surf Coast Rail Stage 1	\$110,000,000
			Warrnambool Line Upgrade	\$100,000,000
		Regional Rail Revival (Vic Funding)	Regional Rail Revival – Gippsland Rail Upgrade	\$435,000,000
		Shepparton line upgrade and additional services	Shepparton line upgrade and additional services	\$33,000,000
	State-wide	Current Projects - other	Enhancing safety on the train network	\$60,615,000
			Ongoing delivery of night network	\$3,165,000
Budget 2017/18 - New Projects Total				\$2,048,676,000
Grand Total				\$18,799,966,000

Source (Department of Treasury and Finance, 2017-18 Budget, 2017)

Appendix B: Data/information sources

Analysis Domain	Metric	Information Source/s
Service Levels	Frequency	PTV, <i>Connect with Greater Shepparton</i>
	Travel Time	PTV
	Reliability	V/Line performance reports
Investment	Capital improvement & upgrades	State budget, V/Line annual reports, DTF
	Maintenance	
Contextual/comparative	Population	Australian Bureau of Statistics
	Population growth	
	Demographics	
	Employment	
	Distance to Southern Cross Station (Melbourne)	Vicsig.net
	Growth Industries	Regional Development Victoria
Other	Benefits of regional rail, comparative analysis between regions	<i>Rail Futures Report (2016)</i>

Useful Links

Network Map <https://www.vline.com.au/getattachment/f8a1e2c3-5d60-4abe-b608-2bc18e9f8197/V-Line-Network-Map>

V/Line - Regional public transport for Victoria - Maintenance on the Seymour-Shepparton line
<https://corporate.vline.com.au/News-Alerts/Media-Releases/Maintenance-on-the-Seymour-Shepparton-line>

V/Line Passenger Services
<https://www.audit.vic.gov.au/sites/default/files/2017-08/20170809-VLine-Passenger-Services.pdf>

Public transport | Victorian Budget 2017/18
<https://www.budget.vic.gov.au/priority/public-transport>

Treasury and Finance - 2016-17 State Budget
<http://www.dtf.vic.gov.au/Publications/State-Budget-publications/2016-17-State-Budget>

History of Rail in Australia
<https://infrastructure.gov.au/rail/trains/history.aspx>

Biggest Public Transport Investment In Victoria's History | Premier of Victoria
<https://www.premier.vic.gov.au/biggest-public-transport-investment-in-victorias-history/>

V/Line - Regional public transport for Victoria - Performance
<https://www.vline.com.au/About-V-Line/Performance>

Regional City of Shepparton - Victorian Regions and Regional Cities - Regional Development Victoria
<http://www.rdv.vic.gov.au/victorian-regions/shepparton>