

North West Victoria Regional Passenger Transport Study

Final for Consultation

Mildura Rural City Council

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Executive Summary

Background

The region of North West Victoria is a long way from any capital city; a 4.5 hour drive from Adelaide, 6 hours from Melbourne or almost an 11 hour drive from Sydney. As the most distant region from the state's capital (and other capital cities), Access and Connectivity is essential for the social well-being and economic prosperity of North West Victoria.

Many people choose to live in the North West Region to take advantage of the lifestyle benefits. More space, less pollution and congestion, the quality of the natural environment, green spaces, the river frontage, and the sense of community are some examples. Further, housing is generally more affordable and life in general is more relaxed.

While there are distinct advantages, considerable research confirms there are also significant social and economic impacts for regional communities. For North West Victoria, transport 'isolation' represents a key social and economic impact, affecting the region from several perspectives, including:

- Access to services, including health
- Transport costs
- Influence on education choices and employment
- Demographic profile (including socio economic disadvantage and ageing community) and
- Regional competitiveness.

Each of the above has a negative impact on the overall regional economy and in particular, its competitiveness when compared to other regions. These impacts agglomerate and affect the overall regional competitiveness of North West Victoria far beyond these discussion areas alone.

Not surprisingly, in regional areas such as North West Victoria, transport costs represent a heavier financial burden than in many other geographic areas. The "Australian Infrastructure Audit 2019" conducted by Infrastructure Australia has recognised a number of key challenges for regional passenger transport, including the following of particular note:

- Many regional, remote and rural communities do not have the economies of scale to justify private investment in charging infrastructure (e.g. electric vehicles)
- Regional aviation often struggles to be financially viable, and customers view it as costly
- Public transport investments and operating subsidies are substantial, but decisions lack transparency
- Regional and remote local governments struggle to fund and maintain roads and airports. Local governments often have relatively small revenue bases but are responsible for the maintenance of expensive transport networks
- Technological change is driving the collection of valuable data by transport operators and network owners
- Public transport service levels and access is lower in the outer suburbs and regional centres. This results in lower public transport mode share and a reliance on cars in these areas
- People on the outskirts of our cities and in regional and remote Australia pay proportionally more for transport
- Emerging point-to-point operators are not subject to the same subsidy schemes and accessibility legislation as taxis, meaning they are not accessible to many people with a disability.



Chapter 5 Transport of the Australian Infrastructure Audit 2019 addresses Transport Accessibility and Equity and states that *"...many Australians lack equal access to transport, and the opportunities it opens up, due to financial, geographic, physical or cognitive restrictions..."*

Further, *"...outer urban and regional communities are particularly at risk of transport disadvantage.*

Public transport plays a vital role in promoting social equity. Disadvantaged groups with limited access to public transport are especially at risk of social exclusion. People living in outer-urban areas and regional centres often have poor access to public transport and rely heavily on private vehicles for access to jobs, education, services and entertainment..."

The return of passenger rail to Victoria has been the subject of advocacy in North West Victoria almost since its removal in 1993. High travel cost, long travel time and a lack of comfort are just a few of the shortcomings of the existing passenger transport system. Mildura however is the largest regional centre in Victoria without a passenger rail service and is one of the 5 most socially disadvantaged Local Government Associations (LGAs) in the state. Advocacy, deeper investigations and a detailed business case will be required to ensure support at all levels for the return of passenger rail.

Given the increasing understanding of accessibility and social equity issues for transport disadvantaged regions, it is timely to investigate the need for improved passenger transport provisions for North West Victoria more broadly and more deeply consider an evidence-based way forward for the return of passenger rail.

The Study

This Study builds on the North West Regional Passenger Transport Project Scoping Brief, which formally defined the problems, benefits and opportunities with the region's passenger transport system. This Scoping Brief has provided strategic direction for the Study, which seeks to answer the following question:

What Regional Passenger Transport Services and Options should be available to regional communities and who will be the users of those services over the next 20-30 years to improve the north west region's Connectivity, Social Equity and Economic Development in a sustainable manner?

Identified opportunities have been evidenced, are considered feasible and prioritised, and consider factors such as connectivity, efficiencies and sustainability, service delivery needs, policy needs and infrastructure upgrade requirements.

The Study has also been undertaken in consideration of the requirements of the Australian Transport Assessment and Planning Guidelines (as prepared by the Transport and Infrastructure Council of Australia), to best position the region for development of robust, evidence-based business cases ready to seek funding opportunities.

Consideration has been given to all aspects of the existing passenger transport system and a range of transport options have been identified, depending on the length of trip and destinations. These include air travel, bus/coach and/or train services and by private vehicles, including taxis and community transport services. Opportunities and actions also include recognition of alternative and new passenger transport services which are emerging, have emerged or may be suited for trial within the region.



Study Participants

As a key element in the development of the Regional Passenger Transport Study consultation has been undertaken with Member Councils, Regional Development Australia, Department of Transport Victoria, key representative groups and other identified stakeholders.

Approach

Key stages of the Study have comprised the following tasks.

- Review of Data and Literature, including ABS data, SEIFA data, exploration of timetables, routes, time and costs of the existing passenger transport system, transport strategies in adjoining regions, and case studies.
- Identification of Future Passenger Transport Needs, through detailed discussions with key stakeholders and industry representatives, to create passenger transport demand profiles across sectors such as Education, Health, Employment, Aged and Disadvantaged and Tourism. This addressed issues such as cost, travel time, services and infrastructure needs.
- Assessment of the Social and Economic Impacts of North West Victoria's Transport 'Isolation', and the manner in which it affects the region's social and economic performance. This assessment has not only drawn upon discussion with key stakeholders, but also draws heavily on research and other case studies.
- Building upon this, the Study also explores the Opportunity Cost of No Rail Transport Investment, and the missed opportunities for the region without this infrastructure.
- Given the timing of the Study, discussion has been included regarding the Impact of COVID-19-19 and the impact this has had on the region and the changing transport needs. Interestingly, this has had both positive and negative benefits for regional passenger transport.
- Identification of Options to meet Future Passenger Transport Needs, for local, intra- and inter-state transport movements.
- Development of a robust Assessment and Prioritisation Process to determine an Action Plan for the region and the determination of short, medium and long-term priorities for passenger transport in North West Victoria.
- Development of a comprehensive Summary and Draft Report for endorsement by the Project Control Group prior to finalisation.

Outcomes and Key Findings

Key findings of the Study include:

- 1. North West Victoria's passenger transport system suffers from the following notable deficiencies:**
 - No passenger rail service
 - Limited inter and intra-regional bus services
 - Expensive air services
 - High demand for community transport
 - Long wait time for taxi services.



2. North West Victoria's transport 'isolation' has resulted in:

- Limited access to services, including health
- Increased transport costs
- Limited education choices and employment
- A poorer demographic profile (including socio economic disadvantage and ageing community) and
- Reduced regional competitiveness.

The following initiatives have been identified to improve the regional passenger transport system in North West Victoria:

- Provision of a Shuttle Bus to Mildura Airport
- Advocate for the Murray Basin Rail Project to extend to Mildura and include a Passenger Rail Service for Mildura
- Improve Passenger Transport Connections within, to and from the region
- Investigate provision of a Second Rail Bridge at Mildura
- Improve Tourist Routes to better cater for passenger transport
- Refine and improve the local Bus Service within Mildura
- Investigate opportunities for provision of On-Demand Transport in the region
- Explore the introduction of Rideshare Services in Mildura
- Consider air travel subsidies to Melbourne (or Adelaide)
- Upgrade Waiting Facilities at Mildura Bus Station
- Introduce Mobility as a Service (MaaS)
- Update Community Transport Service Options
- Introduce and/or Expand Education Programs (as they relate to transport choices)
- Expand Digital Connectivity Options
- Optimise Use of Existing Resources/Assets
- Improve/Strengthen Cross-Border Opportunities
- Extend Air Travel Routes to include a Bendigo/Mildura/Adelaide Route
- Consider Hydrogen Fuelled Vehicles for the Mallee
- Secure and implement infrastructure and support systems for a Mildura Autonomous Bus Trial.

Future passenger transport needs require existing and future services to collectively service local, intra- and inter-state transport needs. With population growth forecasts seeing the region grow to 94,000 residents by 2031 and the large horticultural industry across the region relying heavily on seasonal workers, well-connected passenger transport is key to ensuring the long-term social and economic prosperity of the region.

This Regional Passenger Transport Study has produced a prioritised set of passenger transport initiatives for improved passenger transport within the North West Victoria region, which meet the following strategic responses as determined through the Investment Logic Mapping process undertaken as part of the preceding Scoping Study:

- Restructure current transport options to better serve the north west Region
- Increase diversity and improve affordability of available transport options
- Expand use of technology in provision of region's transport/ community services
- Improve equitable access to community services



- Develop a cross-border regional economic hub
- Expand education opportunities and encourage skilled workforce growth, and
- Identify and realise economic development opportunities that take advantage of improved transport connectivity.

These initiatives have been developed and assessed in collaboration with stakeholders and in accordance with the Australian Transport Assessment and Planning Guidelines (developed by the Australian Transport and Infrastructure Council).

Each initiative has been assigned with actions for the short, medium and long term, with broad costings and relevant stakeholders identified; from these, Priority Actions have been identified.

Priority Actions

Priority Actions seek to achieve both 'quick-wins' and actively commence further investigations towards the realisation of long term regional passenger transport goals. These priority actions have been identified to improve the quality, safety, efficiency, and usage of passenger transport and include:

1. Mildura Passenger Train Service

Rail may provide a more efficient and more comfortable service for travel between Mildura and other regional towns and cities (as well as Melbourne) than bus transport. On-demand transport and local bus services can feed to the train stations in the smaller communities both along the line and in Mildura.

From an economic perspective alone, the provision of rail to Mildura is a costly exercise and has been previously assessed. The social cost and matter of equity for the region however has yet to be fully quantified in an economic sense. Further work is required to document the real level of support for the return of passenger rail to North West Victoria, quantify the most likely level of demand for a train service and to review and extend previous feasibility studies to properly consider the Social Equity benefits of the project.

Short term Actions:

- Engage with Councils located along the corridor, businesses and industry and gather documented support for the return of passenger rail to Mildura (and the region)
- Using this, lobby State Government for a revisit of feasibility studies to clearly include the Social Equity benefits to justify the project (this can include the Actions included in this report)
- Conduct an independent study to quantify the travel demand for a return of the train service (by who and how often) based on a market segment analysis to identify the future potential rail passengers
- In undertaking further investigations ensure consideration is given to the broader regional benefits including connectivity with communities in NSW

2. Regional Passenger Transport Connections

Passengers travelling to Mildura from Melbourne by bus arrive in Mildura after 1am in the morning; other services require leaving Mildura at other similarly inconvenient times. These challenging arrival and departure times have an adverse effect on people's choice of travel mode, many preferring to instead use private transport to make regional trips. Those that do not have the luxury of owning a vehicle may feel further penalised by inconvenient times of transport service operation. Further, poor regional services and connections serve to discourage rather than attract tourists, visitors and seasonal workers to the region.



In the absence of regular scheduling and service reviews for regional bus and coach services in the region, it is time for a formal assessment of operations and services, timing, location and quality of passenger transport connections; based on a proper understanding of current and future passenger needs.

The timing of bus and coach services in the north west region is designed in consideration of linking rail services and other connecting coach services; these too will therefore require consideration in an overall review process.

Short Term Actions:

- Develop and foster advocacy from towns and regions
- Liaise with Department of Transport (DoT) and local and regional bus operators for both coach services and connection to trains

3. Local Town Bus Services

Prior to and during this study, MRCC and its ratepayers have identified the need for a review of the local bus and coach services and existing timetables with respect to meeting customer travel demands (i.e., service times, days of operation and routes). This is not confined to Mildura only. Other surrounding townships also have local bus and coach services or services linking them to Mildura and one another.

Suggested changes include altering the timing of services on weekdays and/or weekends, increasing the number of services offered and adjustment of routes to better serve the type and demographics of users.

Short Term Actions:

- Liaison with DoT and bus operators to critically review current bus and coach services and determine improvements required to best meet customer travel demands.
- Conduct a comprehensive bus network review of the existing routes and services based on walkable catchment analysis, demographic market segment assessment of the existing and future bus customers from a customer engagement survey and service performance evaluation of the local routes and services.

4. On-demand Transport

SunAssist already provides a form of On-demand Transport for the region, but its success means that it already operates well above its capacity. Eligibility criteria for community transport services (requiring either a disability pension or 65+ years aged pension) also limits the population that it can service within the region.

The provision of broader On-demand Transport services for the region could significantly support community, public and private transport services for the region, further assisting the ageing, unwell and transport disadvantaged. Introduction of a new on-demand transport system however will require the determination of an operational and functional business model, and attraction of a suitable operator/s.

This however would also need to be developed in consideration of the current taxi fleet operations, to ensure the developed On-demand Transport model complements rather than conflicts with taxi services.



Short Term Actions:

- Identify the on-demand transport service model, area and operating hours
- Invite private bus operators to tender for on-demand transport services (with app-based booking and passenger tracking).

5. Rideshare Services in the region

Private rideshare operators such as Uber and Ola do not currently operate in Mildura, although well established in Melbourne and other more highly populated regional areas in Victoria and New South Wales. Private rideshare operators offer competitive, 'on-demand' services, as they generally select passenger journeys which largely reflect partly or all of their own travel route.

DoT has advised that it currently has a very small team looking at trials for broader application of rideshare services and would consider North West Victoria a potential candidate for the application of one of these service trials.

Short Term Actions:

- Liaise with private rideshare operators (i.e., Uber, Ola, etc) and State Government transport regulators
- Consult with taxi industry and DoT about competition issues

6. Station and Bus Stop Upgrades

It was identified that improved services and timetables for bus and coach services, extension of rail services and additional community transport services are all valuable improvements to the current regional passenger transport services. For the community to fully embrace these service improvements however, a number of improvements must also be made to the supporting infrastructure.

At the centre of this is the existing regional bus station in Mildura; this is not manned at night, meaning that amenities are not accessible, shelter is limited and a safe waiting area is not available for those arriving late at night/ early morning. Further, bus stops across the region largely do not meet current standards, this including the provision of shelter, tactile tiles, ramps, suitable signage and the like. The treatment of stops should be consistent, and easy to understand.

Short Term Actions:

- Liaise with DoT, State Government and local Councils to identify the scope of works for the station and bus stop upgrades
- Develop plans for stop and station upgrades
- Implement stop and station upgrades



7. Education about Transport Options

As with many regional areas, there is a high reliance on private vehicles for travel, even for short trips. Further, there is also an ample supply of free car parking within the Mildura CBD and other townships which supports car use.

Besides the private car, there are a range of transport options that can be used for movement within Mildura and the wider region, including bus and taxi travel, cycling and walking; many of which utilise some form of active movement, which has added health benefits. Clear communication of the availability, locations and benefits of these transport options can encourage greater use.

Short Term Actions:

- Develop an awareness campaign to promote transport options in the region. This could include advertising through both print and digital media, visits to schools and other suitable groups and clearer identification of actual services and infrastructure.
- Collaborate with Councils and other stakeholders to develop locations for transport themed murals on walls; similar to that used throughout areas such as Melbourne, Geelong and St Kilda for example.

8. Technology and Innovation (including autonomous bus trial)

Technology in transport is happening rapidly with new intelligent transport systems, electric/hybrid motor vehicles and the progressive introduction of connected and autonomous technologies in vehicles. The Region will need to enable these changes with future transport initiatives.

Future transport services are also changing such as the progressive introduction of innovative services like Mobility as a Service.

Autonomous bus trials have been popular in Australia since 2018, including the 'Murray' EasyMile vehicle trialled in Renmark (SA) over the last 12 months which proved very popular with the local public. However, this trial has now come to a conclusion with no further funding to continue the operation.

Short Term Actions

Autonomous Bus Trial

- Determine the future use of the "Murray" EasyMile vehicle that was trialled in Renmark, SA
- Obtain feedback on the Renmark trial and lessons learned
- Investigate opportunities to trial the vehicle in the region

Other Technologies

- Support the progress introduction of electric vehicle charge stations throughout the region
- Monitor developments in fuel alternatives (all transport modes) and the impact on the cost effectively of transport choices
- Monitor developments in transport technologies and alternative mobility service providers.



1 Introduction

The five Councils in the study area, (Mildura Rural City, Yarriambiack, Buloke, Central Goldfields and Northern Grampians) are concerned that the north west region of Victoria requires additional regional transport options and better access for rural communities and disadvantaged groups. These concerns are shared by both regional businesses and the wider community. Victorian State Government representatives are also aware of the region's limited passenger transport options.

The North West Victoria region has an expected population of almost 94,000 residents throughout the five local government areas (LGA's) by 2031. Mildura is considered the north west region's centre.

Mildura however remains the largest regional centre in Victoria without a passenger rail service and has limited inter-regional and interstate connecting bus services, despite its location as a tri state transport hub (between South Australia, Victoria and New South Wales).

Due to early morning timetabling of routes, buses regularly drop off passengers at an unstaffed, unlit and locked V/Line bus terminal in Mildura. A lack of evening local passenger transport services can result in an increased risk of drink driving. Limited frequency of connecting services, together with poor access to specialist health services (which largely lie in Adelaide or Melbourne), hampers residents from seeking and receiving treatment, either at the earliest opportunity or sometimes, not at all.

To improve access to employment, recreational and educational opportunities, it is anticipated that increased transport options and improved infrastructure, will enhance the north west region's liveability, business and employment opportunities and attractiveness for residents and visitors to the area.

This Regional Passenger Transport Study for North West Victoria gives focus to reviewing, articulating and specifically quantifying the economic, social and environmental benefits to north west regional communities, improving connectivity to the capital city, regional Victoria and other interstate locations.

Quick Facts

No passenger rail service

Limited bus services

Expensive air services

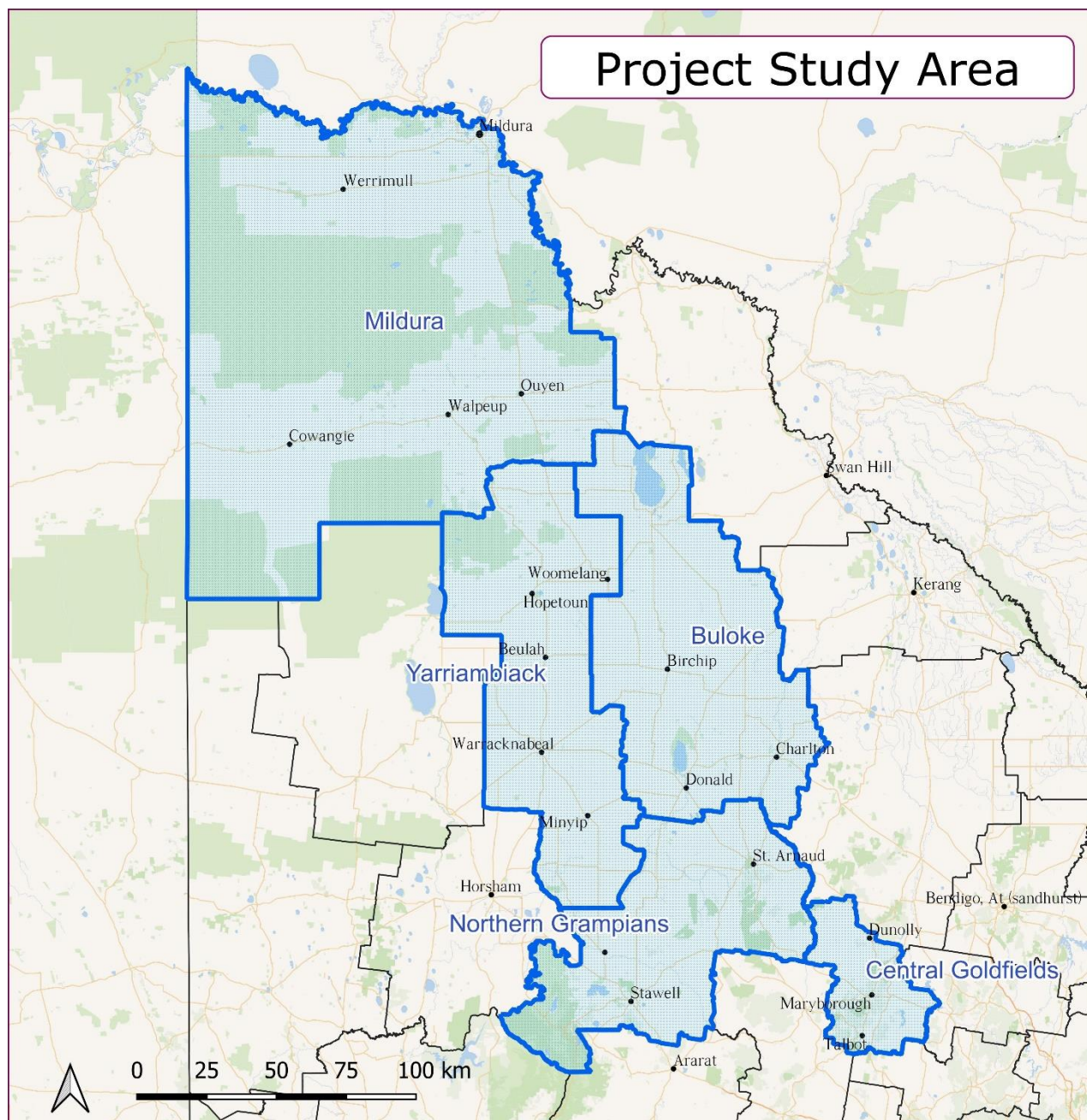
High demand for community transport

Long wait time for taxi services

1.1 Study Area

The study area comprises the north west regions of Victoria, incorporating 5 Council areas including:

- Mildura Rural City Council (MRCC)
- Buloke Shire
- Northern Grampians Shire
- Yarriambiack Shire, and
- Central Goldfields Shire.



Consideration has also been given to cross-border connections, population catchment size and potential benefits to both the South Australian Riverland region, Adelaide and potentially, south west New South Wales, to achieve transport accessibility.



2 The Need for Passenger Transport in North West Victoria

People choose to live in regional areas such as the north west Region to take advantage of the many lifestyle benefits that this provides. More space, less pollution and congestion, the quality of the natural environment, green spaces, the river frontage, and the sense of community are some examples. Further, housing is generally more affordable and life in general is more relaxed.

Being the most distant region from the state's capital, access and connectivity is essential for the social well-being and economic prosperity of North West Victoria. The region's centre, Mildura, is located more than 540km from Melbourne (approx. 6 hour's drive time) and almost 400km from Adelaide (approx. 4.5 hour's drive time).

Those that live and work in the region have the same passenger transport needs as any other location - urban or remote. The key differences or challenges in providing these services however lies in the economic justification. Notably:

- Services generally require longer distances to be covered and therefore longer travel times. Operating and maintenance costs are therefore also higher.
- Services generally cater for a lower volume of users.
- The ability to recoup costs of service provision is even lower than that in more populated areas.

While there are distinct advantages, considerable research confirms there are also significant social and economic impacts for regional communities. For North West Victoria, transport 'isolation' represents a key social and economic impact, affecting the region from several perspectives, including:

- Greater number of workdays are lost to travel to access specialist services and learning (e.g. health and education needs)
- A greater number of workdays are lost due to prior avoidance of timely health care (i.e. as patients put off early or preventative treatment due to the inconvenience and cost of travel)
- Loss of population/resources as more people choose to move to larger, more populated regions and cities
- Less population in turn makes it more costly for the region to provide infrastructure and services (including transport)
- Loss of younger population who need to travel to larger populated areas for study
- Harder to attract new population and increase the region's socio-economic profile
- May also impact attraction of seasonal workers and in turn, the ability to harvest agricultural crops

Other impacts include:

- Reduced health and well-being
- Lesser sense of community due to population decline
- Little opportunity for increased socio-economic demographic as educated young people are not attracted back to the region
- Greater chance of drink driving when suitable transport alternatives cannot be provided
- Reduced social interaction for those who are transport disadvantaged
- Less inter- and intra-regional interaction, which in turn creates even greater isolation.



The impacts of COVID-19 have further highlighted this issue, particularly where border closures have affected day-to-day activities, including access to shopping, health and other essential services (and social interactions especially family).

2.1 Alignment with Strategic Priorities

At the time of development during the COVID-19-19 period (2020-2021), the future Regional Passenger Transport Study for North West Victoria was aligned with the following National, State, Regional and Council strategic priorities:

- **Regional Capitals Australia – Characteristics and Contribution of Australia’s Regional Capitals – Policy Requirement**

This notes the need for new improved infrastructure to stimulate investment and productivity, including transport infrastructure, recognising the economic gateway roles (linking producers, markets, ports etc) that many rural communities and regional cities play in the national economy.

- **Plan Melbourne (2017-2050)– the Vision for Melbourne – State of Cities**

This plan includes a goal to maximise the growth potential of Victoria by developing a state of cities which delivers choice, opportunity and global competitiveness. In particular, refer direction 6.4 – “Improve connection between cities”.

- **Regional Network Development Plan (RNDP) 2016**

This has been developed to guide investment in Victorian regional public transport infrastructure and services over the next 20 years to boost capacity and efficiency across the network, and support population growth.

- **Loddon Mallee North Regional Growth Plan (2014)**

This Plan details a regional approach to land use planning across the 5 municipalities of Buloke, Campaspe, Gannawarra, Mildura and Swan Hill. The plan identifies opportunities to encourage and accommodate growth and to address challenges over the next 30 years.

- **Mallee Regional Economic Growth Strategy 2019**

This strategy outlines a strategic direction for the Loddon Mallee region to invest in skills, build capability and leverage recent and future capital infrastructure, through a package of targeted and ‘unique to region’ investment.

- **Community and Council Plan (2017-2021)**

This has been developed to guide Mildura Rural City Council’s priorities, strategies and objectives for the coming four years in four broad strategic areas – Community, Environment, Economy and Council. Similar plans and priorities have also been reviewed and considered for the other 4 councils within the region.



2.2 Australian Infrastructure Audit 2019

Chapter 5. Transport of the Australian Infrastructure Audit 2019 (prepared by Infrastructure Australia) makes a number of statements which are particularly reflective and relevant for passenger transport in North West Victoria.

“Our transport networks must work harder to promote social inclusion”

“The passenger transport sector is in a state of rapid transition”

“Active transport is at the heart of an integrated transport network”

‘Interstate and regional travel – regional roads are poorly funded and maintained, while flights suffer from high costs and low demand. Rail struggles to compete, but could expand’

“...Following the Victorian Government’s Regional Fast Rail Program and Regional Rail link construction, patronage has doubled on Victoria’s regional trains...”

“Public transport investments and operating subsidies are substantial, but decisions lack transparency. Unless addressed, public transport will continue to be subject to political cycles and budget conditions”

“Transport accessibility and equity ...many Australians lack equal access to transport, and the opportunities it opens up”



3 The Existing Passenger Transport System

3.1 General

Mildura is on the intersection of the Sturt Highway from Adelaide to Sydney, and Calder Highway to Melbourne via Bendigo. V/Line buses operate services that connect Mildura to various parts of Victoria and New South Wales. Some private operators provide coach services to Adelaide and Sydney via Canberra. Mildura has a railway connection to Melbourne, which is used for freight transport and was recently upgraded (in part) to re-enable freight trains to utilise the line as part of the Murray Basin Rail Project. Mildura Airport is one of the busiest airports in Victoria, serviced by three airlines, including QantasLink, REX and Virgin with flights daily to Melbourne. Rex also operates daily flights to Adelaide and Broken Hill. Mildura has a local bus network with services between the CBD, Red Cliffs and Merbein.

Generally, the transport options for North West Victoria can be summarised into the following:

- Road (car) – predominantly used transport between and within regional areas
- Taxi – restricted to larger regional centres (Mildura) and surrounding satellite towns
- Bus – Restricted to some routes within Mildura, Merbein, Irymple, Red Cliffs. Other isolated routes available between some towns
- Coach – limited to specific routes/towns
- Plane – Large regional centres only (i.e. Mildura)
- Walking – Restricted to short distances only
- Cycling – Restricted to short distances only

Transport services within the LGAs of Yarriambiack, Buloke, Central Goldfields and Northern Grampians are generally limited to road-based transport.

Based on the Mallee Regional Profile published in March 2019, 53% of Mildura has ready access to public transport, well below the state at 74%. Buloke is much lower, with only 7% of the population with access to public transport.

Currently, services such as UberX do not operate within North West Victoria.

3.2 Current Passenger Transport Options for North West Victoria to Major Urban Centres

The existing transport options for travel from the North West Victoria region to the major urban centres are summarised below.

Options for travel to **Melbourne** include:

- Road (private car or possibly taxi) that includes travel to Bendigo then rail into Melbourne
- Plane (from Mildura only)
- Train/coach via Swan Hill (public transport)
- Train/coach via Bendigo (public transport)
- Train/coach via Geelong (public transport) and
- Coach via Ballarat (public transport).



Options for travel to **Adelaide** include:

- Road (private car)
- Plane (from Mildura only)
- Coach via Renmark (private operator)
- Coach via Murray Bridge (private operator), and
- Coach via Ouyen and Murray Bridge (private operator).

Options for travel to **Sydney** include:

- Road (private car)
- Plane via Melbourne (via Mildura only) and
- Coach/Train via Griffith and Cootamundra.

3.3 Current Patronage Information and Statistics

The two tables below detail the current frequency, travel time, costs and demand for the travel options between Mildura and Melbourne and other regional centres (Bendigo and Swan Hill). Currently, public transport either via coach or a combination of coach and train has the least out of pocket expense for travel to Melbourne, however has the longest travel time, varying from approximately eight to nine hours.

Table 3.1 Comparison of existing travel options between Mildura and Melbourne and other regional centres

Option	Frequency of services	Travel Time	Out-of-Pocket Costs
Train/coach via Ballarat to Melbourne	1 per day, weekdays only	8 hrs 55 mins	\$55.40
Train/coach via Swan Hill to Melbourne	2 per day, weekdays 1 per day, weekends	7 hrs 38 mins	\$55.40
Train/coach via Bendigo to Melbourne	1 per day, 7 days a week	8 hrs 15 mins	\$55.40
Coach to Swan Hill	3 per day, 7 days a week	3 hrs 24 mins	\$33
Coach to Bendigo	1 per day, 7 days a week	5 hrs 42 mins	\$48.40
Car to Melbourne	Flexible	6 hrs 5 mins	\$100
Plane to Melbourne	5-8 services per day	1 hr 5 min up to 1 hr 20m	\$160-\$300

Notes:

1. Data presented from 2019-20 (pre-COVID-19 restrictions)
2. Driving times will vary between drivers and origin/destination within Melbourne. Times will also depend on vehicle speed and breaks during travel.
3. Travel times in this table are typical in-service travel times as provided by Public Transport Victoria (for coach and train services). They do not include time associated with accessing the service i.e. travel time to bus or airport terminal and waiting time etc.



4. Out of pocket costs are based on one-way adult fares for bus, train and plane, fuel for car assuming 10L/100km fuel consumption and \$1.50 per litre. Other costs such as parking at airport or taxi to airport, and maintenance and depreciation for car are not included.

Table 3.2 Travel catchments and patronage information for the last three financial years

Option	Catchment	2018/19	2017/18	2016/17
Train/coach via Ballarat to Melbourne	Mildura, Ouyen, Birchip, Donald, St Arnaud, Maryborough	Unavailable	Unavailable	Unavailable
Train/coach via Swan Hill to Melbourne ¹	Mildura, Robinvale, Swan Hill corridor	40,711 ¹	41,943 ¹	45,275 ¹
Train/coach via Bendigo to Melbourne ²	Mildura, Robinvale, Swan Hill corridor, including towns between Swan Hill and Bendigo	27,082 ²	28,069 ²	28,800 ²
Coach to Swan Hill ³	Mildura, Robinvale	30,736	33,755	32,829
Coach to Bendigo ³	Mildura, Robinvale, Swan Hill corridor, including towns between Swan Hill and Bendigo	27,082	28,069	28,800
Car ⁴	All areas	N/A	N/A	N/A
Plane ⁵	To and from Mildura	236,633	228,644	218,254

Notes:

1. Data was for the three years pre-COVID-19 which was available at the time of preparing the report. Subsequent patronage data is likely to be influenced by COVID-19 restrictions.
2. Patronage information is for all train trips made between Swan Hill and Melbourne via Rail. Patronage information for Mildura to Melbourne via Swan Hill is currently unavailable.
3. Patronage information is for coach trips made between Mildura and Bendigo. Patronage information for Mildura to Melbourne via Bendigo is currently unavailable.
4. Patronage information was sourced from Department of Transport Victoria.
5. Estimates of car travel demand were not available, however are considered to be the dominant modes of travel to and from Mildura. Car travel is considered to be the dominant mode of travel for all other LGAs within the region.
6. Estimates of air travel are for two-way movement. It should also be noted that Mildura Airport could not quantify the number of passengers who were on-flying to other destinations such as Adelaide or Broken Hill and therefore numbers should be considered as an upper limit. It is known however that Mildura is one of the busiest regional airports in Australia.

Based on the data above, there has been a distinct decline in the use of passenger rail and coach services in North West Victoria. There has been an approximate 11% drop between 2016/17 and 2018/19 in demand from Swan Hill to Melbourne, with an approximate 7% decline in demand for the Mildura to Swan-Hill coach service. This could be attributed to a range of factors including comfort, level of service, number of services etc.



Notwithstanding the above, V/Line publish an annual report with rail patronage statistics per line. All the five main lines have experienced reasonable growth, except the Traralgon line over the last five financial years to 2017/18. The Geelong line has experienced the greatest growth, from 4.02 million passenger trips in 2013/14 up to 8.67 million in 2017/18. The greatest growth in the rail patronage has been attributed to improvements to the rail lines, with the Geelong line experiencing rapid growth.

3.4 'Local' Bus Routes to/from Mildura (run by CDC Victoria)

CDC Victoria operates almost 20 fixed bus routes to/from Mildura, throughout the week and on weekends as follows:

Table 3.3 - CDC Victoria Bus routes to/from Mildura

Route	Description	Approximate Frequency		
		Mon - Fri	Sat	Sun & Pub Hols
100	Mildura to Red Cliffs	1/2hour to hourly	1-2 hour	2 hourly
200	Red Cliffs to Mildura	1/2hour to hourly	1-2 hour	2 hourly
211	Merbein to Mildura (via Eleventh Street)	3 runs only 2 hourly	1 run only	2 runs only 4 hourly
250	Merbein to Mildura (via Seventeenth Street)	Hourly	2 hourly	2 runs only 4 hourly
300	Mildura to Merbein (via Seventeenth Street)	Hourly	2 hourly	2 runs only 4 hourly
311/312	Mildura to Merbein (via Eleventh Street)	3 runs only 2 hourly	1 run only	2 runs only 4 hourly
400/501	Mildura City Loop	2 hourly 9am – 5pm	Nil	Nil
600/601/602	Mildura City Loop	1 to 2 hourly 9am – 5pm	Nil	Nil
950/951	Mildura to Wentworth	Limited runs	Nil	Nil
953/954	Mildura to Gol Gol	2 runs only 4 hourly	Nil	Nil



955	Dareton Loop via Curlwaa, Merbein and Mildura	School days only	Nil	Nil
956	Dareton Loop via Mildura, Merbein and Curlwaa	School days only	Nil	Nil

A copy of the timetables for these services can be found at <https://cdcvictoria.com.au/travel-information/timetables-and-maps/mildura/>.

Notably, these services are generally limited to day services; the latest operating bus service is on a Friday night between Mildura and Red Cliffs, this ending prior to 10pm. With no late weekend services, partygoers are required to either drink responsibly, rely on other drivers or seek taxi services, which are limited.

It is also noted that services do not align with arrival or departure times for V/Line services at Mildura or access the airport.

3.5 Other 'Local' Passenger Transport Services

3.5.1 SunAssist

SunAssist is a not-for-profit community organisation which operates to "assist people to live as independently as possible in the community by providing a range of support services". These services include Community Transport, Meals on Wheels, Assisted Shopping, Friendly Visiting, Phoneassist and the L2P Learner Driver Mentor Program.

The geographical range of the service reaches as far as Bendigo, Swan Hill, Wentworth and Pooncarie. More than 5000 customers are registered with SunAssist; 246 new customers have been referred to the service so far this year. On average, the organisation receives 40 new clients per month.

Currently SunAssist owns and operates 15 vehicles on the road network, all based in North West Victoria and each driven by volunteers. 8 of these vehicles are Accessible vehicles; there are also 2 buses which are used for social outings (each have a capacity of 20-25 persons). All vehicles are suitable for wheeled walkers.

While the overall service is funded through the State (for those users under 65 years) and the Commonwealth (for users over 65 years), SunAssist is not funded for vehicle purchase or running costs. Requests for transport are managed by 2 transport coordinators, managed by an in-house developed IT system. The quality of the IT system is recognised more broadly; SunAssist are looking to sell this operating system to raise further funding.

The Community Transport Service provided by SunAssist is not limited to any particular transport need, but users do need to be on either a Disabled or Elderly Pension to be eligible to access services. Some services can also be approved for special circumstances; for example travel from hospital to home for medical procedures such as hip replacements.

Drivers are also on call 24/7 for transport to and from the Mildura Base Public Hospital. This is a separate service funded by the Mildura Base Public Hospital.

SunAssist also transports children with disabilities between NSW and the Mildura Specialist School; this is run through the Department of Transport NSW.



SunAssist has previously been asked to look at the opportunity to provide on-demand transport services to and from the Mildura Airport. No trial has occurred to date, as a number of taxi-drivers have voiced concerns that SunAssist services already take business from the taxi industry. SunAssist is aware of this perception and aims to comfortably co-exist in the provision of services.

SunAssist recognises that there is a gap in service provisions for both low income workers, indigenous groups and ethnic groups. These groups are clearly in need of transport assistance, but do not meet current eligibility criteria for the service, even for hospital attendance.

The organisation has also looked at a submission to provide travel to Melbourne and other areas to provide 'Ambulance-style' travel.

The quality and range of services provided by SunAssist are recognised elsewhere. They have been asked to speak elsewhere about expanding the services but are also aware of the need to ensure that any expansion cannot come at a compromise of current service provisions. For this reason, SunAssist has chosen to not expand to date.

Funding is a constant issue for the service; the cost of fuel alone last year was \$198,000 and a further \$40,000 was required to cover relevant insurance. Other costs included maintenance of the fleet's standard, badging of the vehicles and administrative costs for running the service.

To meet funding needs, the organisation has diversified its service offerings over the years and continues to seek new funding opportunities. The flexibility in their service operations allows them to operate successfully and upcoming changes in Commonwealth funding provisions (in arrears rather than upfront) will be of benefit to SunAssist. Expansion to include services such as Meals on Wheels and taking up newspaper delivery rounds are both examples of the way in which SunAssist balances the need for an income in order to continue to service the community.

Other examples of community service include SunAssist's support for a struggling local café on RUOK Day; they ordered and purchased 'thank you packs' from the café for each of their volunteers. They have also recently purchased a block of land on which they plan to better accommodate Meals on Wheels tasks, a Men's Shed and other suitable activities for community benefit.

3.5.2 Taxi Services

There are 6 taxi companies that operate services in the region, based in Mildura and servicing both the CBD and surrounding areas. These companies include:

- City Taxis Sunraysia
- Mildura Taxis
- Urcab Mildura
- Silver Cabs Mildura
- City Taxis Sunraysia
- Maxi Taxi Mildura

Each service operates 24 hours/day, 7 days/week. Available vehicles include sedans, 6-7 seater SUVs, wheelchair taxis and 11 seater vehicles. Areas serviced include Mildura, Merbein, Buronga, Nichols Point, Irymple, Red Cliffs and Robinvale.



3.6 Supporting Infrastructure

Supporting infrastructure for regional passenger transport can (where appropriate) include:

- Improved security and lighting
- Seating and shelters for bus, taxi or train passengers
- Passenger transport interchanges
- Passenger transport information boards, signs, etc
- Other passenger transport infrastructure and associated facilities to improve access to public transport and/or
- Minor works directly related to passenger transport infrastructure.

In North West Victoria, there is a staffed bus interchange within the Mildura CBD, providing tickets sales, information, waiting areas and amenities. The interchange facility however is not open after hours and therefore does not cater well for late evening bus arrivals, which do occur.

The level of supporting infrastructure at bus stops varies, both within the Mildura CBD and surrounding areas. Some bus stops include shelter, hardstand and route information; others are little more than a simple sign.

There are opportunities for better connections between bus stops and surrounding communities. Further, there is also opportunity for increasing awareness of bus stop locations, improving kerbside information for passenger transport users and improved safety and security (for example through tactile ground indicators and lighting).



Figure 1 – Example bus stop in Mildura

3.7 Journey to Work Data

Based on Commuting to Work statistics obtained from the 2016 Census, within the whole of the Mildura Local Government Area, there are 21,190 employed people who live in the region with an average commute distance of 10.96km. A total of 21,021 employed people work in the LGA area (i.e. commute to the region for work) with an average travel distance of 9.51km. Statistics for the other Council areas are identified in the table below.



Table 3.4 Journey to work data - Australian Bureau of Statistics 2016

LGA	Number of Employed People Living in Region	Average Commuting to Work Distance for those Living in Region (kms)	Number of Employed People Working in Region	Average Commuting to Work Distance for those Working in Region (kms)
Mildura Rural City	21,190	10.96	21,021	9.51
Yarriambiack	2,500	18.93	2,512	20.92
Buloke	2,357	20.36	2,409	22.93
Central Goldfields	4,136	17.65	4,101	16.59
Northern Grampians	4,640	14.34	4,693	14.92
Victoria	2,594,152	16.17	2,592,949	16.16
Australia	10,024,065	15.98	10,024,065	15.98

Travel mode by LGA indicates that the percentage of people who travel to work by car (either as driver or passenger) remains the predominant form of transport. Mildura Rural City, Goldfields, and Northern Grampians all had higher rates of car use to work than the average for Victoria and Australia. Public transport use in the Council areas was much lower than the average for Victoria and Australia.

Table 3.5 Mode of transport to work as percentage - Australian Bureau of Statistics 2016

LGA	People who Travelled to Work by Car as Driver or Passenger	Public Transport	Walked Only	Worked at Home
Mildura Rural City	77.6%	0.7%	3.7%	4.8%
Yarriambiack	62.4%	0.8%	8.5%	13.2%
Buloke	59.5%	0.5%	12.0%	13.2%
Central Goldfields	73.5%	0.5%	4.9%	5.2%
Northern Grampians	69.6%	0.6%	5.9%	7.6%
Victoria	68.3%	12.6%	3.2%	4.6%
Australia	68.4%	11.5%	3.5%	4.7%



Notably, active transport (i.e. walking) was reportedly higher than the average for all LGAs than the average for Victoria and Australia. Working from home was also reported higher than the Victorian and Australian averages. While the Census data does not provide reasons for method of transport to work, the low public transport usage and high usage by car indicates there is generally a higher reliance on cars for some LGAs as well as limited public transport for all LGAs than the average for Victoria and Australia.



4 Transport Strategies in adjoining regions

4.1 Central Murray Transport Strategy

The Central Murray Transport Strategy, published in 2018 was developed for the Central Murray Regional Forum Councils, including Balranald, Buloke, Gannawarra, Mildura, Murray River, Swan Hill and Wentworth. The strategy identified the key challenges and trends for the region, including a number of goals and priorities. Some of the key goals included,

Promote and facilitate the development of transport systems that support regional economic development and population growth

Improve the transport connectivity of large and small communities to enhance access to services and

Support improved community health and environmental outcomes.

Within the top 15 priorities for the region, a possible return of a passenger rail service was identified for Mildura, with an investigation required into the service from Mildura to Melbourne, by the most efficient and timely route. Improvements to the Swan Hill passenger rail line and service was also identified as a top priority. Other recommendations included improved public transport connections, such as improved frequency and timing between the larger centres of Mildura, Swan Hill, Echuca, Ballarat, Melbourne, Adelaide and Sydney, improvements to the Calder, Sturt and Murray Valley Highways, a truck by-pass of Mildura, completion of the Murray Basin Rail Project, last mile improvements and improvements to tourist routes and trails.

4.2 Loddon Campaspe Integrated Transport Strategy

The Loddon Campaspe Integrated Transport Strategy was prepared in 2015, based on an evidence-based strategy for the Loddon Campaspe region including Central Goldfields, Campaspe, Greater City of Bendigo, Loddon, Mount Alexander and Macedon Ranges Council's. Similar to the Central Murray Transport Strategy, a number of challenges and goals within the top ten priorities for the regions were identified, including the:

- Murray Basin Rail Project
- Capacity improvements on the Bendigo, Swan Hill and Echuca Passenger rail lines and increased passenger rail services and
- Improvements to bridges, structures and a higher mass limit access study for the Goulburn Murray Irrigation District.

These strategies will need to be considered in developing the passenger transport strategy for the overall North West Victoria region.



4.3 The Murray and Mallee Local Government Association 2030 Regional Transport Plan

This Regional Transport Plan was developed in 2014 and updated in 2017 for South Australia's Murraylands and Riverland Region, comprising the Berri Barmera Council, Coorong District Council, District Council of Karoonda East Murray, District Council of Loxton Waikerie, Mid Murray Council, Rural City of Murray Bridge, District Council of Renmark Paringa and Southern Mallee District Council.

The Plan identified 6 key goals for the region, including Economic Development, Access, Road Safety, Tourism, Public Transport and Environment. Through literature review and demand modelling, the Plan has determined regional priorities for the next 15 years, covering road, rail, air and ferry transport needs for freight, community and tourism based movements.

The high level nature of the Plan provides minor reference to specific infrastructure improvements, particularly those for interstate activity. Public transport activity is acknowledged, and current parliamentary policy is recognised, but the Transport Plan makes no direct recommendation/s for improved public transport related infrastructure or services.

It is worth noting here that although not a recommendation of the Regional Transport Plan, an autonomous bus trial has been conducted in Renmark. The findings of this trial and its suitability for a similar opportunity in Mildura have been considered and are discussed further in later sections of this report.



5 Preceding Investigations (ScopingBrief)

A Scoping Brief to undertake a future Regional Transport Strategy for the areas of North West Victoria was commissioned by MRCC in 2019 to outline the requirements for the development of a regional passenger transport strategy for North West Victoria. This has formed the basis for development of this Regional Passenger Transport Plan / Strategy.

This Scoping Brief was prepared through desktop investigations and extensive discussions with key stakeholders. Investment Logic Mapping (ILM) was also undertaken to ensure clear Problem Identification, Benefits and possible options for improvement of regional passenger transport. This process is in accordance with the process set out by the Victorian Government's Department of Treasury and Finance, to depict the logic stream for an investment. This approach has engaged key 'investors' to shape the investment decisions, through a facilitated workshop of 'intelligent discussion' to identify and align connectivity problems for the region, with proposed investment opportunities for new and improved infrastructure and services.

In particular the workshop identified:

- Issues for passenger transport within, to and from the region
- Consequences of the identified issues
- Possible sources of evidence to support issues
- Defined problems through distillation of identified issues
- Benefits for the community if problems are resolved, against which KPI's can be assigned and
- Strategic responses (broadly speaking, opportunities), to address problems and realise benefits.

Copies of the Investment Logic Mapping process are included in the Scoping Brief.



6 Future Passenger Transport Needs

6.1 General

Future passenger transport provisions in North West Victoria will need to effectively integrate stakeholder and user needs with rapid technological advancements, embrace innovation and ensure sustainability of initiatives and solutions for the coming decades.

Importantly, they will need to respond to the needs of those who choose to reside and visit a region which boasts one of the most liveable inland cities in the country. Future residents and visitors will include, but not be limited to:

- Future leaders of smart agriculture
- STEM education facility community – teachers, researchers and students
- Specialist health providers
- Tourists and
- An ageing population.

Key issues to be considered include climate change, the impacts of fossil fuels on independent car travel, road deterioration, car ownership/affordability and sustainability of transport solutions over the next 30 years. Other considerations will include, but not be limited to, the following:

- Technology and the way this may affect future transport choices
- The influence and impact of automated vehicles in the future
- An ageing workforce
- Impacts and opportunities of the Free Trade Agreement
- The very real need for social inclusion and equity
- The need for quality and efficient communications and
- NDIS employment and aged care – it is estimated that 3000 to 4000 jobs will be required in the region in addition to those today.

While the timing and impact of these are yet to be fully defined, passenger transport solutions for the region will need to be flexible, meet current and known future needs and be responsive to change.

6.2 Transport Profiles

Detailed discussions have been held with key stakeholder representatives to gain a greater understanding of the passenger transport needs across key cross-sections of the region. This has included Tourism, Health, Education, Employment and Ageing and where topical, has covered aspects such as:

- Need for services
- Demand for services (seasonal? when? to/from?)
- Indicative numbers of users
- Current transport provisions and
- Issues or gaps.

These discussions are described in detail in Appendix A. A short summary for each is included below, followed by an overall table that summarises and compares the needs of varying stakeholder types.



6.2.1 Tourism

North West Victoria features many key tourist destinations, including the Murray River, Mallee and Wimmera regions, northern Grampians and the historically rich Goldfields. To date, current service levels and costs of passenger transport to and from the region to both other regions and capital cities has necessitated largely car-centric tourism within the region. Visitation data shows that 90% of visitors to the region come by road.

The Business Victoria website provides information regarding regional visitation, tourism employment and regional spend across the regions. North West Victoria encompasses parts of each of the Goldfields, Grampians and Murray tourism regions, which collectively total an annual tourism spend of more than \$2.9B (measured during the COVID-19 pandemic) and employ more than 30,400 people.

Demand for transport services within the region is highest during school holidays and the warmer months of the year; coinciding with the stone fruit picking season and commencement of the grape harvest. There is ongoing demand for transport connectivity to and from the capital cities of Melbourne and Adelaide, to other regional centres including Swan Hill, Bendigo, Horsham and Renmark and to varying tourist destinations within the region.

Detailed discussions have been held with Mr Mark Thompson, CEO of the Murray Region Tourism Board and Mr David Zacher, Team Leader at the Mildura Visitor Information Centre.

Key issues that have been raised by both stakeholders include:

1. The regional bus service is not user friendly from a number of perspectives, including in particular, timetabling.
2. The need for greater availability of taxi services.
3. The need for cross-border public transport.
4. Improved transport connections between the Mildura Airport and the Mildura CBD.
5. The lack of provisions for 'touring' visitors, for example walking and cycling routes and better connectivity to the river.

6.2.2 Health

Within the north west region of Victoria, the main hospital is the Mildura Base Public Hospital, formerly privately operated, but has recently returned to public operation. The hospital provides emergency, maternity, intensive care, general medicine and surgery, medical imaging, pathology, dialysis, mental health and ambulatory services. Work is currently being prepared for hospital expansion, which includes a future 5 operating theatre capacity.

The Mildura Base Public Hospital is located on Ontario Avenue, where public transport does exist, but is limited. Other smaller towns are generally serviced by smaller district hospitals and health care centres, but for more specialised services, travel to larger regional centres and capital cities is required. Travel to these destinations is generally limited to road-based travel via car, and in some cases, coach.

There is very real concern that the lack of affordability and ease of access to health services, particularly for specialist needs is having a detrimental effect on the region's overall health. Residents are likely to be less proactive in dealing with minor health issues which require costly and often inconvenient travel, waiting until they become serious or even critical before being forced to seek treatment options. These issues and concerns are further exacerbated by the rate of ageing population in the region and frustration with the NDIS process.

In Victoria, the Victorian Patient Transport Assistance Scheme (VPTAS) subsidises travel and accommodation costs incurred by rural Victorians and an approved escort(s) who have no option but to travel more than 100 kilometres one way, or an average of 500 kilometres a week, for one or more weeks, to receive approved medical specialist services, or specialist dental treatment.



Patients are required to pay the first \$100, after this VPTAS covers all travel and accommodation costs for the remainder of the year. Travel costs are covered for both travel assistance and also public transport costs and for accommodations costs up to a nominated daily limit; all are accessible and claimable online and in 11 different languages. All LGA's within the study area are included within this scheme.

Despite many attempts, the team was unable to reach a suitable representative from the Mildura Base Public Hospital to provide input regarding current transport issues and opportunities for the region.

Discussions have been held however with other health care services in the region, including:

- Mr John Bergin, Chief Financial Officer of the Sunraysia Community Health Service
- Eden Pempleton (proxy while Bronwyn Hogan is on maternity leave) from the Southern Mallee Primary Care Partnerships
- Mr Greg Little, CEO of the Grampians Community Health (based in Stawell) and
- Pat Croft, Director of Clinical Services at the East Wimmera Health Service.

Key issues raised by stakeholders include:

1. Difficulty for clients to access health services in Melbourne
2. Difficulty for clients to access clinics if they do not have a private car or live near public transport
3. The train service through to Melbourne leaves Swan Hill train station only twice a day at restricting hours (noting that there are no other passenger train services available across the Southern Mallee)
4. Some community transport options available in smaller towns, but the operation of these is heavily reliant on volunteer support/Council financial support
5. Grampians Community Health Service run drink and drug driving rehabilitation programs – these are run in certain towns; however participants can't always get there (due to loss of licence)
6. There are domestic violence services available in the region, however there are issues with people being able to access those services; often they can't get away from their own environment
7. Much of the workforce come from different ethnic backgrounds – patients and staff find it difficult to engage because of their backgrounds. Due to the sporadic nature of services, family often finds it difficult to come to visit patients from other areas.
8. One of the key reasons for people moving from the region is because of lack of services – families tend to move to more densely populated areas such as Bendigo because of the associated higher provision of health and other support services and the easier methods for their access.
9. Disadvantaged people often need to be transported by private vehicle – due to the unavailability of public transport. This is a further financial burden for these people.
10. COVID-19 has had an impact on resources for seasonal work. For all people within the region access to safe transport is limited as buses are not running during this time. In result, people are actually fitting into smaller vehicles such as mini-buses to travel through the region. This of course seems to be in contrast to social distancing principles but has become a necessary transport requirement.
11. The increasingly ageing population is resulting in more passengers requiring non-private transport throughout the region. Those with physical limitations are also having access difficulties, including for example, getting on and off buses.



6.2.3 Education

The level of education and qualification in the region is generally lower than the state average. Low proportions of students are attending secondary school and have a form of formal qualification. Experience both in North West Victoria and other regional areas shows that lower education rates in the regions are often connected to higher unemployment rates.

There are however facilities both within and adjacent the region that offer both TAFE and tertiary education opportunities. TAFE campuses are located both in Robinvale (Vic) and Coomealla (NSW); La Trobe University is located in Bendigo and Federation University Australia is located in both Horsham and Ballarat. Students are known to be high users of public transport; efficient, connected passenger transport to and from education facilities is an important precursor to upskilling the region, retaining population and building the overall regional economy.

Discussions have been held with Deb Neal, Head of Campus for the LaTrobe University, and Mr Geoff Dea from Sunraysia Institute of TAFE (SuniTAFE). Key issues raised include:

- There is a bus stop which services both La Trobe University (Mildura campus) and SuniTAFE. The bus stop however is located only a short walk from SuniTAFE, but approximately a 10 minute walk from the University. There is a desire for a second bus stop to be installed, located closer to the university entrance. Many also drive to the university, but a lower percentage when compared to those who travel to TAFE.
- There are a number of socio-economically disadvantaged students who heavily rely on the public transport system to attend university; the availability of bus connectivity is highly valued.
- The university has no comment on the need for the introduction of passenger rail; it is not considered to be core to their service offering or function.

6.2.4 Employment

Mildura is the largest employment centre within North West Victoria; however the region's rich horticulture ensures that seasonal work opportunities are always available. These opportunities are largely filled by overseas workers and backpackers, who rely on regional passenger transport.

It has been difficult to engage with employment representatives during this time within the region; the pandemic too has affected the employment industry with the resulting economic downturn. From our observations, we therefore offer the following comments:

COVID-19 has had a significant impact on employment within the region over the past 9 months and will continue to influence the volume and type of seasonal workers travelling to and from the region. Until the pandemic is fully resolved, it is expected that higher proportions of workers may be sourced from other regional areas and states as domestic tourism increases. While this may result in a higher number of workers who own or share private vehicles in the short to medium term; the long term issues and opportunities for passenger transport however remain the same. These include:

- Improved public transport could be an enabler for more socio-economically disadvantaged members of the community to access employment. While public transport has been restricted and at times, unavailable during past months to minimise the spread of COVID-19, transport connectivity is key to economic growth in the region. Passenger transport is an important element of this.
- There is a lack of passenger connectivity between the Mildura Airport and the Mildura CBD; no shuttle bus service is available and taxi services can at times be poor. This increases cost and potentially travel time for business.
- The lack of convenient, regular public transport through Mildura, the broader region and across the river into New South Wales serves to encourage use of private vehicles for travel to and from places of employment.
- The availability of ample free public car parking within the Mildura CBD and the broader region makes it even easier to choose private car travel for work.



6.2.5 Ageing

North West Victoria is an ageing region as youth and families are moving to bigger cities with more diverse employment opportunities, health and educational services. Busier lifestyles are less able to accommodate taking elderly family members and friends to appointments and outings; reliance on passenger transport for the elderly is often the outcome.

The ageing community is often the greatest user of passenger transport, and in the full range of forms.

The quick travel time of air transport often makes it a preferred although more expensive choice for longer trips. Bus and rail are used also for inter-regional and/or longer trips at a more affordable price point and concession fares are also available. Community transport services however meet a wide range of health and social-based transport needs; providing flexibility, assistance with access and egress and at an affordable price point.

Also refer comments under Section 6.2.2 Health, above.



6.2.6 Transport Profile Summary

The following table compares the need, demand type, relative number of users, current transport provisions and issues and opportunities for the various transport users explored above.

	Tourism	Health	Education	Employment	Ageing
Need	Low	High	Low-Medium	Low	High
Timing of Demand	Seasonal	Constant	School Learning Calendar	Constant	Constant
Relative number of Users	Low	High	Low-Medium	Low	High
Current transport provisions	Air – connections to capital cities and selected regional centres Train – access between Melbourne and Swan Hill Bus – direct connections to Melbourne and Adelaide, and several links to other regional towns and around Mildura Charter buses also available	Air – connections to capital cities and selected regional centres Train – access between Melbourne and Swan Hill Bus – direct connections to Melbourne and Adelaide, and several links to other regional towns and around Mildura Community transport services	Bus – direct connections to LaTrobe University and SuniTAFE, and links to other regional towns and cities offering educational facilities Taxi Private car	Air – connections to capital cities and selected regional centres Train – access between Melbourne and Swan Hill Bus – direct connections to Melbourne and Adelaide, and several links to other regional towns and around Mildura Taxi Private car	Air – connections to capital cities and selected regional centres Train – access between Melbourne and Swan Hill Bus – direct connections to Melbourne and Adelaide, and several links to other regional towns and around Mildura Community transport services



	Taxi Private car	Taxi Private car	Taxi Private car
Issues/Opp ortunities	Regional bus service is not user friendly from a number of perspectives, including scheduling, journey time and frequency of services. The need for greater availability of taxi services. The need for cross-border public transport. Improved transport connections needed between the Mildura Airport and the Mildura CBD (e.g. shuttle bus). The lack of provisions for 'touring' visitors, for example walking and cycling routes and better connectivity to the river.		



6.2.7 Other Transport Needs

6.2.7.1 Disabled Access

Melissa Hale of the Disability Advocacy Resource Unit (DARU) has outlined the experiences, need and issues for travel within, into and out of the region for disabled members of the community, as summarised below. DARU provides support in advocacy – particularly where people can't afford to travel for specialist services. Melissa indicated that NDIS is very reluctant to cover travel costs in general. In the last financial year, DARU assisted 100-200 clients in the Mildura area; almost all of those are reliant on public transport due to their disability, these range from physical to intellectual disabilities.

- Passenger transport services are considered poor in Mildura, with no direct transport to Melbourne. Disabled passengers need to catch a bus, then taxi and then hire a mobility tool to get to Melbourne. The limited access to services in Mildura means that passengers are normally required to travel to larger regional centres such as Bendigo for appointments, treatments and other needs.
- Public transport is limiting people socially, particularly if the wider family does not reside locally.
- The biggest issue is accessibility in regional towns.
- Carers are generally required to travel with disabled passengers; note that no facilities are provided on buses or trains for changing if required.

6.2.7.2 Recreation and Sport

Carmel McKay from the Mallee Sports Assembly has advised that they work with a wide cross-section of the community, including disadvantaged groups, multi-cultural groups, women, girls and youth through sport. The group finds that not having access to same sort of services that metro and other regional areas utilise further reinforces its isolation. Carmel has offered the following thoughts on passenger transport needs for recreation and sporting activities and has advised that they are currently undertaking a needs analysis and have already identified that transport is often a barrier to participation.

- Participants are reliant on bus services or car as the region covers a very large area; a lot of people however do not have their own car or everyday access to transport. The sports assembly covers 1/3 of Victoria, across which there are between 600 and 700 clubs
- Athletes are often isolated from where they need to be/ families need to travel/move, etc
- While there are community buses, the services and scheduling of these does not always meet people's timetables or support the needs of sporting precincts. The existing bus station is also not considered to be particularly user friendly or accessible
- Issues such as cost and accessibility, loss of flights due to COVID-19, and flights not always being accessible for disabled users are all further barriers
- Geographic isolation for some people is a further issue
- There seem to be mixed feelings on the need for passenger rail

6.2.7.3 Sunraysia Mallee Ethnic Communities Council

The Sunraysia Mallee Ethnic Communities Council is a not-for profit organisation who works closely with MRCC and across all Mallee Council's to assist in working with poor communities and give focus also to new and emerging communities; often comprising harvest and seasonal workers.

- There is seasonal migration of these communities as they follow work – it is common for groups to carpool from metropolitan areas if individuals don't have access to private vehicles. This does however restrict work flexibility for individual workers
- COVID-19 has significantly impacted the usual demand levels for transport services by the ethnic community. There are no backpackers arriving and restrictions also prevent temporary migration. It has been suggested that there are approximately 10,000 less workers than usual as a result. The issue however is that seasonal workers are still required to meet production needs and consumer demands.



If workers are sourced from metropolitan areas, the challenge lies in safely and efficiently transporting them home; currently they would need to spend all weekend on a bus. Air travel is very time efficient but cost prohibitive. The availability of and accessibility for a seasonal labour force during COVID-19 times is rapidly becoming a very important issue for the region.

- Efficient intra-regional public transport is also difficult, especially as services are required to stop in many places. It may be worth investigating some express services across the region to facilitate worker transport needs. It is recognised that the Sunraysia Mallee region covers a geographically large area, with several horticultural districts. Robinvale for example, is very seasonally work driven.
- A common comment from university students studying within the region is that the universities promote Mildura as a settlement destination however there is lack of education choice and little suitable transport.
- Another key transport issue faced by minors travelling into/out of or within the region for educational needs is unaccompanied travel between boarding school or between split families.

6.3 Technology Used/Available to Support the Region

There is very little technology currently available to support passengers using transport services within the region.

Buses and trains are not supported by wireless technology; work is required to address this. Providers are aware of these limitations to customers, budgets to date have not allowed for such investment.

Virgin has a dedicated in-flight app for airline traffic travelling on the Melbourne-Mildura route. QANTAS is yet to offer a similar service.

6.4 The Need and Benefits of a Skilled Workforce for the Region

Recent data published by the Australian Local Government Association (June, 2019) suggested the Loddon-Mallee region was well below the national average of \$82 per hour in productivity (gross regional product per hour worked), with rates for the Loddon Mallee region at \$59 per hour. An article by the Sunraysia Daily published in June 2019 stated *"...If a region is not generating enough income, people with good skills will leave the area and established house prices will fall..."*. It also stated that another way to lift productivity was to equip young people with skills, so that they can be employed within the Loddon Mallee region. The report also stated that despite low productivity rates, the Loddon Mallee region has steady population growth, with unemployment rates coming down over the previous 18 months.

The Victorian Skills Commissioner published the Mallee Regional Skills Demand Profile in 2017. The report identified the region's economy is highly interconnected, where strong local and intermodal demand for agriculture is reflected in manufacturing, transport and construction industries. This essentially means that the flow of income from the workforce and households in the regions creates demand for service industries. In addition, the report estimated the required workforce growth in each industry group. It was identified that should the estimates be realised, the region is likely to face significant labour shortages, with a number of challenges being faced (i.e. ageing workforce, high labour market participation and low unemployment rates). While not directly linked to transport, the provision of readily available, low cost transport services to Mildura and surrounding LGAs could be used to assist in attracting the required labour workforce from other areas of Victoria (i.e. Melbourne or other regional centres).



Table 1 of the Victorian Skills Commission 2017 Regional Skills Demand Profile for The Mallee identified the following preliminary outlook on job growth by industry (refer report for full detail):

Table 6 - Preliminary outlook on job growth by industry group

Industry Group	Estimated FTE	Taskforce Estimate of 2017-2020 Workforce Growth (CAGR)	Total Required Workforce Growth (including replacements)	Jobs Identified to be Created During Consultations over Next 3 Years
Horticulture	-4,300	3.5%-7%	+600-1100	-300 skilled -600 contract
Other agriculture	-2,400	0.5%-1.5%	+100-200	-70
Hospitality and tourism	-2,900	2%-2.5%	+250-300	NA
Construction	-2,300	1.8%-3.5%	+200-300	NA
Manufacturing	-2,300	2.5%-4.5%	+250-400	-275
Transport, logistics and automotive	-3,300	2.6%-4.5%	+350-550	NA
Retail Trade	-5,500	1.5%-2%	+1400-500	NA
Healthcare and social assistance	-6,200	2.9%-4.2%	+750-1000	-400



7 North West Victoria's Transport 'Isolation' – Social and Economic Impacts

7.1 General

Many people choose to live in regional areas such as the North West Region to take advantage of the many lifestyle benefits that this provides. More space, less pollution and congestion, the quality of the natural environment, green spaces, the river frontage, and the sense of community are some examples. Further, housing is generally more affordable and life in general is more relaxed.

While there are distinct advantages, considerable research confirms there are also significant social and economic impacts for regional communities. For North West Victoria, transport 'isolation' represents a key social and economic impact, affecting the region from several perspectives, including:

- Access to services, including health
- Transport costs
- Influence on education choices and employment
- Demographic profile (including socio economic disadvantage and ageing community) and
- Regional competitiveness

These are considered in more detail below. Figure 2 illustrates the complex and compounding impacts of transport disadvantage, particularly as related to areas of established social disadvantage.

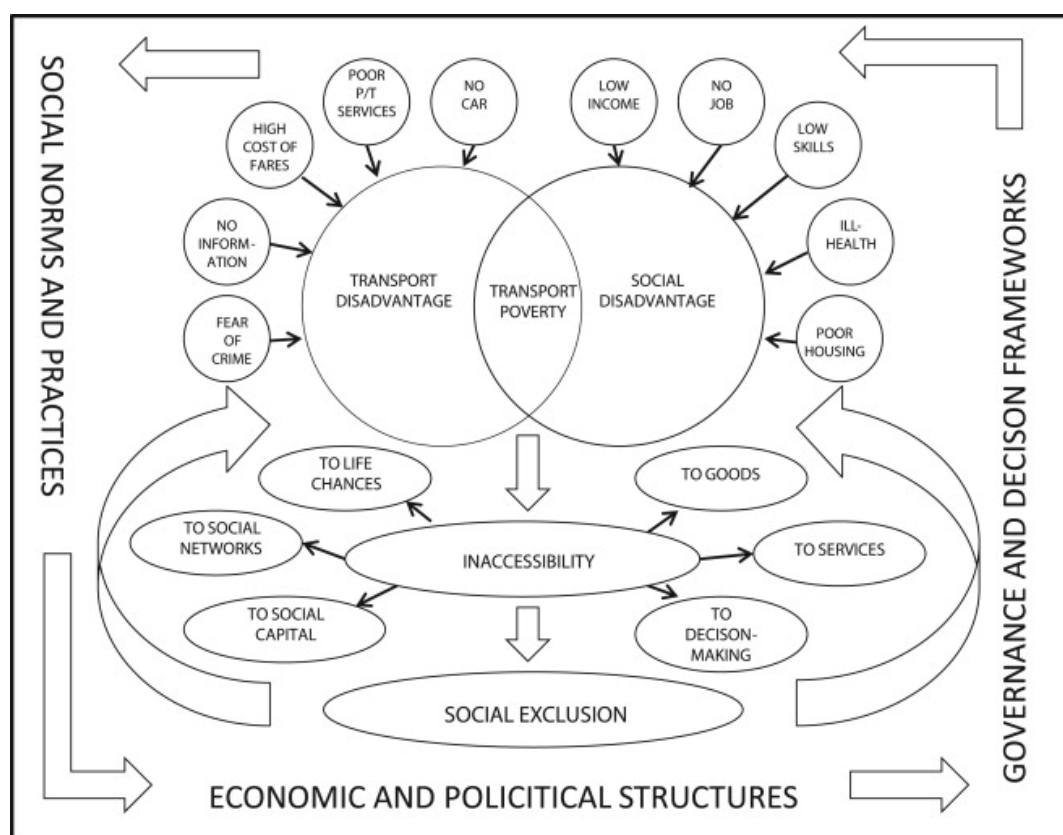


Figure 2 - The complex and compounding impacts of transport disadvantage (Source: Lucas, K (2012), Transport and Social Exclusion)



7.2 Access to Services (including Health)

Transportation barriers are often cited as barriers to healthcare access. Transportation barriers lead to rescheduled or missed appointments, delayed care, and missed or delayed medication use. These consequences may lead to poorer management of chronic illness and thus poorer health outcomes.



Figure 3 - Model of relationship between transportation, health care access and outcomes

Australian Government research has found that a lack of nearby health services is a bigger barrier for people living in regional and remote Australia. In 2016, the proportion of patients who said that a reason they did not see a GP or specialist was that there were no health services nearby rose with increasing remoteness.

	No GP nearby 	No specialist nearby 
Major cities 	3%	6%
Inner regional 	5%	22%
Outer regional 	9%	31%
Remote and very remote 	20%	61%

Figure 4 - Impact of geography on GP and specialist visitation

"...In addition, patients in outer regional areas were 8 times as likely as those in major cities to say that no specialist nearby was a barrier for not seeing a specialist.

This is further compounded if the main language spoken at home is not English; in this case patients in outer regional areas were 2.6 times as likely to say that no specialist nearby was a barrier to seeing as specialist..."

Extract from Australian Institute of Health and Welfare document 2016: Coordination of health care: experiences of barriers to accessing health services among patients aged 45 and over

The main hospital facility in the North West region is the Mildura Base Public Hospital – a 172 bed facility (including 8 Intensive Care Unit beds) which services 80,000 people in the Sunraysia. This is the major public referral health service for the Northern Mallee sub-region of the Loddon Mallee region, the Far West region of New South Wales and the Riverland region of South Australia. This facility offers the broadest range of health services and specialist care, including:



Cardiology (limited)	Maxillofacial Surgery	Oncology
Community and Inpatient Mental Health Services	General Medicine	Ophthalmology
Chemotherapy	General Surgery	Orthopaedics
Day Surgery	Gerontology	Paediatrics
Dialysis	Hospital in the Home	Psychiatry
Emergency Services	Intensive Care	Rehabilitation Services
ENT Surgery	Obstetrics and Gynaecology	Urology

While the above services appear broad, they largely cater for day-to-day patient needs and the range of specialists providing these services is limited. Due to the low socio-economic and ageing profile of the region, there is also very high demand for public hospital admissions and long wait times for elective surgery.

Other nearby facilities include the Mildura Private Hospital and (outside of the region) the Renmark Paranga District Hospital, the Wentworth Health Service, the Riverland General Hospital (located in Berri) and the Loxton Hospital. While these all offer beds, they do not offer the same range of services or volume of accommodation provided at the Mildura Base Public Hospital.

Poorer access to health services has both social and economic impacts for North West Victoria.

Social impacts include:

- rescheduled or missed appointments
- delayed care or no care
- missed or delayed medication use
- increased risk of spread of illness or disease
- social isolation as a result of illness; missed events and activities, reduced community participation
- less healthy community

Economic impacts include:

- transfer of illness amongst the wider community as unwell workers continue in employment
- lost work time, due to illness or care for others with illness or longer recovery times
- reduced productivity as affected workers operate at reduced pace
- reduced spend within both the local, regional and broader economy resulting from social isolation
- reduced education attendance (longer term impact on economy)
- potential increased demand on paramedic and emergency health care services



7.3 Transport Costs

Using Mildura as an example travel start point from the region, the distance to nearest capital cities is as follows:

From Mildura to	Distance (km)	Drive time (hours)
Adelaide	400 (via Sturt Highway)	4.5
Melbourne	542 (via Calder Highway)	6
Sydney	>1000 (via Sturt and Hume Highways)	10 hours, 50 min

Figure 5 - Travel distance and drive time between Mildura and nearest capital cities

Not surprisingly, in regional areas such as North West Victoria, transport costs represent a heavier financial burden than in many other geographic areas.

Chapter 5 Transport of the Australian Infrastructure Audit 2019 addresses Transport Accessibility and Equity and states that "...many Australians lack equal access to transport, and the opportunities it opens up, due to financial, geographic, physical or cognitive restrictions..."

Further, "...outer urban and regional communities are particularly at risk of transport disadvantage.

Public transport plays a vital role in promoting social equity. Disadvantaged groups with limited access to public transport are especially at risk of social exclusion. People living in outer-urban areas and regional centres often have poor access to public transport and rely heavily on private vehicles for access to jobs, education, services and entertainment...

There are 3 common types of social disadvantage:

- Financial disadvantage
- Physical and cognitive disadvantage and
- Geographical disadvantage

Further, there are 3 common challenges that outer-urban and regional communities face when seeking to use public transport:

1. Access to public transport is lower – lower settlement densities mean people are less likely to live within walking distance of a public transport stop or station
2. Service frequencies are lower – Operators can provide higher frequencies when there is sufficient demand. Demand is normally lower in outer-urban areas and regional centres, meaning frequencies are lower. This means people wait longer for services, and cannot interchange between services easily.
3. Travel distances are longer – People living in outer-urban and regional areas tend to live further away from places of work, education, service and entertainment...

These challenges usually lead to lower patronage levels. Public transport use in the outer suburbs of our major cities and regional Australia is significantly below the average across our largest cities..."

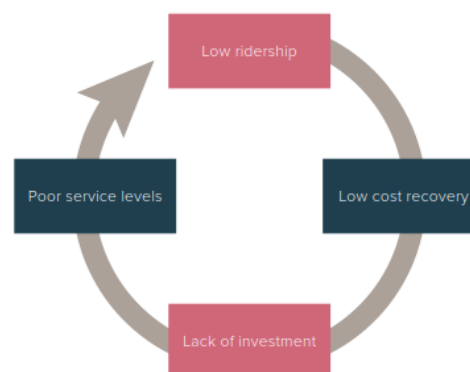


This is illustrated as a self-defeating cycle in in Figure 7 below.

"...It is common for public transport services in lower density environments to get caught in a self-defeating cycle. Existing services are poorly patronised, so governments do not invest in new infrastructure and improved service levels. This leads to poor performance, which further discourages partnership and cost recovery..." as shown in the diagram adjacent.

Until this cycle is broken, transport will remain the largest single cost within people's infrastructure bill.

The challenge for governments is to find ways to escape this cycle. Emerging modes such as rideshare, car share and on-demand buses are examples worth considering.



Source: Infrastructure Australia (2018)²⁵²

Figure 6 – The self-defeating cycle of public transport in lower density areas (Source: Infrastructure Australia, Infrastructure Audit 2019)

7.4 Influence on Education Choices and Employment

7.4.1 Education Choices

North West Victoria offers higher education study choices at both La Trobe University and SuniTAFE; each with campuses located in Mildura. Courses are broadly related to the social and economic needs of the region; tertiary studies range across the Arts, Business, Education, Nursing, Health and Social Sciences, Midwifery and Science. Some online courses are also available. TAFE study options include Automotive, Accounting and Bookkeeping, Food and Hospitality, Health and Community and Horticulture and Agriculture.

The transport 'isolation' of the region affects study choices in the following ways:

1. Students may elect to choose only from the limited courses available locally
2. Students choose to leave the region to study other courses; at the risk of not returning to the region
3. Further study is not chosen, in favour of direct employment. In most cases, this limits the long term earning capacity of the subject individual. It is known that post-Secondary qualifications are key to improved income earnings.

While these circumstances can arguably be applied to all students choosing a study or employment path, the study (and employment) options in Mildura are far less broad than many other locations. The desire to leave the region is often much greater, but the region's demographics can make this also seem like an impossible opportunity to afford.

Where a shift is affordable, many young adults in the region are also encouraged and motivated to seek greater education opportunities and employment options offered by a greater population base. While education has shifted online in many cases over the past 18 months, there are still more opportunities to meet people and make valuable connections in more heavily populated areas. Employment opportunities for skilled workers is also in greater demand in these larger centres.



7.4.2 Employment

Agriculture continues to be the highest employing industry in the region, but often employs workers on a seasonal basis and is largely focused on primary (rather than secondary or value-adding) production. For this, unskilled workers are generally sufficient and fit the pay scale afforded by farming operations. The low earning, often transient and poor English speaking workforce is a significant component of the region's workforce and further influences the demographic profile (also refer following sub-section).

The transport 'isolation' of the region requires a higher percentage of the population to own a private vehicle. When compared to other areas, the cost to drive and maintain a vehicle or use alternate transport is proportionately higher when compared to other areas. This further impacts the proportion of available disposable income.

Statistics show that younger families are moving from North West Victoria to seek the convenience of services, facilities and opportunities offered by larger cities as lives become more fast paced and the desire for 'connectedness' becomes greater. Even if not relocating to capital cities such as Melbourne or Adelaide, families are preferring to reside in 'busier' regions such as Greater Bendigo.

The above behaviours further reflect the social and economic impacts of the region's transport 'isolation'. The need for more efficient and convenient access to greater study and employment opportunities and supporting services is resulting in a shift from the region, consequently broadening 'gaps' in the demographic profile and adversely affecting regional population and economic growth. More specifically, these impacts include:

- loss of young adults from the region who choose to study elsewhere. These students are often more driven and likely to be future 'movers and shakers'. Unfortunately, many of these students choose not to return to the region.
- loss of a significant element of the region's social and economic fabric. Young adults also represent the young families of the future (and therefore are considered key to future population growth)
- less opportunity to teach and retain skilled workers in the region, which in turn can affect the rate of economic growth and longer term regional investment.

7.5 Demographic Profile

SEIFA data shows that North West Victoria is the most socio-economically disadvantaged region in the state.

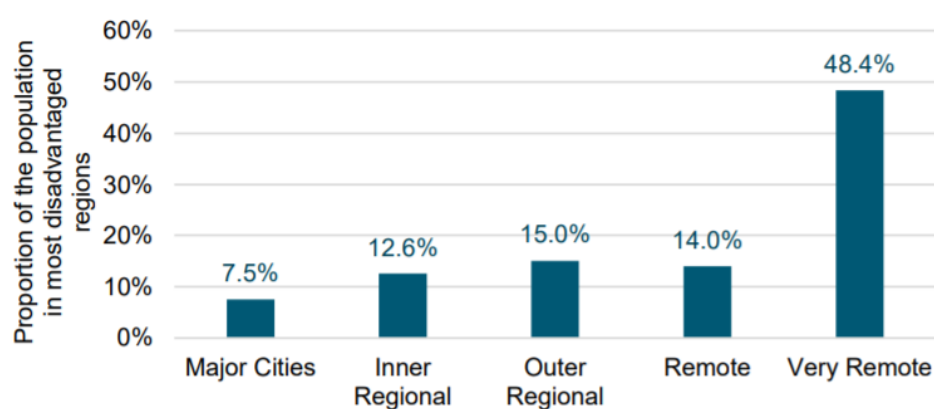


Figure 7 - Population in the 10 percent most disadvantaged regions across remoteness areas 2016
(Source: ABS, 2016, Socio-economic Indexes for Areas (SEIFA), Cat. No. 2033.0.55.001)



The following extracts from the Mallee Regional Profile – An analysis of regional strengths and challenges (prepared for Infrastructure Victoria (March 2019) by Aither) give insight into the Economic and Social profiles of the overall Mallee Region, of which North West Victoria represents a significant proportion.

Table 7 - Extract from the Mallee Regional Profile - An analysis of regional strengths and challenges (Aither, March 2019)

Indicator	Rating	Likely Impact of Drivers of Change	Description
Economic Profile			
Industry Structure	N/A	N/A	The Mallee is characterised by a high concentration of agriculture compared to Victoria. Agriculture is the key export for the region. The strongest employment growth in the region however, has been in the services sectors with the importance of agriculture and manufacturing as employment industries expected to decline further in the future.
Economic Output	Below Average	Adverse	The Mallee region has a lower GVA per capita than the Victorian average and has declined in the last 10 years, while Victoria has seen growth in economic output. This is likely to be related to the effect of the Millennium drought on agriculture in the region. The low relative output can also be attributed to lower labour productivity as discussed below, lower participation rates and an ageing population. This region has seen growth in potentially highly productive agricultural industry in more recent years, however this may not translate into future job and income growth as the data shows no corresponding increase in agricultural employment.
Labour Productivity	Below Average		Labour productivity in the Mallee region is lower than the average for Victoria. There appears to be divergence from the Victorian average from around 2001, which may be associated with decreased agricultural productivity during the Millennium drought which has led to permanent closure of some agricultural industry in the region.
Capital Investment	Below Average		Capital investment in the Mallee region is below the Victorian average with relatively low rates across all LGAs in this region. The highest rates of investment in residential new construction are in Mallee and Swan Hill LGAs, likely reflecting the growing population in these LGAs. The lowest rates are seen in Buloke LGA, reflecting the projected population decline in this LGA.
Participation Rate	Average	Adverse	The average participation rate in the Wimmera-Mallee is significantly below the average for Victoria, which again can be due to a range of contributing factors including the number of retirees. Generally, there are lower participation rates in the rural areas than in Mildura or Swan Hill. The working age population is comparatively low in the rural areas of the region and is projected to continue to decline further.



Household Income and Unemployment	Below Average	Adverse	Household income is lower than the state average across all LGAs. Mildura has the highest income, potentially due to the greater availability of jobs in the regional centre compared to the rural areas. The lowest household incomes are in the rural LGAs of Gannawarra and Buloke. Unemployment across the region is generally lower than the average for Victoria, with particularly low levels in Buloke and Gannawarra. The unemployment rate in Mildura is above the Victorian average. This may reflect the characteristics of a regional hub, seen more broadly across Australia, whereby unemployment has increased faster in many regional centres than the immediately surrounding rural areas.
Employment and Skills	Average	Adverse	Employment growth in the region has been strongest in the health care and construction sectors, with declines in manufacturing and agriculture. These trends are predicted to continue with the growth in high skill industries. This presents both an opportunity and challenge for the region. While growth in high skill job offers opportunities for continued wage growth, increasing demand for high skill labour will potentially lead to future skill shortages and increasing income differences between those with higher qualifications and those without. There is very low commuting to work in other LGAs from the regional centres.

Social Profile

Indicator	Rating	Likely Impact of Drivers of Change	Description
Disadvantage	Above average	Adverse	Disadvantage is demonstrated to be concentrated within small rural towns, larger centres such as Swan Hill as well as the regional centre in Mildura. There is a relatively high level of advantage in the farmlands outside of rural towns and regional cities. The difference in advantage between the towns and the farmlands that surround these towns is likely a reflection of a longer term agglomeration trend that has been occurring in the agriculture industry and a gradual economic decoupling of small rural towns and the surrounding farm businesses.
Youth Engagement with Work or Study	Average	Adverse	The proportion of the population aged between 15-19 years not engaged in work or study is similar to the Victorian average with the exception of Mildura (larger) and Buloke (smaller). In all LGAs of the Mallee region, with the exception of Buloke; there is a large proportion of 15-19 year olds employed full-time compared to the Victorian average. All LGAs have a smaller proportion of people aged 20-24 with Year 12 or higher qualifications than the Year 12 average. Those with Year 12 or equivalent in the Buloke and Gannawarra LGAs in further education and training is a larger proportion than the Victorian average with higher rates of apprenticeships and similar rates for bachelor degrees.
Population Health	Below Average	Adverse	The population health indicators generally reveal a noticeable gap across the region compared to the Victoria average, with particularly poorer outcomes most evident in the Buloke LGA.



Buloke in particular, has a considerably lower percentage of access to community service and resources. All LGAs except Mildura have high ACSC separations. HACC has higher than state average utilisation across all LGAs in the region. Life expectancy is similar to the Victorian average for females, but lower for males in all LGAs in the Mallee. All LGAs demonstrate higher levels of self-reported obesity than the Victorian average, other than Gannawarra. Hospital separations all higher in all LGAs and most notable in Gannawarra and Buloke, both being more than double the Victorian average. All LGAs other than Buloke have high numbers of clients that receive drug and alcohol treatment, being more than quadruple the Victorian average in Gannawarra and double in both Mildura and Swan Hill LGAs. Similarly, all LGAs have a high number of registered mental health clients compared to the Victorian average, being more than double in Mildura LGA.

Early Childhood Outcomes

Below Average

The Mallee region has mixed results across different early childhood outcome indicators. All LGAs have a larger proportion of children who are developmentally vulnerable in two or more domains than the Victorian average. Mildura and Swan Hill LGAs also demonstrate higher rates of child protection substantiations than the Victorian average, being nearly double in Swan Hill LGA.

Housing Stress

Below Average

Indicators for housing stress for low income households are generally lower in the Mallee region than the Victorian average. However, the proportion of households with low income and rental stress in the Mildura LGA is larger than the Victorian average. Swan Hill LGA is more comparable to the Victorian average. Buloke and Gannawarra LGAs have lower levels of housing stress compared to other LGAs and the Victorian average. Both Mildura and Swan Hill LGAs have higher rates of social housing than other Mallee LGAs and the Victorian average. The percentage of reported homelessness is lower in all LGAs than the Victorian average other than Swan Hill LGA where it is marginally higher.

Crime

Above Average

Report offences vary significantly across the LGAs. Both Mildura and Swan Hill LGAs demonstrate significantly higher offence rate than the Victorian average. Buloke LGA demonstrates comparatively low rates of offences, being lower than the Victorian average and all other LGAs. The correlation between crime and other social indicators in Mildura and Swan Hill LGAs – such as early childhood outcomes, mental health and drug and alcohol treatment – may warrant further investigation.

Wellbeing

Above Average

A larger proportion of respondents in the Mallee report a higher level of wellbeing when compared with the Victorian averages for all indicators assessed. This is consistent with most studies of rural and regional wellbeing which show that the population in regional areas have a greater sense of wellbeing. This is further demonstrated in the rates of volunteering which are significantly higher than the Victorian average in Buloke and Gannawarra LGAs, being more than double the Victorian average in the Buloke LGA.



7.6 Regional Competitiveness

Each of the above discussions on the North West Region's Transport 'Isolation' has a negative impact on the overall regional economy and in particular, its competitiveness when compared to other regions. These impacts agglomerate and affect the overall regional competitiveness of North West Victoria far beyond these discussion areas alone.

Regional competitiveness is directly related to levels and measures of economic development within the region. Improved passenger transport can benefit economic development in the region in several ways, including productivity, business activity, employment, income, property values and tax revenue. Importantly, these economic development impacts can also be measured, as described below.

Category	Description	How it can be Measured
Employment and Business Activity	Increased employment and business activity resulting from expenditures on transit services	Local expenditure on transit services times multipliers from a regional Input-Output table. "New" money brought into a region.
Consumer Expenditures	Consumer expenditures shifted from vehicles and fuel to more locally produced goods	Consumer expenditure shifts, evaluated using an Input-Output table to determine net change in regional employment and business activity.
Land Use Efficiencies	Increased accessibility and clustering, providing agglomeration efficiencies	Changes in property values around transit stations.
Productivity Gains	Improved access to education and jobs, and reduced cost to businesses	Methods described in mobility, efficiency and land use benefits sections, with emphasis on employment gains and businesses savings.
Strategic Economic Development	Transit facilities and services support strategic development objectives	Role of transit in community's identity supporting strategic industrial development.
Transit System Efficiency	Reduced unit costs and improved services	Estimates of per capita transportation cost savings provided by public transit services.

Figure 8 - Economic Development Impacts of Passenger Transport (from the US Victoria Transport Policy Institute (VTPI) "Evaluating Public Transport Benefits and Costs, Best Practices Guidebook", 31 August 2021)



7.7 Counting the Cost

The total cost of transport isolation differs between individuals and is dependent on (but not limited to):

- Health profiles
- Age
- Financial capacity
- Type and level of employment
- Available transport modes
- Ability to drive
- Level of independence
- Ability to multi-task with other commitments and
- Destination

The average distance, travel cost and travel time by modal option between Mildura and nearby capital cities has been outlined in section 3.3.

Travel cost is not the only cost however. Lost work time must also be considered for those in the workforce, or time contributions lost elsewhere as a result of the travel time required. While not specifically quantified in this report, there is also a need to quantify the cost of lost education, childcare and other support services.

Average Employee Earnings have been derived from ABS information published in August 2020 as follows:

Table 8 - Extract from ABS statistics - Average Employee Earnings (August 2020)

Employee Type	Average Employee Earnings
Labourers	\$26.20/hr
Skilled Workers	\$34.67/hr, with average weekly skilled worker incomes as follows:
Cert I/II	\$27.80/hr
Cert III/IV	\$30.40/hr
Adv. Dip	\$30.67/hr
Bach	\$37.33/hr
Grad Dip	\$41.89/hr
Postgrad	\$42.67/hr

As an example, an average skilled worker needing to travel via train/coach to Melbourne would accumulate a lost income of at least \$618.28, plus approximately \$110 in travel costs, plus accommodation, which could be in the order of \$100/night. This totals approximately \$830.00, in addition to the time and costs associated with the health appointment itself. This cost represents more than half of the average weekly income.

It is noted that while aircraft fares are more expensive, travel time savings can potentially reduce the overall time/cost differential.



8 Counting the Opportunity Cost of No Rail Transport Investment

While the level of investment required to return suitable passenger rail infrastructure and services to North West Victoria is significant, this must be balanced against the opportunity cost.

Opportunity Cost is determined as the potential benefits an individual, investor, or business misses out on when choosing one alternative over another.

In this case, when selecting other transport modes over rail for connectivity of North West Victoria to Swan Hill, Bendigo and ultimately into Melbourne.

Rather than debate which mode of transport is superior, it is best to consider which mode of transport is most appropriate in a particular situation. All transport modes become more efficient and effective at achieving regional planning objectives if implemented with supportive policies that improve service quality, create more supportive land use patterns and increase ridership.

Rail investment generally offers the following benefits:

Greater demand – rail tends to attract more discretionary riders than buses.

Greater comfort - due to larger seats, more legroom, and smoother and quieter ride.

Greater maximum capacity – requires less space and is more cost effective on high volume routes.

Greater travel speed and reliability – rail can travel faster than road travel and is not generally susceptible to delays due to other traffic activity (this assumes that the track is properly maintained).

More positive land use impacts – rail tends to be a catalyst for more accessible development patterns.

Increased property values – near transit stations.

Less air and noise pollution – particularly when electric powered.

Rail stations tend to be more pleasant than bus stations - so rail is preferred where many transit vehicles congregate.

Most importantly however, is determining the full extent of potential benefits of each option under comparison. While full economic analysis for the return of rail to North West Victoria lies beyond the scope of this investigation, the tables below are provided as guidance in the economic evaluation process. These have largely been derived from the US Victoria Transport Policy Institute (VTPI) "Evaluating Public Transport Benefits and Costs, Best Practices Guidebook", 31 August 2021).



Table 9 - Passenger transport benefits and costs

	Improved transit service	Increased transit travel	Reduced automobile travel
Metrics	Service Quality (speed, reliability, comfort, safety etc)	Passenger Ridership (passenger kilometres or mode share)	Mode Shifts or Automobile Travel Reductions
Potential benefits	- Improved convenience and comfort for existing users - Equity benefits (since existing users tend to be disadvantaged) - Option value (the value of having an option for possible future use) - Improved operating efficiency (if service speed increases) - Improved security (reduced crime risk)	- Mobility benefits to new users - Increased fare revenue - Increased public fitness and health (by stimulating more walking or cycling trips) - Increased security as more non-criminals ride transit and wait at stops and stations	- Reduced traffic congestion - Road and parking facility cost savings - Consumer savings - Reduced chauffeuring burdens - Increased traffic safety - Energy conservation - Air and noise pollution reductions
Potential costs	- Capital and operating costs, and therefore subsidies - Land use and road space - Traffic congestion and accident risk imposed by transit vehicles	Transit vehicle crowding	Reduced automobile business activity

While there are various tools that have been developed to economically evaluate the merit of transport policies and projects, they are generally designed for a specific transport mode or objective. Further, they often rely only upon benefits and impacts that are 'easy to measure'.

With this approach, public (or passenger) transport economic assessments are often not favourable; the cost of running such transport often outweighs the benefits. It is generally understood however that there are broader benefits, however these are not often quantified. A more robust approach to economic evaluation models which consider a broader range of impacts would improve the decision making process for all involved.



Usually Considered	Often Overlooked
Financial costs to governments	Downstream congestion impacts
Vehicle operating costs (fuel, tolls, tyre wear)	Impacts on non-motorised travel
Travel speed (reduced congestion delay)	Parking costs
Per-kilometre crash risk	Vehicle ownership and distance-based depreciation costs
Project construction environmental impacts	Project construction traffic delays
	Generated traffic impacts
	Indirect environmental impacts
	Strategic land use impacts
	Transportation diversity value (e.g. mobility for non-drivers)
	Equity impacts
	Per-capita crash risk
	Impacts on physical activity and public health
	Some travellers' preference for public transport (lower travel time costs)

Equity impacts, indirect environmental impacts and impacts on physical activity and public health are key benefits that are particularly relevant for North West Victoria but are often overlooked.

An overall list of considerations for robust economic analysis is outlined below.

Table 10 - Potential transit benefits and costs; impacts to consider when evaluating a transit policy or project

Impact Category	Description
Transit Service Costs	<i>Financial Costs of providing transit services</i>
Fares	Direct Payments by transit users
Subsidies	Government expenses to provide transit services
Existing User Impacts	<i>Incremental benefits and costs to existing transit users</i>
Various	Changes in fares, travel speed, comfort, safety etc to existing transit users
Mobility benefits	<i>Benefits from increased travel that would not otherwise occur</i>



Direct User Benefits	Direct benefit to users from increased mobility
Public Services	Support for public services and cost savings for government agencies
Productivity	Increased productivity from improved access to education and jobs
Equity	Improved mobility that makes people who are also economically, socially or physically disadvantaged relatively better off
Option Value/ Emergency Response	Value of having mobility options available in case they are ever needed, including the ability to evacuate and deliver resources during emergencies
Efficiency Benefits	<i>Benefits from reduced motor vehicle traffic</i>
Vehicle Costs	Changes in vehicle ownership, operating and residential parking costs
Chauffeuring	Reduced chauffeuring responsibilities by drivers for non-drivers
Vehicle Delays	Reduced motor vehicle traffic congestion
Pedestrian Delays	Reduced traffic delay to pedestrians
Parking Costs	Reduced parking problems and non-residential parking facility costs
Safety, Security and Health	Changes in crash costs, personal security and improved health and fitness due to increased walking and cycling
Roadway Costs	Changes in roadway construction, maintenance and traffic service costs
Energy and Emissions	Changes in energy consumption, air, noise and water pollution
Travel Time Impacts	Changes in transit users' travel time costs
Land Use	<i>Benefits from changes in land use patterns</i>
Transportation Land	Changes in the amount of land needed for roads and parking facilities
Land Use Objectives	Supports land use objectives such as infill, efficient public services, clustering, accessibility, land use mix, and preservation of ecological and social resources
Economic Development	<i>Benefits from increased economic productivity and employment</i>
Direct	Jobs and business activity created by transit expenditures
Shifted Expenditures	Increased regional economic activity due to shifts in consumer expenditures to goods with greater regional employment multipliers



Agglomeration Economies	Productivity gains due to more clustered, accessible land use patterns
Transportation and Efficiencies	More efficient transport system due to economies of scale in transit service, more accessible land use patterns, and reduced automobile dependency
Land Value Impacts	Higher property values in areas serviced by public transport



9 The Future of North West Victoria

In future decades, North West Victoria will continue to experience a number of challenges relating to its demographic and industry structure. These include population ageing, the changing nature of industry and work, and the provision of cost effective services to a spatially dispersed population.

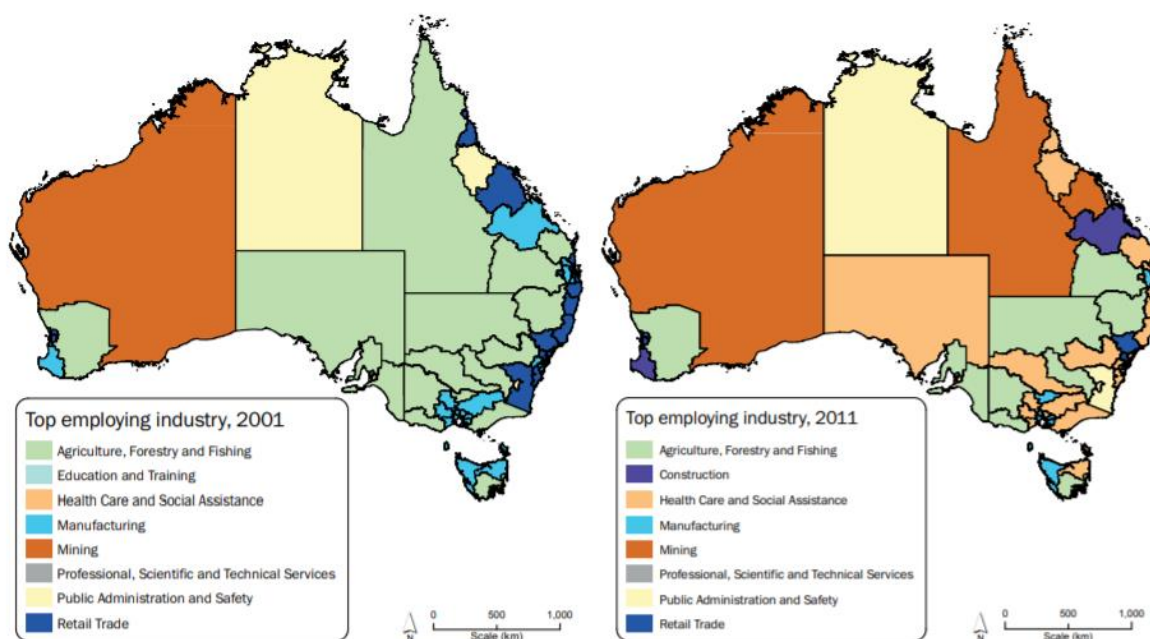
Into the future, some of the most significant factors influencing employment will include:

- change in industry structure
- technological advances and
- globalisation.

The trend towards employment requiring skills and training is also set to continue. The CSIRO estimates that while 44 per cent of Australian jobs are potentially at high risk of automation, this technology will also be responsible for the creation of new jobs.

Agriculture, one of Australia's (and the North West region's) largest regional industries, provides an example of the effect of mechanisation and automation on employment opportunities. Employment in agriculture has long been in decline as improved technology and farming practices lift productivity. This mechanisation has led to a reduction in low-skilled roles, while simultaneously creating job growth in higher skilled roles. For example, reduced employment in low skilled crop farming occupations has been more than offset by growth in employment in skilled animal and horticultural roles.

Figure 4.3: Largest employing industries, 2001 and 2011



Source: Department of Infrastructure and Regional Development 2015, State of regional Australia: progress in Australian regions 2015.

A projected growth area for the region's economy is in the human services-related industries, particularly health care and social assistance for an ageing population. This will have significant implications for North West Victoria's population (particularly in Mildura) as service industries are more likely to cluster in regional centres than in smaller towns and rural areas.



Tourism and related industries such as accommodation, food services and retail trade are also expected to continue to deliver economic growth in the region with help from the low Australian dollar.

Tourism related industries currently contribute approximately 20 per cent of total employment in regional Australia. To capitalise on the positive influence of structural change, innovation and science will be critical for North West Victoria to deliver new sources of growth and maintain high-wage jobs. Innovative firms are more competitive, more able to capture increased market share and more likely to create jobs in knowledge intensive industries.

Emerging modes of innovative service delivery using communications technologies and other mechanisms have potential to provide services to those previously unable to access them through traditional means. Some recent changes in services delivery that are likely to benefit North West Victoria include flexible regional models of health services and improved distance education capabilities.

Rapid technological development including digitisation and automation is also likely to pose significant challenges and opportunities for North West Victoria. People in unskilled or low-skilled occupations are likely to experience the greatest pressure and new capabilities will be required for the jobs of the future. This may present an additional challenge for the region where there is less access to and fewer educational and training opportunities.

Targeted infrastructure investment, strategic planning and increased connectivity and mobility will help secure the future of North West Victoria's economy and communities.



10 COVID-19-19 – Impacts and Learnings for the Region's Passenger Transport

COVID-19-19 has had a marked effect worldwide on the use of transport. The highly contagious nature of the disease and time required for vaccine development and distribution has meant that our best defence has been to limit travel and avoid unnecessary exposure, for both humans and animals. 'Self-isolation', 'quarantining' and 'working from home' have become everyday expressions and the concept of face-to-face meetings has become an activity we may never again embrace to the extent which we have done previously.

It has not all been bad news however. Regional areas have long faced the challenge of transport disadvantage, recognising the role and importance of distance education, telehealth and remote working. Learning, participating and responding under these conditions however was considered the exception rather than normal practice and generally not seen to offer the same value as more conventional methods.

The impact of COVID-19-19 has brought about significant change and acceptance of the need to operate differently as a society to effectively continue life under pandemic conditions. Now we are seeing distance education, telehealth and remote working as necessary tools; giving valuable time back that would be otherwise spent travelling and overall, reducing vehicle emissions through less transport. In result, the delivery of these tools has now improved – to the benefit of regions such as North West Victoria.

There will always be a need for passenger transport however, and none less so than for those living in regional areas. There are still many learning, health and working demands that require travel, often for more important issues and the need for safe and efficient passenger transport to meet these needs has not changed. Social connection is equally important. New, increased safety measures are required to stop (or minimise) the spread of disease and importantly, give users the confidence that they can safely return to using passenger transport services without putting their own health at risk.



11 Options for Future Regional Passenger Transport

11.1 Future Passenger Transport Planning

Future passenger transport planning for North West Victoria will need to successfully integrate rapid technological advancements, embrace innovation and ensure sustainability of initiatives and solutions for the coming decades.

Importantly, it will respond to the needs of those who choose to reside and visit a region which boasts one of the most liveable inland cities in the country. Future residents and visitors will include, but not be limited to:

- Future leaders of smart agriculture
- Stem education facility community – teachers, researchers and students
- Specialist health providers
- Tourists and
- An ageing population.

Key issues to be considered include climate change, the impacts of fossil fuels on independent car travel, roads deterioration, car ownership/affordability and sustainability of transport solutions over the next 30 years. Other considerations will need to include, but not be limited to:

- Technology and the way this may affect future transport choices
- The influence and impacts of automated vehicles in the future
- An ageing workforce
- Impacts and opportunities of the Free Trade Agreement
- The very real need for social inclusion and equity
- The need for quality and efficient communications and
- NDIS employment & aged care – it is estimated that 3000 to 4000 jobs will be required in the region in addition to those of today.

11.2 A Model for Generating Options

The Australian Transport Assessment and Planning Guidelines (ATAP) recognise that the development of options to address transport problems generally take the form of either Reform Options or Capital Investment Options.

To assist in development of a full range of options that consider both supply and demand factors, the following model has been considered:



Regulatory Reform

- Regulatory or access regimes
- Market structures and frameworks
- Safety and environmental standards
- Licensing

Land Use Reform

- Planning controls
- Land use changes
- Integration between transport and land use decisions

Better Use Reform

- Active management systems
 - Intelligent transport systems
 - Smartcards
- Influencing Behaviour:
- Economic charging
 - Demand management

Governance Reform

- Administrative and institutional frameworks
- Public service delivery processes
- Approvals processes
- Coordination processes
- Contractual provisions
- Funding agreements

Service Reform

- Increased service
- Integration between modes
- Priority for public transport
- Comfort and safety
- Fares
- Information and wayfinding

Capital Investment

- Upgrade existing infrastructure
- Expansion of existing infrastructure
- New infrastructure

As can be seen, the model places significant focus on the development of reform initiatives. This is in recognition of the potential of demand-side reforms to address many of the problems facing infrastructure networks. However, it is important to consider both reform and capital investment options in developing potential solutions.



11.3 Future Possible Passenger Transport Options for the Region

The following section includes a broad range of options for regional passenger transport in North West Victoria, identified both through previous related studies and new, stakeholder identified opportunities. The diversity of these options reflects the breadth of thinking in identifying options, in keeping with the above model.

Possible Transport Option	Commentary/Thoughts
Shuttle bus option to and from Mildura Airport (currently only taxi services available)	- Establish a regular route, including to and through the CBD (e.g. Retail Heart, Hospital, Business District, Council Offices, Bus Station, (future) Rail Station, Hotel/Motel Accommodation) - Frequency aligned with aircraft arrivals and departures - May choose to either set a route, or engage with users to determine a preferred route - Needs to be accessible - Charge a reasonable fare - Also particularly useful for tourists and seasonal workers – a cost effective transport option - Can offer door-to-door drop offs or central hub/stop drop-offs - Can be time saving when compared to waiting for taxis - Fixed pricing - Knowledgeable staff members and drivers that can advise of important local information, news and events.
Completion of the Murray Basin Rail Project (funding committed)	- The Murray Basin Rail Project involves standardizing and upgrading over 1000km of rail track to provide better rail access between the Murray Basin and Victoria's major ports.



- "...The project will drive economic growth, create jobs and provide a major boost to the transport industry, agricultural sector and regional communities. It will improve rail freight services and reduce the costs of freight..." (V/Line) as well as improving road safety by moving freight from road to rail.
- Appendix C illustrates the extent of the project and each of its stages; due for overall completion in late 2023.

It should be noted that on 18 February 2021 the Victorian Government ruled out standardising the Sea Lake and Manangatang rail lines; in result standard gauge trains on the Mildura line can only access Geelong and Melbourne via Ararat. These trains cannot travel via Ballarat.

Improvements to the Calder Highway corridor including provision of extended duplicated sections, additional overtaking lanes, rest stops and intersection treatments

- The Calder Highway is the key road link for freight, social and tourism travel movement between Mildura and Melbourne, and also Bendigo.
- Improvements to the corridor will improve travel time, efficiency and safety of the corridor for all users, including passenger transport.

Passenger rail service for Mildura

- Mildura is the only regional city in Victoria without a passenger rail service
- Many other parts of regional Victoria are accessible by passenger rail; these provide working examples of such a service for Mildura
- Rail may provide a more efficient service for travel between Mildura and other regional towns and cities (as well as Melbourne) than bus transport
- On-demand transport can be a feeder to the train stations in the smaller communities along the line and in Mildura

Improvement of passenger transport connections – including bus connections between larger centres and stops at small towns along these routes

- There are a number of examples of passenger transport connections between bus, rail and air travel both within and to and from the region which are inefficient and unsafe
- These include the bus station in Mildura
- Include infrastructure and timing of services and connections



Investigate Second bridge crossing at Mildura and Rail Connection from Mildura to Transcontinental Railway	- Identified in Central Murray Regional Transport Strategy 2019 - Bridge crossing could be located near Mildura, possibly at Karadoc, to better connect agriculture, horticulture and mining in New South Wales with southern markets and processing plants, to cater for growing urban populations and address increasing demand for transporting product. - Explore the opportunity for creating an interstate rail connection from Mildura to the 'Intercontinental' rail line at Menindee or Broken Hill; or possibly Sayers Lake. This may create opportunities for greater interstate passenger transport activity.
Improvement to Tourist routes (i.e. Silo Art Trail)	- The safety and ride quality of these routes is important in supporting the attractiveness of these routes; often utilised by towing vehicles and those appreciating a comfortable travel surface.

Other options that have not been fully investigated to date could include:

Possible Transport Option	Commentary
Provision of additional local bus services within Mildura, including increased frequency and hours of operation and more tailored routes and timetables	- Assess current services, frequency and hours of operation and make recommendations for change
Provision of tailored on demand transport services (small capacity buses etc)	- For rural low-density towns where passenger volumes do not warrant a regular transport service, tailored on demand transport is a more effective way of providing services. Routes are optimised according to passenger requests. These can take a variety of forms. - There are a number of trials that have occurred in regional NSW from which learnings can be drawn, including at Moree, Northern Rivers, Sapphire/South Coast, South Coast to Canberra, Villages to Narrabri, Dubbo, Lithgow, and Hay. - Refer Appendix B for more information



Introduction of Rideshare car services to Mildura (i.e. Uber)

- Mildura is yet to see these services implemented in the region

Introduction of Government funded subsidy for air travel to Melbourne (affordability) and

- Mildura Airport Pty Ltd operates under the Corporations Act and has one shareholder, MRCC, and is the busiest regional airport in Mildura.
- When compared with other forms of transport, regional aviation is often a costly transport choice but plays an important role in connecting regional and remote communities with key services and resources. Without action, regional and remote communities will continue to struggle to afford airfares; this adversely affecting their ability to access (for example) quality health and education services and facilities.
- There are some programs in place to subsidise and assist travel costs where demand is insufficient to justify commercially operated services. The Australian Airports Association and numerous regional and remote communities have called for the Australian Government subsidy schemes to be expanded. There have also been calls for greater state government intervention of unregulated air routes to improve transparency in the methodology used to set fares, thereby helping highlight whether further regulation may be required.

Upgraded bus terminals and improved amenities for waiting passengers.

- Safety and comfort are key in encouraging more users of passenger transport
- The main bus terminal in Mildura is closed late at night when the bus from Swan Hill arrives, leaving passengers without access to amenities or assistance by personnel. Users have reported feeling unsafe at this time and lack confidence in using the services.
- Timetable changes may assist, and/or changes to terminal operating times.



11.4 Options Identified by Stakeholders

Stakeholders raised a number of additional discussion points during workshops that identified possible options for improved regional passenger transport. While not exhaustive, these are summarised below.

Possible Transport Option	Commentary
Conduct trials for new and improved services (to provide a means to robustly test potential options)	- Changes in demographics, the economy and development all have an effect on the demand for passenger transport services. These services must be regularly reviewed, improved and modified or expanded in order to meet changing user needs. - Congruently, the very same users can also be resistant or reluctant to change. Passenger transport trials – for both new and improved services, provide an effective mechanism to ‘test’ potential options, whereby: ◦ Users can experience proposed changes without commitment ◦ Feedback on the proposed changes can be sought from users during the trial process ◦ Trials maintain flexibility in the approach to change ◦ Changes can be trialled prior to investment in permanent alterations ◦ Service, efficiency and driver and passenger experience can be assessed prior to formal adoption (or rejection) ◦ Investigate shared costs and joint funding for an autonomous bus, like the service in Renmark, SA ◦ Consider an autonomous bus to connect Mildura CBD and the Mildura South development and the Mildura Airport as a corridor connection ◦ Consider a ‘flexibus service’ for the emerging residential development at Mildura South ◦ Consider Mobility as a Service (MaaS) options which are combinations of fare and pricing for multiple transport providers; i.e. fare reductions with bundled packages for fixed route bus services, taxis, on-demand transport services, etc



Introduce and/or expand education programs	- Education has been identified in both North West Victoria and in other regional areas as a key factor in retaining both people and skills in regional Australia and to continue and grow its economic contribution. - Provide cost subsidisation for community transport needs further education at the Vocational and Tertiary level. The expansion of course and qualification offerings at these campuses or the introduction of (in time) an additional education facility will encourage more students to travel to and/or stay in the region for further study. - An increase in student population will in turn increase demand for passenger transport services.
Consider expanding digital connectivity options to reduce physical transport demands	- One of the positive outcomes of COVID-19-19 was the rate at which digital connectivity was embraced to further benefit our everyday lives. Medical appointments, education and work-related activities can now, more than ever, be conducted and supported through digital connectivity. This is of immense benefit to regional areas and has in turn markedly reduced physical transport demands.
Optimise use of existing resources/assets by using these during non-demand periods,	- School buses and pool cars (govt) have been suggested as vehicles that may be available to further assist with transport demands
Consider targeting specific champion transport markets to begin with	- Adopting a staged approach to implementation is practical, cost-effective and easier to modify and/or tailor if required. A logical approach would be to initially better serve established transport demands, for example travel between the Mildura Airport and CBD.
Consider options for other community transport services (i.e. Dial a Mum/Dad)	- Laterally thought out options such as these may assist with the safety of young adolescents and other drivers who may otherwise take risks such as drink-driving due to lack of available passenger transport late at night and on weekends.
Consider the merits of cross-border opportunities with both South Australia and possibly also New South Wales. This could create a unique economic zone and potentially draw from a greater pool of funding also. Place greater value on the	- One of the more notable impacts of COVID-19-19 for the region was the segregation imposed by closure of state borders and the adverse effect this had on passenger movements between the Sunraysia/Riverland region and also to and from capital cities. - Regional services and resources are already shared across the SA/Vic border, including employment, education, health, as well as retail and recreation facilities. - Capitalising on cross-border relations could provide further significant benefits.



development of sustainable solutions, including being responsive to climate change

Consider the feasibility study re:
Bendigo/Mildura/Adelaide air route

- Regional Development Australia conducted a survey in 2019 for this route, after introduction of a travel route by QANTAS between Bendigo and Sydney.
- To date, this route has not been implemented.

Consider hydrogen-fuelled vehicles for the Mallee

- Victoria's Mallee region is host to a hydrogen technology cluster, tapping into its vast solar resources. With a need for specific infrastructure however, the use of hydrogen fuel as a mainstream energy source is likely a decade away.
- In support of this, hydrogen fuelled vehicles for the Mallee should be considered.

Mildura Autonomous Bus Trial

- Renmark's 'Murray' Autonomous Bus Trial has drawn to a close; perhaps this vehicle could be trialled in Mildura?



12 Evidence and Case Studies

12.1 The Link between Transport Connectivity and Economic Development

"...Investment in transport links and networks can directly influence the functioning of labour markets, business productivity and competitiveness. These impacts interact over time and can in turn lead to improvements in economic output and the geographical distribution of economic activity. They can also impact on the environment, quality of life and the overall attractiveness of towns and cities.

Reduced transport costs and improved connectivity has benefits for both businesses and individuals, including:

For businesses, greater connection with suppliers, customers and a wider pool of talent in the labour market.

For individuals, greater participation in the labour market, access to a wider range of job and therefore employment opportunities and connection to a wider range of education, leisure and retail opportunities in turn generating greater competitiveness of local business.

Investing in transport connectivity can influence both the level of economic activity in the region as well as where it is located

In result, improvements in transport connectivity can drive increases in productivity and employment, resulting in increased economic output.

Where transport connectivity improvements are 'transformational', they can also influence the location of economic activity, drawing businesses to relocate to more productive locations with better access to skills, other resources and customers..." – **The Transport Knowledge Hub (UK)**

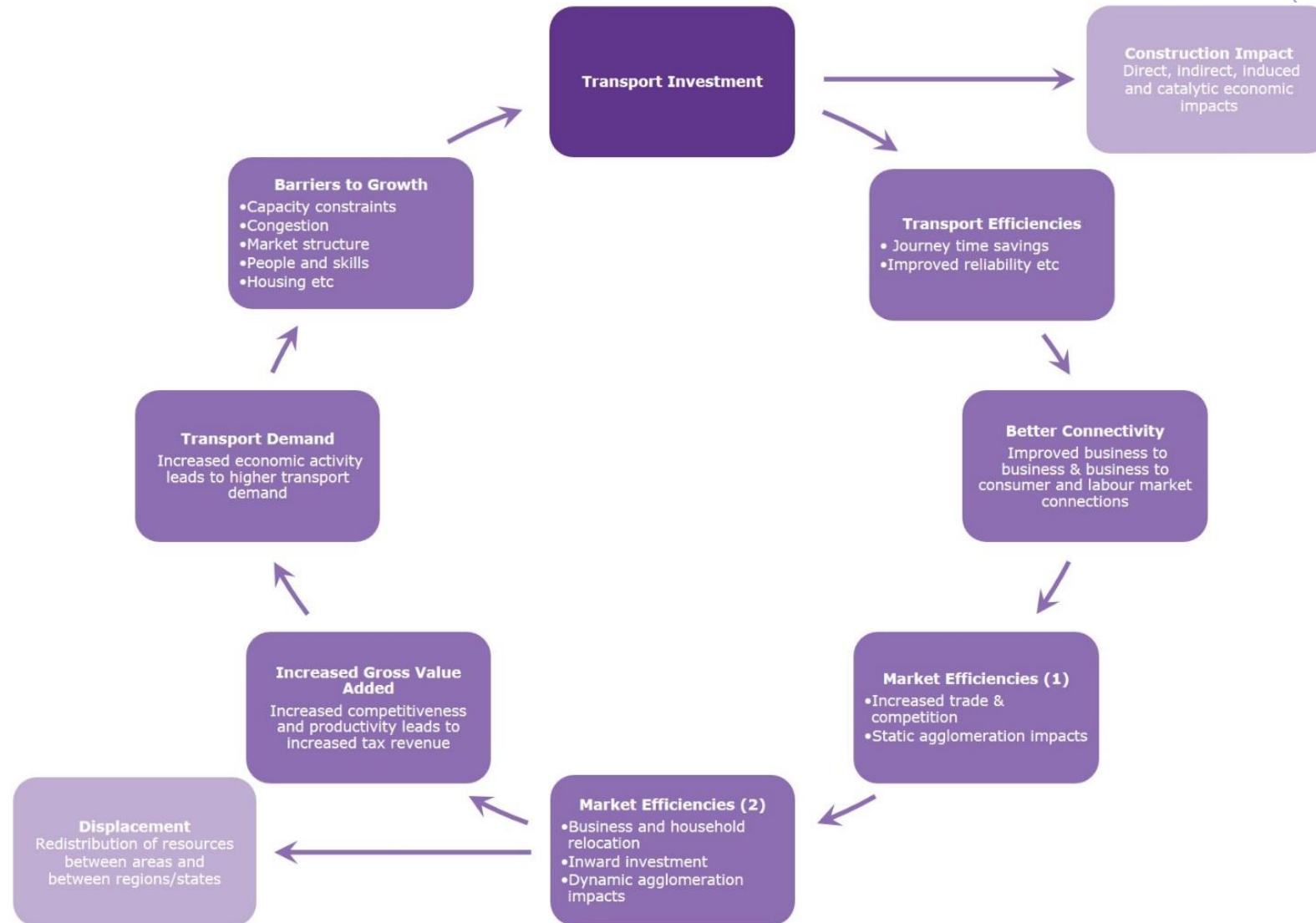


Figure 9 - The link between Transport Investment and Economic Growth
(derived from the Transport Knowledge Hub (UK))



It is acknowledged across the region that there has been a failure to realise a wide range of regional development and growth opportunities as a result of the limited level of transport options to, from and within the region. This can be extended to also include lost tourism opportunities as indicated in Figure 2 of Section 3.

Transport connectivity improvements could begin with simple tasks such as improving connectivity and affordability for existing transport services and through provision of state government support for Community Transport providers; this is further explored in Appendix C and has been previously highlighted in the Mallee Transport Forum Options paper prepared in 2017.

Outlined in the Central Murray Transport Strategy, 2018, growing heavy vehicle traffic, including High Productivity Freight Vehicles (HPFVs) on the George Chaffey Bridge, delays and disruptions on the bridge, and lack of through freight routes, bypassing Mildura city, have prompted calls to conduct planning for a second Murray River bridge crossing and new truck bypass, near Mildura. Similarly, the concept of a standard gauge railway line from Mildura to the Transcontinental Railway (i.e. to Broken Hill or Menindee), which would allow direct access by rail to Darwin, Perth and Sydney from the region has been identified for further investigation.

12.2 Case Studies

A range of examples have been sought from across Australia to consider varying regional passenger transport services, opportunities and initiatives that could be implemented throughout North West Victoria. These are outlined in the following pages and in Appendix B.

12.2.1 Regional Passenger Train Services

Key interstate and regional passenger train services in Australia are illustrated in Figure 11 below.

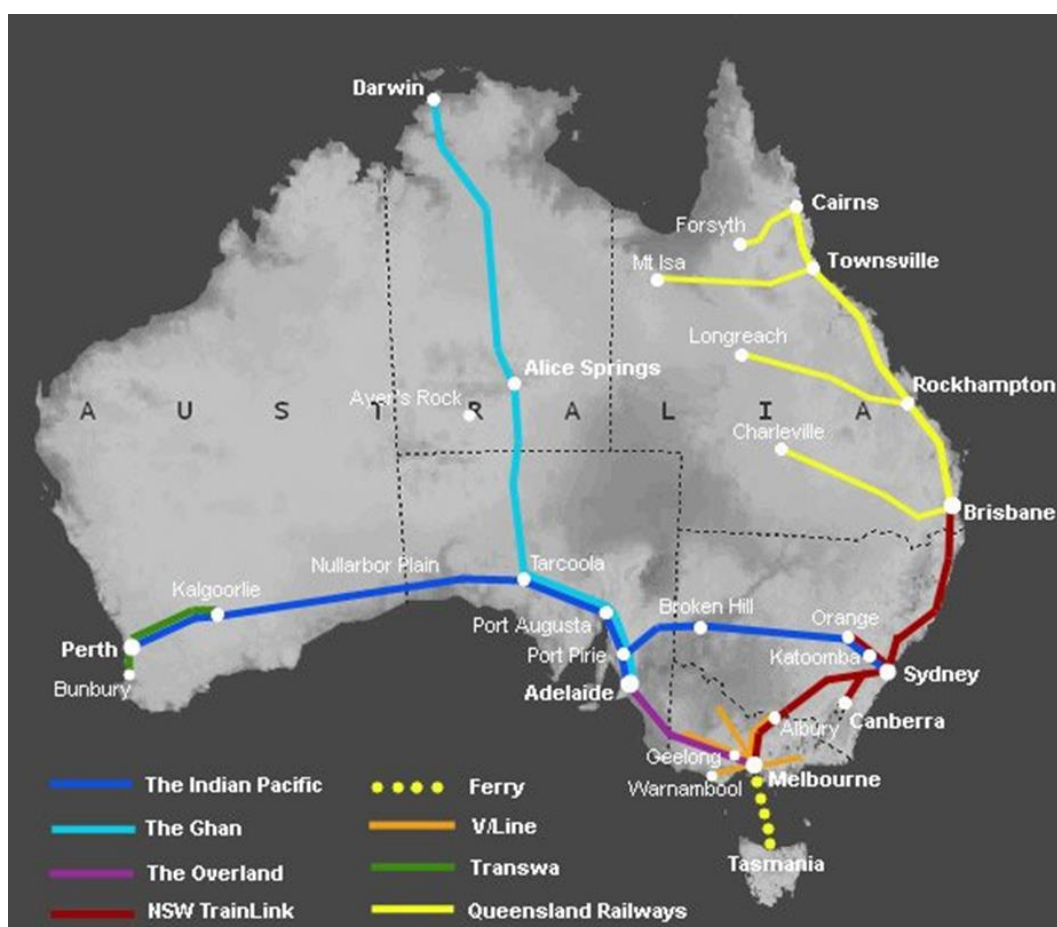


Figure 10 - Interstate and Regional Passenger Train Services

Comparable regional passenger train services in Australia to that proposed for the return of rail to Mildura include:

- TRANSWA services, between Perth and Bunbury, Kalgoorlie, Merredin and from Northam to Midland
- The Southern Highlands Line in New South Wales, operated by NSW TrainLink
- V/Line daily regional rail services between Melbourne and Shepparton in Victoria, and
- The Tilt Train, between Brisbane and Bundaberg, Queensland.

TRANSWA Services

The AvonLink operates over a 97 km route between Northam and Midland with one return service each weekday (except public holidays). Passengers must transfer to the Midland Line on the Transperth network to continue to Perth CBD. The MerredinLink operates one return service on Monday, Wednesday and Friday between Perth and Merredin.



The AvonLink train services are mostly for daily commuters and business trips to Perth via Midland and the electric passenger trains on the Midland line. The Australink trains are mostly for business, tourist and social trips to Perth and Bunbury as destinations connecting the hinterland communities at stations along the route.

Kalgoorlie and Merredin train services provide regional connections to Perth and are not for daily commuters.

The AvonLink and MerredinLink (less than 260 km) are both shorter trips than between Melbourne and Mildura. The Australind from Perth to Bunbury is more comparable as a train service to Mildura.



The Southern Highlands Line, Victoria

NSW TrainLink is a division of Transport for NSW that operates passenger train and coach services throughout NSW and some services to Victoria, Queensland and South Australia.

The Southern Highlands Line is an intercity rail service operated by NSW TrainLink that services the Macarthur, Southern Highlands and Southern Tablelands regions of New South Wales. First operating in 1869, the service runs from Campbelltown across the Main Southern railway line through to Goulburn, with peak hour services extending the route to Central. The railway service operates alongside a bus route from Picton to Bowral, operating on the route of the Picton – Mittagong loop railway line, and a regional coach service from Bundanoon to Wollongong on the South Coast Line, operating on the corridor of the Unanderra - Moss Vale railway line.

One of only two routes on the NSW TrainLink intercity network to run entirely on non-electrified railway lines, the Southern Highlands Line is operated with a rolling stock solely consisting of Endeavour railcars, with most services only using two cars. The service spans 169 km of railway, making it the most extensive route on the NSW TrainLink network apart from the Blue Mountains Line's Bathurst Bullet service. The route also spans 22 stations, making it also the route with the lowest number of stops. An additional 2 stations and 55 km of railway are traversed by Southern Highlands trains at peak hours.



Melbourne to Shepparton V/Line service

V/Line operates hourly passenger services to Melbourne, with Sprinter and VLocity railcars used on quieter services, as well as locomotive hauled H type carriages during peak times. Beyond Seymour, three daily passenger trains run as the Albury Line and five daily services run as the Shepparton Line.

Passengers have already started realising the benefits of the Regional Rail Revival program. A total of 10 additional weekly services have also been introduced, as part of stage one works on the Shepparton Line Upgrade.

Stage 1 - Complete

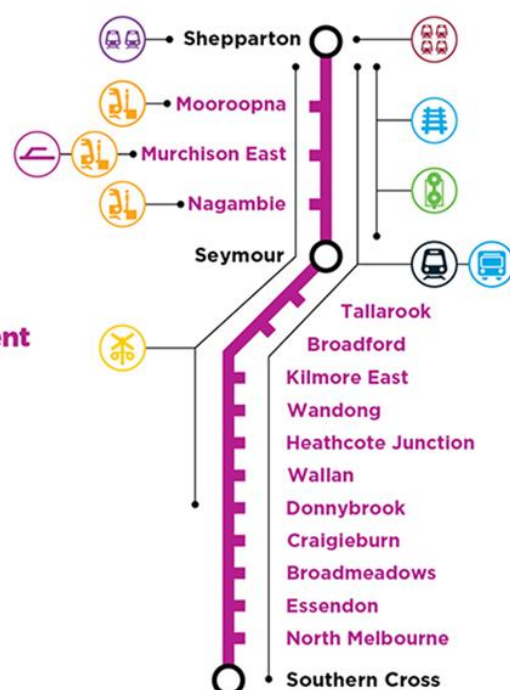
-  **Additional train services**
10 extra services a week between Melbourne and Shepparton
-  **Stabling upgrade**
in Shepparton to support extra services
-  **Coach services**
29 extra coach services for better transport connections

Stage 2 - Underway

-  Platform extensions at Mooroopna, Murchison East and Nagambie to suit VLocity trains
-  Crossing loop extension on the line to enable trains to pass each other
-  59 level crossing upgrades between Donnybrook and Shepparton
-  Stabling for VLocity trains

Stage 3 - In development

-  Track upgrades to enable trains to travel at higher speeds
-  Signalling upgrades to enable nine weekday return services
-  Expanded stabling for VLocity trains to support more services



V/Line delivered additional stabling facilities at Shepparton, to enable the additional services, and the works were fast-tracked to deliver benefits for passengers sooner.

Tilt Train between Brisbane and Bundaberg, Queensland

In 1998, the electric Tilt Train started services from Brisbane to Rockhampton. With a top service speed of 160 km/h and the ability to tilt five degrees in each direction. It is the fastest train in Australia but has the same maximum allowed service speed as the V/Line VLocity train which operates in Victoria.

The train operates on the North Coast line and serves the intermediate towns of Gympie, Maryborough West railway station, Bundaberg and Gladstone. The electric Tilt trains operate with a multiple unit configuration.



The electric Tilt Train features 2x2 economy seating, and 1x2 business class seating, visual entertainment along with in-seat audio entertainment. Economy class passengers have a regular trolley and a buffet style galley food service, while business class has a frequent trolley service and passenger attendants to tend to the needs of the passengers.



The train service from Roma Street to Bundaberg began in 2014.

Three long distance trains, namely the Spirit of Queensland, Spirit of the Outback and Tilt Train service Bundaberg with more than 91,000 visitors in 2017. Bundaberg station is Queensland's most popular regional train station.

In 2019, \$21.8M was invested in improvements to the existing signalling systems at Bundaberg and Bundaberg North to increase the rail reliability and safety for passenger trains with a system that is easier to maintain.

A tabulated comparison of regional rail services is included in Appendix D.

12.2.2 WA Regional Air Fare Caps

As reported by ABC News on 13 January 2021:

The WA Labor Party has made a commitment to cap regional airfares, investing \$19.8 million in the Regional Airfares Zone Cap.

This will allow regional residents to pay less for flights to and from Perth; one-way flights to towns within 1,000km of the city would be capped at \$199, and fares to communities outside that range would be capped at \$299.

Exmouth Shire President Matthew Niikuula commented that "A lot of our community are always upset that there's no local fares or ratepayer fares that they can access to make getting to the city and back more affordable. So this is going to be fantastic," Mr Niikuula said.

East Kimberley Shire President David Menzel also welcomed the government's promise, hoping it would make life in remote areas easier. "If you're looking at air fares that might be well over a thousand dollars out of Kununurra, that's certainly one of those factors that makes living in the regions a very unattractive proposition," Mr Menzel said.

Rural Doctors Association President Dr Andrew Kirke said it was particularly important that regional people had access to cheaper fares so they could access medical services in Perth. He said the caps would come at the perfect time, as the health system experiences an overload of procedures which were previously on hold due to COVID-19-19.

"Anything that makes the process of getting people to their appointments easier is a good idea," Dr Kirke said.

It is recommended that discussions be undertaken with the WA State Government to better understand how this concept has evolved and the potential for this to be similarly applied to the North West Victoria region.



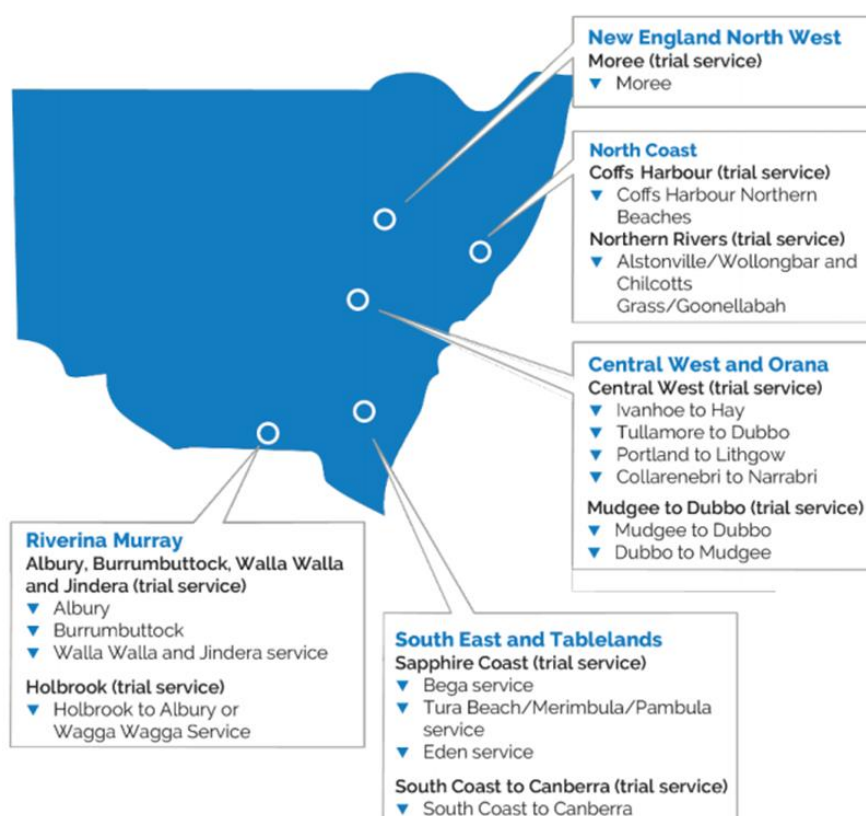
12.2.3 Tailored On Demand Transport and Flexible Bus Services

For rural low-density towns where passenger volumes do not warrant a regular transport service, on demand transport is a more effective way of providing services. Routes are optimised according to passenger requests and can include the following options (for example):

- **Route Deviation** can occur with a regular schedule that deviates to serve demand-responsive requests within a zone
- **Point Deviation** serves demand-responsive requests within a zone with no regular path between the stops
- **Demand-Responsive Connector** operating on request within a zone to a fixed-route network with most trips to or from transfer points
- **Request Stops** operating in conventional fixed-route timetabled service with a limited number of undefined stops responding to passenger requests
- **Flexible-Route Segments** operating a conventional fixed-route timetable service, but switching to a demand-responsive mode for parts of the route
- **Zone Route** operating in demand-responsive mode along a corridor with established departure and arrival times at one or more end points.

Appendix B includes examples of On Demand and Flexible bus services in:

Regional NSW



Coffs Harbour, NSW



woopi connect
OPERATED BY **FOREST**

A bus that's ready when you are

woopi connect
OPERATED BY **FOREST**

Download the Woopi Connect app from the App Store or Google Play to book your next ride.

Travel type	Adult	Concession
Single-zone travel	\$4.30	\$2.10
Cross-zone travel	\$6.40	\$3.30

Eden, NSW

sapphirecoast BUSLINES

Want door to door bus service?

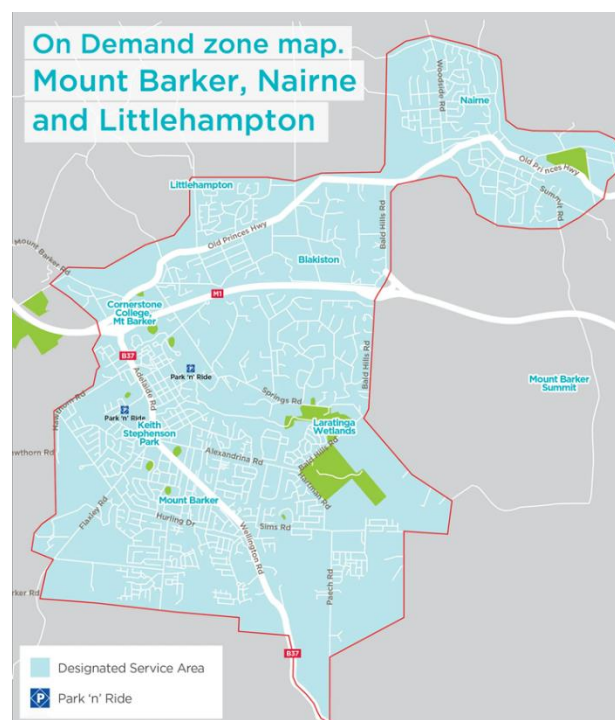
Phone **6495 6452** to book your seat on **Flexi Bus** – don't forget to book the day before



Mount Barker, SA

The trial is a shuttle bus service that aggregates demand at the pick-up point and delivers passengers to their destination in a fast and efficient manner. Bookings are made via the mobile phone app to pick passengers from either:

- Their home
- A designated point of interest within the service area, or
- A bus stop



Flexibus in Ipswich, Qld

FlexiLink is a maxi cab service operating in Ipswich and surrounding suburbs.

Passengers are picked up from their home and dropped at any location within the service's roam zone or a key location in the area, such as a train station or shopping centre.

Vehicles are wheelchair accessible and display the 'FlexiLink' sticker.



Kan-Go Bus in Toowoomba, Qld.

The Kan-go service is a partially demand-responsive service (roam zone) and a partially fixed-route service.

The fixed route is between the Range Shopping Centre, St Vincent's Hospital and Toowoomba City (Grand Central), and operates the same as any other bus service with designated stops and passengers can get on or off at any of these stops.

The roam zone allows passengers to be picked up at variable locations and dropped along the fixed route, or alternatively, picked up along the fixed route and dropped at variable locations (note it does not allow for pick up and drop off in the roam zone).

Passengers are picked up from their home and dropped at any location within the service's roam zone or a key location in the area, such as a train station or shopping centre. Bookings must be made at least one hour before travel.



12.2.4 Emerging Trends in Passenger Vehicles

Regional Electric Buses in NSW

Route 737 between Kiama and Bomaderry on the NSW South Coast will be operated with low-floor electric buses with funding support from the NSW State Government.

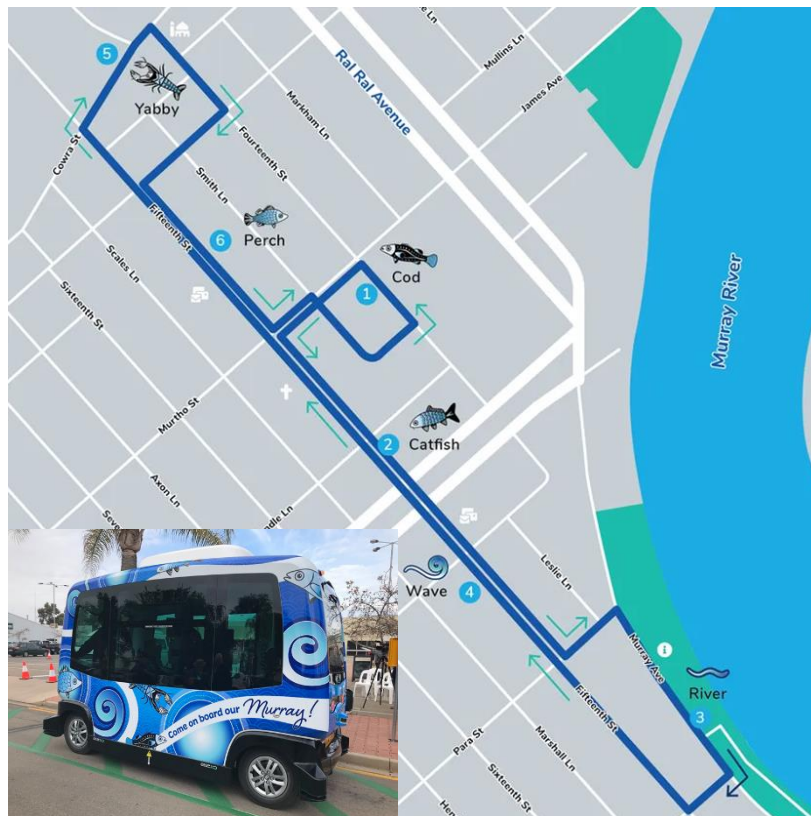
Zero Emissions Buses for Regional Victoria

Zero Emissions Buses (ZEB) with electric, hydrogen and hybrid-fuel buses are an emerging opportunity for clean and quiet alternatives to diesel buses and coaches.



Autonomous Bus Trials in Australia

- Driverless bus trials in South Australia, with the Olli in Glenelg and the FLEX at the Tonsley – Flinders precinct.
- EasyMile driverless bus trial in Renmark, South Australia.
 - Vehicle capacity for 6 seated and up to 12 passengers with accessible access
 - Does not replace local bus services
 - Slow speed (16 km/h in autonomous mode) (up to 40 km/h under control)
 - Free service funded by City of Renmark and State Government
 - The initial trial had some “teething” problems, so the route was shortened
 - Designed for people with mobility and access issues as a first and last “mile” alternative connecting local destinations



The purpose of the trial is to demonstrate the capability of driverless vehicles to:

- Improve mobility of residents to community facilities
- Understand levels of acceptance of automated vehicle technology by the community
- Service the local community in providing a first and last mile public transport mobility solution
- Capability of the technology in a complex regional environment
- Utilisation of the technology for the aged, tourism and feeder service to existing public transport
- Contribution of autonomous vehicle to smart city solutions
- 2.4 km route with 6 named stops
- No need to book, just turn up and go with Murray arriving approximately every 30 minutes
- Murray provides a hop on and hop off service at six bus stops along the route, operating approximately every 30 minutes on Tuesdays from 10am to 1pm and Wednesdays to Saturdays from 10am to 4pm.
- Service does not operate on Public Holidays.

12.2.5 Promote Initiatives for Patronage Growth

These are explored further in Appendix B, and include:

World of Melbourne by Bus



The campaign launched with 16 posters and will continue in phases across a range of channels with localised targeting and includes a website built to showcase the more than 700 bus routes in Melbourne.

Introduction of similar style artwork could provide a range of valuable benefits for Mildura, including education and marketing and improved street appeal. A similar style of travel poster/s could be explored with PTV.

Regional Train and Coach Fare Payment – where Mobility as a Service options integrated fare payment for all types of passenger transport with discounts for multi-modal travel (bus, train, taxi, Uber, etc)

Improved Security at Bus Stops – through improved lighting and video surveillance cameras.

Expansion of Electric Charging Stations - throughout North West Victoria.



13 Assessment and Prioritisation of Options

13.1 Assessment Tools

The Transport and Infrastructure Council's Australian Transport Assessment and Planning Guidelines published in 2016 (ATAP Guidelines) sets out three stages of assessment used in the determination, prioritisation and economic assessment of options for transport system improvements.

Table 11 - Option Assessment Tools

Options Assessment Stage	Recommended Tools
Strategic Merit Test	Multi-Criteria Assessment (MCA) E.g. Objective Impact Table (OIT)
Rapid Appraisal	Rapid Cost-Benefit Analysis (CBA) Rapid Appraisal Summary Table (AST)
Detailed Appraisal	Detailed CBA Detailed AST

The strategic nature of this study focuses on the Strategic Merit Test (SMT), with further guidance provided for development of the CBA for projects that are identified for early priority. Further details of each of the above stages can also be found in Part F3 – Options Generation and Assessment of the Transport and Infrastructure Council's Australian Transport Assessment and Planning Guidelines (2018), which are available online for reference.

The SMT is used to determine the relative alignment and performance of options against the economic, environmental and social goals and overall objectives for North West Victoria's Regional Passenger Transport, as identified in the Stage 1 Project Scoping Brief.



13.2 Alignment with the Investment Logic Mapping (ILM) Process

The Investment Logic Mapping process undertaken as part of the Stage 1 Project Scoping Brief identified 7 Strategic Responses to the Problem Definition and Benefits Realisation process for future regional passenger transport, as follows:

- A – Restructure the current transport options to better serve the North West region
- B – Increase the diversity and improve the affordability of available transport options
- C – Expand the use of technology in the provision of transport and community services to the region
- D – Improve equitable access to community services
- E – Develop a cross-border regional economic hub
- F – Expand education opportunities and encourage the growth of the skilled workforce
- G – Identify and realise economic development opportunities that take advantage of improved transport connectivity.

Each of the identified options has been reviewed against these strategic responses, with alignment as shown in Table 12 below.



Table 12 - Alignment of Options with the ILM Process

Option	Transport System Improvement Description				Alignment with ILM Strategic Responses				
		Restructure current transport options to better serve the N-W Region	Increase diversity and improve affordability of available transport options	Expand use of technology in provision of region's transport/ community services	Improve equitable access to community services	Develop a cross-border regional economic hub	Expand education opportunities and encourage skilled workforce growth	Identify and realise economic development opportunities that take advantage of improved transport connectivity	
1	Shuttle Bus to Mildura Airport		X		X		X	X	
2	Completion of the Murray Basin Rail Project							X	
3	Calder Highway Improvements							X	
4	Passenger Rail Service for Mildura		X		X		X	X	
5	Improve Passenger Transport Connections	X	X		X				
6	Investigate Second Rail Bridge at Mildura	X			X	X		X	
7	Improve Tourist Routes							X	
8	Local Bus Service within Mildura	X	X		X				
9	On-Demand Transport	X	X	X	X				
10	Rideshare Services in Mildura		X	X	X				
11	Air travel subsidies to Melbourne (or Adelaide)		X		X			X	
12	Upgrade Waiting Facilities at Mildura Bus Station	X							
13	Mobility as a Service	X	X		X				
14	Update Community Transport Service Options	X			X				
15	Introduce and/or Expand Education Programs								
16	Expand Digital Connectivity Options	X			X				



Option	Transport System Improvement Description	Alignment with ILM Strategic Responses						
		Restructure current transport options to better serve the N-W Region	Increase diversity and improve affordability of available transport options	Expand use of technology in provision of region's transport/ community services	Improve equitable access to community services	Develop a cross-border regional economic hub	Expand education opportunities and encourage skilled workforce growth	Identify and realise economic development opportunities that take advantage of improved transport connectivity
17	Optimise Use of Existing Resources/Assets	X						
18	Improve/Strengthen Cross-Border Opportunities					X		
19	Extend Air Travel Routes to include a Bendigo/Mildura/Adelaide Route	X			X			X
20	Consider Hydrogen Fuelled Vehicles for the Mallee		X					
21	Mildura Autonomous Bus Trial		X	X	X			



13.3 Development of Assessment Criteria

The following Assessment Criteria were developed in consideration of the region's Transport, Economic, Environmental and Social Goals and confirmed through stakeholder discussion and feedback:

Table 13 - Assessment Criteria

Number	Criterion Name	Criterion Considerations	Triple Bottom Line
1	Improved Customer Benefits	Increasing Passenger Transport Usage (who and how many transport users that will benefit from the option?)	Social
2	Aligns with Government Goals and Objectives	Achieving Government Objectives (does it achieve the Government policy positions at all levels?)	Social
3	Wider Community Benefits	Supporting Wider Community Objectives (reduced carbon footprint, greater economic and business activity - including tourism, greater equity for transport disadvantaged groups, safety and security, improved aesthetics and amenity)	Social
4	Risks and Impacts to Deliver Option	Minimising the Impacts and Risks (property acquisition, loss of access, noise, air pollution, environmental flora and fauna, visual impacts)	Transport
5	Ease of Implementation	Level of planning approvals, community engagement, government stakeholder input, feasibility studies, cost/benefit assessments	Transport
6	Costs	Minimising Capital and Operational Costs (how much money is needed?)	Economic
7	Timing/Availability of Funding	Availability of Government Funding or Private Financing (where is the money coming from?)	Economic



Each of these criteria have been assigned 5 levels of assessment, ranging between high positive outcomes to high negative outcomes. Appendix E provides definitions for each level of assessment across all criteria and application of this to each of the options.

13.4 Ranking of Options

Ranking of options has been completed through application of the above criteria and assessment, supplemented by presentation and discussion with stakeholders and completion of a sensitivity analysis; achieved through variation of assigned criteria weightings.

The final options are presented on the following pages. The table also assigns relative priorities for action, key tasks in the short, medium and long term and required stakeholders to achieve these actions. Some initiatives are costly and complex, with short term actions including lobbying and further feasibility studies to maintain or increase project momentum. Others are simpler in nature, requiring less funds and less infrastructure, but still achieving important outcomes.

Options marked in bold type have been identified as Priority Actions; these are further discussed in Section 13.5.



Table 14 - Final Assessment and Ranking of Options

Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
1*	Shuttle Bus to Mildura Airport	Mildura Airport Shuttle Bus	Services	Review previous planning for a shuttle bus service and consider on-demand transport options (i.e. fixed route versus flexible services)	Develop a business case for a shuttle bus including the demand analysis (considering the experience from the proposed on-demand transport services)	Tender shuttle bus service to private bus operator	Long term	Mildura Rural City Council
2	Passenger Rail Opportunities – leveraging off the Murray Basin Rail Project	Murray Basin Rail Project; inclusion of passenger rail	Infrastructure	Review opportunities to operate passenger trains on sections of the rail network upgrades; continue dialogue with the State Government	Develop business cases to operate passenger trains on sections of the rail network upgrades Obtain funding for passenger train services and required infrastructure	Conduct detailed planning and design for the rail infrastructure and develop a plan for passenger train services to be implemented	Short term	Mildura Regional Development DoT
3	Passenger Rail Service to Mildura	Mildura Passenger Train Service	Infrastructure and Services	Engage with Councils located along the corridor, businesses and industry and gather documented support for the return of passenger rail to Mildura (and the region) Lobby State Government for a revisit of feasibility studies to include the Social Equity benefits to justify the project (this can include the Actions included in this report) Conduct an independent study to quantify the travel demand for a train service (by who and how often)	Develop a full business case and environmental statement with community and stakeholder consultation Continue dialogue with State Government to support the project	Confirm a delivery plan for implementation of train services to Mildura Conduct detailed planning and design with environmental and community impacts; build rail infrastructure and design the timetable for services; implement train services	Long term	Councils along rail corridor, businesses, industry and other key representative groups (e.g. health, tourism, Mildura Regional Development) Victorian State Government (including DoT)
4	Improve Passenger Transport Connections throughout region	Regional Passenger Transport Connections	Infrastructure	Develop and foster advocacy from towns and regions Liaise with DoT and local and regional bus operators for	Review and refine bus and train timetables with DoT and bus operators	Review and refine bus and train timetables with DoT and bus operators	Short term	Regional Councils Stakeholders from Health, Tourism,



Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
				both coach services and connection to trains				Education and Recreation sectors Local and regional bus operators DoT
	Investigate Second Bridge Crossing at Mildura	Mildura Second Bridge Crossing	Planning	Prepare a broader regional transport strategy for the North West Victoria region, which would include this as a future infrastructure requirement Lobby State Government for a Bridge Feasibility Study to be completed	Develop a full business case and environmental statement with community and stakeholder consultation Continue dialogue with State Government to support the project	Confirm a delivery plan for implementation of the second rail bridge at Mildura	Long term	Regional Councils Stakeholders from community, industry and tourism sectors DoT Cross-border Commission
6	Improve Tourist Routes across region	Tourism Routes (i.e., art trail, public murals)	Marketing	DoT to upgrade tourism signage guidelines and integration Lobby Visit Victoria to support promotion of the tourist routes Undertake a review of the tourist routes in the region	Develop a plan to implement the tourist routes including branding and route wayfinding signage Determine minimum standards for infrastructure along the tourist routes	Implement tourist routes, including branding and route wayfinding signage	Short term	Visit Victoria Local Councils
7	Local Bus Services within towns in the region	Local Town Bus Services	Services	MRCC has identified the need for a review of the local service and existing timetables with respect to meeting customer travel demands (i.e., service times and routes) Liaise with DoT and the bus operators Integrate the bus network planning with any consideration for an autonomous service in Mildura to avoid an overlap of the CBD services, but with integration at a central bus stop hub	Monitor the local town bus services and refine the routes to service growth areas	Review fixed route and on-demand transport services for efficiency and customer demands	Short term	Local Councils Local bus operator (currently Sunraysia Bus Lines in Mildura) Autonomous bus provider if applicable DoT



Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
8	On-demand Transport	On-demand Transport	Services	Invite private bus operators to tender for on-demand transport services (with app-based booking and passenger tracking) Identify the on-demand transport service model, area and operating hours Integrate with the network planning of a review of the local bus services in Mildura	Monitor the on-demand transport services and refine with the latest technology Investigate the impacts on other service models, areas and operating hours	Review the on-demand transport and fixed route services for efficiency and customer demands Revise on-demand transport services to consider other service models, areas and operating hours	Short term	Local Councils Private bus operators Community transport provider
9	Rideshare Services in the region	Rideshare Services in the region Note: DoT currently has a small team looking at trials, and would consider these in North West Victoria	Services	Liaise with private rideshare operators (i.e., Uber, Ola, etc) and State Government transport regulators Consult with taxi industry and DoT about competition issues	Assess level of usage of private rideshare and impacts on other passenger transport services (including taxis and local buses) Consider expansion into NSW and obtain transport approvals	Refine contractual areas and operating times for private rideshare services	Short term	Local Councils Private rideshare operators Taxi Industry DoT
10	Air Travel Subsidies to Melbourne	Air Travel Subsidies	Services and Fares	Liaise with State Government transport regulators and airlines that operate to Mildura Airport Identify eligibility criterion for the subsidies (i.e. mostly for regional residents and not for business or holiday travel to Mildura)	Implement the discounted fares policy with airlines Review the usage of the subsidised fares and liaise with State Government transport regulators	Review usage of the discounted fares with airlines Liaise with State Government transport regulators	Medium term	State Government Mildura Airport



Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
11**	Upgrade Passenger Waiting Facilities in the region	Station and Bus Stop Upgrades	Infrastructure	Liaise with DoT, State Government and local Councils to identify the scope of works for the station and bus stop upgrades Conduct an accessibility and safety audit of the stops and stations to identify the issues Develop plans for stop and station upgrades Obtain funding for upgrades Implement stop and station upgrades	Continue to upgrade and maintain stops and stations as required	Continue to upgrade and maintain stops and stations as required	Short term	Local Councils DoT
12	Mobility as a Service	Mobility as a Service	Services and Fares	Review fare structure for local bus and taxi services including the use of Myki ticketing	Monitor fare structure for local bus and taxi services	Monitor fare structure for local bus and taxi services	Short term	Local Councils DoT
13***	Other Community Transport Options	Other Community Transport Options	Services	Review SunAssist services and operations for targeted special needs customers Investigate alternate transport options	Implement alternate transport options to accommodate mobility needs of the community transport market	Refine community transport options to meet the emerging requirements of the elderly and special transport needs population	Short term	SunAssist Local Councils DoT
14	Education about Passenger Transport Options	Education about Passenger Transport Options	Services	Collaborate with Councils and other stakeholders to develop locations for murals on walls with a transport theme Develop an awareness campaign to promote the transport options in the region	Refine the awareness campaign to promote passenger transport options in the region to include schools and businesses Target different age groups and parts of the community through online communication and social media	Refine awareness campaign to promote the passenger transport options in the region to include schools and businesses	Short term	Local Councils DoT
15	Better Digital Connectivity	Better Digital Connectivity	Infrastructure	Identify gaps in digital connectivity in the region Lobby private sector NBN companies to complete roll-out	Monitor private sector NBN companies on the quality of the roll-out of the broadband infrastructure in the region	Monitor private sector NBN companies on the quality of roll-out of the region's broadband infrastructure	Short term	Local Councils State Government Private sector NBN companies



Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
				of broadband infrastructure in the region				
16	Non-peak Use of Resources	Non-peak Use of Resources	Services	Review contractual arrangements and operational limitations for existing bus services (i.e., fixed route buses and school specials) Liaise with DoT and bus operators	Implement a trial for shared use of vehicles and drivers for multiple transport services (i.e., allowing on-demand transport operators to use local buses and drivers)	Review trial for shared use of vehicles and drivers and implement a permanent contractual arrangement Liaise with DoT and bus operators	Long term	Local Councils Existing bus service operators State Government
17	Cross-border Co-operation	Cross-border Co-operation	Governance	Liaise with the Cross-border Commission including representatives from Vic, NSW and SA and local Councils in the cross-border region Identify opportunities to address cross-border issues, in particular with the impacts of COVID-19-19, Murray River bridge accessibility during emergency events or repairs and fruit fly inspection points	Develop projects for transport infrastructure and services integration and efficiencies and to resolve transport issues within the cross-border region Implement a practical Action Plan	Monitor usage of transport infrastructure and services Continue to liaise with the Cross-border Commission, State Governments and Councils in the cross-border region	Short term	Cross Border Communication State Governments Local Councils
18	Feasibility of Bendigo, Mildura, Adelaide Air Route	Feasibility of Bendigo, Mildura, Adelaide Air Route	Services	Liaise with airlines and State Government about new route to obtain approvals for a new service Determine travel demand for the new air route and level of service Undertake a private sector financial business case to operate it	Trial the Bendigo, Mildura, Adelaide air route Monitor usage of the service and impacts on other air services (i.e., Adelaide, Mildura, Broken Hill air route)	Review and decide if the Bendigo, Mildura, Adelaide air route is to continue as a permanent air service Refine the number of flights on this route	Medium term	Airlines Mildura, Bendigo and Adelaide Airports DoT (Vic) DIT (SA)
19	Hydrogen-fuelled Vehicles	Hydrogen-fuelled Vehicles	Vehicles	Investigate if potential investment in hydrogen	If viable, implement facilities for hydrogen production in the region	Continue to expand facilities for hydrogen production and infrastructure to distribute and	Long term	Private Sector Local Government



Initiative	Passenger Transport Initiative Description	Initiative Name	Type of Initiative	Short term	Medium term	Long term	Proposed Delivery Time Frame from the Strategic Merit Test	Key Stakeholders
				production will be viable in the region Liaise with private sector investors and State Government	Roll-out infrastructure to distribute and operate hydrogen-fuelled vehicles (i.e., service station upgrades) Promote sales of hydrogen-fuelled vehicles in the region Liaise with private sector investors and Government	operate hydrogen-fuelled vehicles in the region Liaise with private sector investors and State Government		DoT
20	Autonomous Bus Trial	Autonomous Bus Trial	Vehicles and Services	Determine the future use of the "Murray" EasyMile vehicle that was trialled in Renmark, SA Obtain feedback on the Renmark trial and lessons learned Investigate opportunities to trial the vehicle in the region	Identify route and operational requirements for a trial Conduct the planning and road safety audit assessment to implement the trial Develop the marketing campaign for launch of the trial service Implement trial Monitor the operations and usage of the autonomous bus with regard to patronage, user and community views and operational efficiency	Determine if the trial is to continue, expand or be implemented in other locations in the region	Medium term	EasyMile Other autonomous bus providers MRCC
21	Zero Emissions Bus Fleet	Fleet Replacement with Zero Emissions Buses	Vehicles	Liaise with DoT and bus operators about the roll-out of a ZEB fleet for towns in the region Determine a priority of services for implementation	Review performance of the ZEB fleet Expand to other regional towns and to NSW towns	Consider a ZEB-fleet for long distance coach services in the region and to Bendigo, Ballarat, Melbourne and Adelaide	Short term	Local Councils DoT

Notes:

Calder Highway improvements have not been included; this is an action directly for DoT

* A parliamentary costing for a passenger rail shuttle between Mildura and Maryborough was prepared and submitted by Tim Quilty of the Liberal Democratic Party in February 2021. Subsidies for shuttle buses could be considered also for links to and from passenger rail opportunities.

** The operator or regulator of the service should ensure that the beginning, end of route and en-route services should be available to the public. Critical review is also required of the bus services, routes and frequencies; this has not occurred for a number of years. Assessment his also required of current provisions against standards for stops, signage, shelters, mobility measures, wayfinding and the like.

***DoT has been involved across the state in relation to community transport and the like; often through co-contribution. There may also be opportunity to include possible access to government services.



13.5 Priority Actions

– Preliminary Reviewed by Working Group

The following Priority Actions have been recognised by the region as key tasks to be achieved in improving the quality, safety, efficiency, and usage of passenger transport. Further information regarding the project background, key short-term actions and identified key stakeholders are covered in the sub-sections below.

13.5.1 Mildura Passenger Train Service

Type of Initiative: *Infrastructure and Services*

Background:

The Victorian Government has previously referred to the need to ensure social equity when it comes to the provision of passenger transport throughout the state, particularly in terms of connectivity to Melbourne from regional areas and those with lower socio-economic profiles. Mildura is the only remaining regional city in Victoria without a passenger rail service (which it once had).

Options for passenger transport between Mildura and Melbourne currently include private car, bus, bus to Swan Hill and then train to Melbourne, or air travel. Air travel is expensive and bus travel is lengthy, with challenging departure and arrival times (late night/early morning) for users.

The extension of rail to Mildura will provide greater transport choice for the north west region. Many other parts of regional Victoria are accessible by passenger rail; including Bendigo, Swan Hill, Ballarat and Shepparton. These all provide working examples of such a service for Mildura.

Rail may provide a more efficient and more comfortable service for travel between Mildura and other regional towns and cities (as well as Melbourne) than bus transport. On-demand transport and local bus services can feed to the train stations in the smaller communities both along the line and in Mildura.

From an economic perspective alone, the provision of rail to Mildura is a costly exercise and has been previously assessed. The social cost and matter of equity for the region however has yet to be fully quantified in an economic sense. Further work is required to document the real level of support for the return of passenger rail to North West Victoria, quantify the most likely level of demand for a train service and to review and extend previously feasibility studies to properly consider the Social Equity benefits of the project.

Short term Actions:

- Engage with Councils located along the corridor, businesses and industry and gather documented support for the return of passenger rail to Mildura (and the region)
- Using this, lobby State Government for a revisit of feasibility studies to clearly include the Social Equity benefits to justify the project (this can include the Actions included in this report)
- Conduct an independent study to quantify the travel demand for a return of the train service (by who and how often) based on a market segment analysis to identify the future potential rail passengers

Stakeholders:

Councils along the rail corridor, Businesses, Industry and other key representative groups (e.g. health, tourism, Mildura Regional Development), and the Victorian State Government (including DoT).



13.5.2 Regional Passenger Transport Connections

Type of Initiative: *Infrastructure*

Background:

Passengers travelling to Mildura from Melbourne by bus arrive in Mildura after 1am in the morning; other services require leaving Mildura at other similarly inconvenient times. These challenging arrival and departure times have an adverse effect on people's choice of travel mode, many preferring to instead use private transport to make regional trips. Those that do not have the luxury of owning a vehicle may feel further penalised by inconvenient times of transport service operation. Further, poor regional services and connections serve to discourage rather than attract tourists, visitors and seasonal workers to the region.

In the absence of regular scheduling and service reviews for regional bus and coach services in the region, it is time for a formal assessment of operations and services, timing, location and quality of passenger transport connections; based on a proper understanding of current and future passenger needs.

The timing of bus and coach services in the north west region is designed in consideration of linking rail services and other connecting coach services; these too will therefore require consideration in an overall review process.

Short Term Actions:

- Develop and foster advocacy from towns and regions
- Liaise with DoT and local and regional bus operators for both coach services and connection to trains

Stakeholders:

Regional Councils, Stakeholders from Health, Tourism, Education and Recreation sectors, Local and Regional bus operators, DoT

13.5.3 Local Town Bus Services

Type of Initiative: *Services*

Background:

Prior to and during this study, MRCC and its ratepayers have identified the need for a review of the local bus and coach services and existing timetables with respect to meeting customer travel demands (i.e., service times, days of operation and routes). This is not confined to Mildura only. Other surrounding townships also have local bus and coach services or services linking them to Mildura and one another.

Suggested changes include altering the timing of services on weekdays and/or weekends, increasing the number of services offered and adjustment of routes to better serve the type and demographics of users.

Short Term Actions:

- Liaison with DoT and bus operators to critically review current bus and coach operations and services and determine improvements required to best meet customer travel demands
- Conduct a comprehensive bus network review of the existing routes and services based on walkable catchment analysis, demographic market segment assessment of the existing and future bus customers from a customer engagement survey and service performance evaluation of the local routes and services

**Stakeholders:**

MRCC, DoT, V/Line, BusLink Sunraysia and any other bus operators

13.5.4 On-demand Transport

Type of Initiative: *Services*

Background:

SunAssist already provides a form of On-demand Transport for the region, but its success means that it already operates well above its capacity. Eligibility criteria for community transport services (requiring either a disability pension or 65+ years aged pension) also limits the population that it can service within the region.

The provision of broader On-demand Transport services for the region could significantly support community, public and private transport services for the region, further assisting the ageing, unwell and transport disadvantaged. Introduction of a new on-demand transport system however will require the determination of an operational and functional business model, and attraction of a suitable operator/s.

This however would also need to be developed in consideration of the current taxi fleet operations, to ensure the developed On-demand Transport model complements rather than conflicts with taxi services.

Short Term Actions:

- Identify the on-demand transport service model, area and operating hours
- Invite private bus operators to tender for on-demand transport services (with app-based booking and passenger tracking)

Stakeholders:

Local Councils, private bus and transport operators, SunAssist and taxi operators

13.5.5 Rideshare Services in the region

Type of Initiative: *Services*

Background:

Private rideshare operators such as Uber and Ola do not currently operate in Mildura, although well established in Melbourne and other more highly populated regional areas in Victoria and New South Wales. Private rideshare operators offer competitive, 'on-demand' services, as they generally select passenger journeys which largely reflect partly or all of their own travel route.

DoT has advised that it currently has a very small team looking at trials for broader application of rideshare services and would consider North West Victoria a potential candidate for the application of one of these service trials.

Short Term Actions:

- Liaise with private rideshare operators (i.e., Uber, Ola, etc) and State Government transport regulators
- Consult with taxi industry and DoT about competition issues

Stakeholders:

Local Councils, Private rideshare operators, Taxi Industry, DoT



13.5.6 Station and Bus Stop Upgrades

Type of Initiative: *Infrastructure*

Background:

It was identified that improved services and timetables for bus and coach services, extension of rail services and additional community transport services are all valuable improvements to the current regional passenger transport services. For the community to fully embrace these service improvements however, a number of improvements must also be made to the supporting infrastructure.

At the centre of this is the existing regional bus station in Mildura; this is not manned at night, meaning that amenities are not accessible, shelter is limited and a safe waiting area is not available for those arriving late at night/ early morning. Further, bus stops across the region largely do not meet current standards, this including the provision of shelter, tactile tiles, ramps, suitable signage and the like. The treatment of stops should be consistent, and easy to understand.

Short Term Actions:

- Liaise with DoT, State Government and local Councils to identify the scope of works for the station and bus stop upgrades
- Develop plans for stop and station upgrades
- Implement stop and station upgrades

Stakeholders:

Local Councils, DoT

13.5.7 Education about Transport Options

Type of Initiative: *Services*

Background:

As with many regional areas, there is a high reliance on private vehicles for travel, even for short trips. Further, there is also an oversupply of free car parking within the Mildura CBD which serves to encourage car use.

Besides the private car, there are a range of transport options that can be used for movement within Mildura and the wider region, including bus and taxi travel, cycling and walking; many of which utilise some form of active movement, which has added health benefits. Clear communication of the availability, locations and benefits of these transport options can encourage greater use.

Short Term Actions:

- Develop an awareness campaign to promote transport options in the region. This could include advertising through both print and digital media, visits to schools and other suitable groups and clearer identification of actual service sand infrastructure.
- Collaborate with Councils and other stakeholders to develop locations for transport themed murals on walls; similar to that used throughout areas such as Melbourne, Geelong and St Kilda for example.

Stakeholders:

Local Councils, DoT



13.5.8 Autonomous Bus Trial

Type of Initiative: *Vehicles and Services*

Background:

Autonomous bus trials have been popular in Australia since 2018, including the 'Murray' EasyMile vehicle trialled in Renmark (SA) over the last 12 months which proved very popular with the local public. This trial has now come to a conclusion with no further funding to continue the operation. EasyMile has not yet established itself in Victoria but would be keen to discuss an opportunity for the provision of a new vehicle and a bespoke travel map for the North West region, most likely in Mildura.

Many of the autonomous bus trials have ended due to the end of Government funding and subsidies. However, the most relevant example of a continuing autonomous bus service is in Coffs Harbour, NSW. [NSW in world first trial of fully autonomous bus - Government News.](#)

It is known as Busbot in Coffs Harbour: [News articles | Busbot](#)

Introduction of a trial may provide a novel way to encourage the community to try public transport and create a talking point around other travel options.

Short Term Actions:

- Determine the future use of the "Murray" EasyMile vehicle that was trialled in Renmark, SA
- Obtain feedback on the Renmark trial and lessons learned
- Investigate opportunities to trial the vehicle in the region

Stakeholders:

EasyMile, other potential autonomous bus providers, MRCC



13.6 Priority Actions – Stakeholder Feedback

Stakeholders on the reference group were provided an opportunity to respond to the preliminary priority actions outlined above. Comments were received from Department of Transport (Victoria), Wentworth Shire Council, North West Rail Alliance, and Regional Development Victoria (RDV). The following table summarises the salient points received and we offer a response/suggested change were considered appropriate.

Comment	Response
Department of Transport (Victoria)	
DoT acknowledges that the Draft Report has considered all aspects of the existing passenger transport system operating in the Region and that a range of transport options have been investigated.	No change to report needed. DoT consider the investigations and report to be comprehensive and consistent with State Government directions.
The identified priority actions are broadly consistent with the State Government's vision to deliver a transport system that is simple, connected, accessible, reliable, safe and supports a productive, growing economy.	No change to report needed.
Mildura Passenger Train There is currently no DoT plan to return passenger rail services to Mildura. This is not to say that this may not change into the future, however, significant analysis would be required to understand the potential impacts a return to passenger services might have on other transport needs and interdependent projects.	The proposed recommendation highlights the need for this detailed analysis including liaison with Councils and stakeholders along the corridor. The proposed recommendations to undertake feasibility studies to clearly include the Social Equity benefits to justify the project and to conduct an independent study to quantify the travel demand for a return of the train service are considered valid and should remain unaltered.
Regional Passenger Transport Connections Timetabling for trains and coaches seeks to maintain connectivity between services. Timetables are influenced by a number of factors, including customer demand and coordination between regional and metropolitan services. At times services are also impacted by weather events, infrastructure upgrades and maintenance.	The recommendation to liaise with DoT and bus operators to critically review current bus and coach operations and services and determine improvements required to best meet customer travel demands remains valid.
Local Town Bus Services The information contained in the report will be used when developing a full bus network review. DoT's Bus Planning team recognises the need for	The recommendation to liaise with DoT and bus operators to critically review current bus and coach operations and services and determine



Comment	Response
a full network review of Mildura but this is dependent on funding being available. Mildura Airport connections would be investigated as part of a network review.	improvements required to best meet customer travel demands remains valid.
On-Demand Transport Demand Responsive Transport (DRT) and FlexiRide are relatively new concepts currently being explored by DoT's Bus Planning team and would be considered as part of a full network review.	The recommendation for further coordination and investigation of options remains valid.
Rideshare More rideshare (or on-demand) services in the region would certainly be valuable for passengers. However, Rideshare services are established and operated by private businesses, and, although aligned with the relevant Commercial Passenger Vehicles Victoria requirements, are very much determined by market forces.	The recommendation for further coordination and investigation of options remains valid.
Station and Bus Stop Upgrade Accessibility is a focus for DoT, and we are working to prioritise investment across the network to increase the functional accessibility of infrastructure.	The recommendation to continue liaison with DoT, State Government and local Councils to identify the scope of works for the station and bus stop upgrades remains valid.
Education about Transport Options Actions to increase the awareness of the available transport options are a good idea - if people are better informed about their transport options they can make more informed choices that suit their needs and ultimately have a better transport experience.	No change to report needed.
Autonomous Bus Trial These types of trials are usually focused on testing the technology, operate in more controlled environments (away from public roads) and require a chaperone to be on board for passenger safety. These conditions limit the potential benefits of operating fully automated vehicles for public transport services at present.	The priority action addressing (specifically) autonomous bus services will be amended to more broadly address new advancements in technology and innovation, including alternative fuel sources for rail.



Comment	Response
When comparing Autonomous Bus services like Mildura's EasyMile trial, a shuttle bus with a driver may be more cost effective in the short to medium term and provide a more beneficial transport service, based on connecting popular destinations, tourist attractions and PT hubs across short distances.	
There may also be potential funding sources which DoT can provide assistance with regarding the ride share, minor transport projects requiring capital expenditure, and on-demand transport actions identified in the Draft Report. Possible funding sources which may be available to regional council transport-related projects include: • Changing Places Initiative – grants • Community Road Safety Grants Program • Disability Discrimination Act initiatives • Heritage • Aboriginal Inclusion.	Noted. Ongoing collaboration will be needed between the State and Region to provide adequate resourcing (including funding assistance) for the key priority actions.
DoT recommend that consideration be given to how the project is progressed into the future and how best to continue engagement with stakeholders and DoT.	Noted. Refer Section 14 below.
Wentworth Shire Council – Strategic Development Officer	
Local Regional Bus Services. The importance of local bus services extends beyond the defined study area. Due to limited service provision from Wentworth, Dareton, Buronga and Gol Gol to/from Mildura, it is important to focus and lobby for an increase on bus services.	While the study scope focussed on the north western region of Victoria it is important to note the regional importance of Mildura and connectivity with communities in NSW. This will be acknowledged in the amended priority action (Regional Passenger Transport Connections).
Council supports the initiative to determine the demand and necessity for an increase in appropriate on-demand transport services	This will be acknowledged in the amended priority action (On-demand Transport) to also acknowledge the importance of cross-border connectivity



Comment	Response
Council supports the ongoing investigations into the introduction of new technologies and opportunities for regional public transport services.	Noted.
Council supports the continued discussion and investigations to improved connectivity to other significant rail corridors.	Noted. The opportunity for interstate connectivity, either through extension of a rail corridor or bus connectivity to Mildura, will be noted in the Priority Action addressing the Mildura Passenger Train Service.
Council looks forward to continue working with key local and state stakeholders to improve our region's transport network and services.	Noted. Ongoing collaboration with stakeholders in NSW to be noted in Section 14 (next steps).
North West Rail Alliance	
NWRA disagrees with the reports "Mildura-centric" focus. NWRA categorically rejects the flawed proposition that private airlines be subsidised by the public purse.	The option to investigate subsidised air travel (section 11.3) has not been fully investigated and has not been progressed as a priority action. The report considers transport alternatives for the region as a whole and all Shire Councils within the study area have been invited to participate as key stakeholders to the project.
NWRA prioritises the reintroduction of a Public Transport passenger train that would provide a 'rail spine and station hubs' scenario, with railway stations acting as important multi-modal connectivity hubs between stations along the spine and outlying towns.	Noted. We believe the recommendation for an independent study to quantify the travel demand for a return of the train service is appropriate. The study should consider options for rail alignment and connectivity with bus services and outlying communities to establish the demand for such a rail service.
NWRA questioned why "there has been a concerted effort to 'pull back' and look holistically at the full extent of passenger transport services required for the north-west region" from the "reintroduction of passenger rail services to Mildura, based predominantly on the need for social equity"?	The scope of the study had to address what Regional Passenger Transport Services and Options should be available to regional communities and who will be the users of those services over the next 20-30 years to improve the north west region's Connectivity, Social Equity and Economic Development in a sustainable manner. The study was not specifically focussed on the return of rail services to Mildura and the region.



Comment	Response
The NWRA questioned why the North West Mallee region is the only apparent region being subjected to “Investment Logic Mapping (ILM)”.	The Investment Logic Mapping process was undertaken as part of the Stage 1 Project Scoping Brief. This was facilitated by an Accredited ILM Facilitator and contributed to by an informed group of invested parties for the overall project. The subsequent prioritisation process undertaken in this stage of the project considered the region’s Transport, Economic, Environmental and Social Goals, and was confirmed through stakeholder discussion and feedback. The process has been based on the Transport and Infrastructure Council’s Australian Transport Assessment and Planning Guidelines published in 2016 (ATAP Guidelines).
Opportunities to embrace/integrate new technologies should address alternative power options for rail including locomotives powered by hydrogen cell technologies.	The priority action addressing (specifically) autonomous bus services will be amended to more broadly address new advancements in technology and innovation, including alternative fuel sources for rail.
Various other comments were offered in regard to the <u>draft</u> list of options discussed by the reference committee.	This list has since been prioritised and rationalised into the Priority Actions documented above.

Regional Development Victoria

Mildura Passenger Trail Service. Need to clarify that the rail service is provided via Ballarat and the time used to make this trip. A faster rail service is required.	Demand for the rail service must first be established, regardless of the route, hence the recommendation for an independent study to quantify the travel demand for a return of the train service.
Regional Passenger Transport Connections. Need to acknowledge the VLine bus service links to the train service in Swan Hill. Timetabling issues need to be raised as a short term action (e.g. “Advocate for timetable scheduling that provides more convenient arrival and departure times for medical, educational and well-being/safety reasons). Linkages to other towns in the greater regional (not just Mildura) should be addressed	The Priority Action will be updated to reflect these comments.



Comment	Response
On Demand Transport. Could look to extend the SunAssist model and consider cross-border issues.	The expansion or introduction of a new on-demand transport system will require the determination of an operational and functional business model, and attraction of a suitable operator/s. This will need to be developed in consideration of the current taxi fleet operations, to ensure the developed On-demand Transport model complements rather than conflicts with taxi services. Opportunities for cross-border opportunities should be considered as part of these ongoing investigations.
Education on Transport Options. Concern over reference to “oversupply of free car parking within Mildura”, noting that as a regional centre, there is a reliance (need) on private motor vehicle travel.	While reference to the supply of plentiful and free car parking within Mildura (and other centres) is considered valid, the sensitivity around parking is noted. The recommendation will be amended accordingly.
Autonomous Bus Trial. RDV do not believe this is a viable option noting that other trials interstate have concluded and the trial would rely on ongoing committed funding.	The priority action for autonomous bus trial has been amended to address Technology and Innovation. The option for a bus trial has been retained to may provide a novel way to encourage the community to try public transport and create a talking point around other travel options.
Suggestion for a priority action on existing resources / assets.	Noting that the complete list of actions and the rationalisation/prioritisation of the actions has been developed through a comprehensive process of stakeholder engagement, we do not propose a new (additional) action to address existing resources.



13.7 Priority Actions – Final for Consultation

13.7.1 Mildura Passenger Train Service

Type of Initiative: *Infrastructure and Services*

Background:

The Victorian Government has previously referred to the need to ensure social equity when it comes to the provision of passenger transport throughout the state, particularly in terms of connectivity to Melbourne from regional areas and those with lower socio-economic profiles. Mildura is the only remaining regional city in Victoria without a passenger rail service (which it once had).

Options for passenger transport between Mildura and Melbourne currently include private car, bus, bus to Swan Hill and then train to Melbourne, or air travel. Air travel is expensive and bus travel is lengthy, with challenging departure and arrival times (late night/early morning) for users.

The extension of rail to Mildura will provide greater transport choice for the north west region. Many other parts of regional Victoria are accessible by passenger rail; including Bendigo, Swan Hill, Ballarat and Shepparton. These all provide working examples of such a service for Mildura.

Rail may provide a more efficient and more comfortable service for travel between Mildura and other regional towns and cities (as well as Melbourne) than bus transport. On-demand transport and local bus services can feed to the train stations in the smaller communities both along the line and in Mildura.

From an economic perspective alone, the provision of rail to Mildura is a costly exercise and has been previously assessed. The social cost and matter of equity for the region however has yet to be fully quantified in an economic sense. Further work is required to document the real level of support for the return of passenger rail to North West Victoria, quantify the most likely level of demand for a train service and to review and extend previously feasibility studies to properly consider the Social Equity benefits of the project.

Short term Actions:

- Engage with Councils located along the corridor, businesses and industry and gather documented support for the return of passenger rail to Mildura (and the region)
- Using this, lobby State Government for a revisit of feasibility studies to clearly include the Social Equity benefits to justify the project (this can include the Actions included in this report)
- Conduct an independent study to quantify the travel demand for a return of the train service (by who and how often) based on a market segment analysis to identify the future potential rail passengers
- In undertaking further investigations ensure consideration is given to the broader regional benefits including connectivity with communities in NSW

Stakeholders:

Councils along the rail corridor and across the border that could benefit from a new service, Businesses, Industry and other key representative groups (e.g. health, tourism, Mildura Regional Development), and the Victorian State Government (including DoT).



13.7.2 Regional Passenger Transport Connections

Type of Initiative: *Infrastructure*

Background:

Some passengers travelling to Mildura from Melbourne by bus arrive in Mildura after 1am in the morning; other services require leaving Mildura with both transit times (for coach services) and arrival times often being inconvenient for passengers on these long haul journeys.

These challenging arrival and departure times have an adverse effect on people's choice of travel mode, many preferring to instead use private transport to make regional trips. Those that do not have the luxury of owning a vehicle may feel further penalised by inconvenient times of transport service operation. Further, poor regional services and connections serve to discourage rather than attract tourists, visitors and seasonal workers to the region.

In the absence of regular scheduling and service reviews for regional bus and coach services in the region, it is time for a formal assessment of operations and services, timing, location and quality of passenger transport connections; based on a proper understanding of current and future passenger needs.

The timing of bus and coach services in the north west region is designed in consideration of linking rail services and other connecting coach services; these too will therefore require consideration in an overall review process.

Short Term Actions:

- Develop and foster advocacy from towns and regions
- Liaise with DoT and local and regional bus operators for both coach services and connection to trains
- Undertake a review of time tabling an interconnectivity of bus:rail services that provides more convenient arrival and departure times for medical, educational and well-being/safety reasons

Stakeholders:

Regional Councils (including those across the border), Stakeholders from Health, Tourism, Education and Recreation sectors, Local and Regional bus operators, DoT

13.7.3 Local Town Bus Services

Type of Initiative: *Services*

Background:

Prior to and during this study, MRCC and its ratepayers have identified the need for a review of the local bus and coach services and existing timetables with respect to meeting customer travel demands (i.e., service times, days of operation and routes). This is not confined to Mildura only. Other surrounding townships also have local bus and coach services or services linking them to Mildura and one another.

Suggested changes include altering the timing of services on weekdays and/or weekends, increasing the number of services offered and adjustment of routes to better serve the type and demographics of users.

**Short Term Actions:**

- Liaison with DoT and bus operators to critically review current bus and coach operations and services and determine improvements required to best meet customer travel demands
- Conduct a comprehensive bus network review of the existing routes and services based on walkable catchment analysis, demographic market segment assessment of the existing and future bus customers from a customer engagement survey and service performance evaluation of the local routes and services

Stakeholders:

MRCC, DoT, V/Line, BusLink Sunraysia and any other bus operators

13.7.4 On-demand Transport

Type of Initiative: *Services*

Background:

SunAssist already provides a form of On-demand Transport for the region, but its success means that it already operates well above its capacity. Eligibility criteria for community transport services (requiring either a disability pension or 65+ years aged pension) also limits the population that it can service within the region.

The provision of broader On-demand Transport services for the region could significantly support community, public and private transport services for the region, further assisting the ageing, unwell and transport disadvantaged. Introduction of a new on-demand transport system however will require the determination of an operational and functional business model, and attraction of a suitable operator/s.

This however would also need to be developed in consideration of the current taxi fleet operations, to ensure the developed On-demand Transport model complements rather than conflicts with taxi services.

Short Term Actions:

- Identify the on-demand transport service model, area and operating hours
- Invite private bus operators to tender for on-demand transport services (with app-based booking and passenger tracking)

Stakeholders:

Local Councils (including those across the border), private bus and transport operators, SunAssist and taxi operators.

13.7.5 Rideshare Services in the region

Type of Initiative: *Services*

Background:

Private rideshare operators such as Uber and Ola do not currently operate in Mildura, although well established in Melbourne and other more highly populated regional areas in Victoria and New South Wales. Private rideshare operators offer competitive, 'on-demand' services, as they generally select passenger journeys which largely reflect partly or all of their own travel route.

DoT has advised that it currently has a very small team looking at trials for broader application of rideshare services and would consider North West Victoria a potential candidate for the application of one of these service trials.

**Short Term Actions:**

- Liaise with private rideshare operators (i.e., Uber, Ola, etc) and State Government transport regulators
- Consult with taxi industry and DoT about competition issues

Stakeholders:

Local Councils, Private rideshare operators, Taxi Industry, DoT

13.7.6 Station and Bus Stop Upgrades

Type of Initiative: *Infrastructure*

Background:

It was identified that improved services and timetables for bus and coach services, extension of rail services and additional community transport services are all valuable improvements to the current regional passenger transport services. For the community to fully embrace these service improvements however, a number of improvements must also be made to the supporting infrastructure.

At the centre of this is the existing regional bus station in Mildura; this is not manned at night, meaning that amenities are not accessible, shelter is limited and a safe waiting area is not available for those arriving late at night/ early morning. Further, bus stops across the region largely do not meet current standards, this including the provision of shelter, tactile tiles, ramps, suitable signage and the like. The treatment of stops should be consistent, and easy to understand.

Short Term Actions:

- Liaise with DoT, State Government and local Councils to identify the scope of works for the station and bus stop upgrades
- Develop plans for stop and station upgrades
- Implement stop and station upgrades

Stakeholders:

Local Councils, DoT

13.7.7 Education about Transport Options

Type of Initiative: *Services*

Background:

As with many regional areas, there is a high reliance on private vehicles for travel, even for short trips.

Besides the private car, there are a range of transport options that can be used for movement within Mildura and the wider region, including bus and taxi travel, cycling and walking; many of which utilise some form of active movement, which has added health benefits. Clear communication of the availability, locations and benefits of these transport options can encourage greater use.



Short Term Actions:

- Develop an awareness campaign to promote transport options in the region. This could include advertising through both print and digital media, visits to schools and other suitable groups and clearer identification of actual service sand infrastructure.
- Collaborate with Councils and other stakeholders to develop locations for transport themed murals on walls; similar to that used throughout areas such as Melbourne, Geelong and St Kilda for example.

Stakeholders:

Local Councils, DoT

13.7.8 Technology and Innovation (including autonomous bus trial)

Type of Initiative: *Vehicles and Services*

Background:

Technology in transport is happening rapidly with new intelligent transport systems, electric/hybrid motor vehicles and the progressive introduction of connected and autonomous technologies in vehicles. The Region will need to enable these changes with future transport initiatives.

Future transport services are also changing such as the progressive introduction of innovative services like Mobility as a Service.

Autonomous bus trials have been popular in Australia since 2018, including the 'Murray' EasyMile vehicle trialled in Renmark (SA) over the last 12 months which proved very popular with the local public. However, this trial has now come to a conclusion with no further funding to continue the operation.

The introduction of (for example) an autonomous bus trial will be subject to further investigations.

- EasyMile has not yet established itself in Victoria but would be keen to discuss an opportunity for the provision of a new vehicle and a bespoke travel map for the North West region, most likely in Mildura.
- Many of the autonomous bus trials have ended due to the end of Government funding and subsidies. However, the most relevant example of a continuing autonomous bus service is in Coffs Harbour, NSW. [NSW in world first trial of fully autonomous bus - Government News.](#)
- Introduction of a trial may provide a novel way to encourage the community to try public transport and create a talking point around other travel options.

Short Term Actions

Autonomous Bus Trial

- Determine the future use of the "Murray" EasyMile vehicle that was trialled in Renmark, SA
- Obtain feedback on the Renmark trial and lessons learned
- Investigate opportunities to trial the vehicle in the region

Other Technologies

- Support the introduction of electric vehicle charge stations throughout the region
- Monitor development and efficiency in fuel alternatives (all transport modes) and the impact on the cost effectively of transport choices
- Monitor developments in transport technologies and alternative mobility service providers.

Stakeholders:

EasyMile, other potential autonomous bus providers, MRCC, DoT



14 Outcomes and Next Steps

This Regional Passenger Transport Study has produced a prioritised set of passenger transport initiatives for improved passenger transport within the North West Victoria region, which meet the following strategic responses as determined through the Investment Logic Mapping process:

- Restructure current transport options to better serve the north west Region
- Increase diversity and improve affordability of available transport options
- Expand use of technology in provision of region's transport/ community services
- Improve equitable access to community services
- Develop a cross-border regional economic hub
- Expand education opportunities and encourage skilled workforce growth, and
- Identify and realise economic development opportunities that take advantage of improved transport connectivity.

These initiatives have been developed and assessed in collaboration with stakeholders and in accordance with the Australian Transport Assessment and Planning Guidelines (developed by the Australian Transport and Infrastructure Council).

Each initiative has been assigned with actions for the short, medium and long term, with broad costings and relevant stakeholders identified; from these, Priority Actions have been identified.

Priority Actions seek to achieve both 'quick-wins' and actively commence further investigations towards the realisation of long term regional passenger transport goals.

We recommend ongoing consultation with the community and key stakeholders including Council Shires within the study region and beyond.

We also recommend Council considers the formation of a stakeholder group to progress coordination of the recommendations with DoT and stakeholders. As much as this report has clearly demonstrated the need for improved passenger transport services in the north western region of Victoria (and beyond), funding, coordination and delivery of the recommendations will require commitment from within the region.



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Appendix A – Transport Profiles



Detailed discussions have been held with key stakeholder representatives to gain a greater understanding of the passenger transport needs across key cross-sections of the region. This has included Tourism, Health, Education, Employment and Ageing and where topical, has covered aspects such as:

- Need for services
- Demand for services (seasonal? when? to/from?)
- Indicative numbers of users
- Current transport provisions and
- Issues or gaps.

Tourism

North West Victoria features many key tourist destinations, including the Murray River, Mallee and Wimmera regions, northern Grampians and the historically rich Goldfields. To date, current service levels and costs of passenger transport to and from the region to both other regions and capital cities has necessitated largely car-centric tourism within the region. Visitation data shows that 90% of visitors to the region come by road.

The Business Victoria website provides information regarding regional visitation, tourism employment and regional spend across the regions. North West Victoria encompasses parts of each of the Goldfields, Grampians and Murray tourism regions, which collectively total an annual tourism spend of more than \$2.9B (measured during the COVID-19 pandemic) and employ more than 30,400 people.

Demand for transport services within the region is highest during school holidays and the warmer months of the year; coinciding with the stone fruit picking season and commencement of the grape harvest. There is ongoing demand for transport connectivity to and from the capital cities of Melbourne and Adelaide, to other regional centres including Swan Hill, Bendigo, Horsham and Renmark and to varying tourist destinations within the region.

Discussion has been held with **Mr Mark Thompson, CEO of the Murray Region Tourism Board**, who has advised the following observations, issues and gaps within the region's transport system.

- The existing regional bus service is not user friendly from a number of perspectives, including departure times, the low frequency of services and the very long journey time
- There is a need for better integration and timetabling of the existing regional bus service
- The effects of COVID-19 have exacerbated regional transport issues – aviation connectivity was lost; this transport mode however may need to be utilised to drive business and tourism in the future
- There is a need for continual improvement of the airport and its facilities due to the distance of the region from capital cities. Further, the potential for a shuttle bus between the airport and around Mildura should be explored.
- Road infrastructure upgrades may also be pivotal for post-COVID-19 demands, due to the expected increase in regional travel, caravans and the like (for example overtaking lanes, rest areas, signage and safety measures). While there are lots of point to point journeys undertaken, there is potential for more touring and therefore time spent between 'points', which may also put greater focus on connecting the journey through towns, more signage to the river and other key points of interest and cycling and walking provisions.
- Clear and easy direction to tourism-based businesses
- Cycling and walking needs to be user friendly and integrated across the region
- The availability of taxi services has historically been an issue, although there are now more operators.



- Finding ways to keep tourism operators open is essential; this has been further highlighted during the COVID-19 pandemic
- Integrated public transport services across state borders is also a challenge as this is currently subject to separately state owned/operated services. Finding a more efficient outcome for this would be of substantial benefit to the region.

Mr David Zacher – Team Leader at the Mildura Visitor Information Centre also offered the following input through discussion:

- The main issue with public transport is that the local public transport provisions are not aligned with the tourism industry; tourists either have to hire vehicles or walk around Mildura and other areas.
- The Mildura to Adelaide bus service (V-line service) is not considered to be overly popular, due to the 10 hour journey time. Further, the state government does not provide concessions for concession card holders.
- The main demand for public transport to and from Mildura is to either Melbourne or Adelaide.
- The current timing of passenger transport services is not suited to regional end users, only for city users
- David is not sure about passenger rail; he feels that the region has good transport links, particularly with the availability of budget priced rental cars.
- David also recalls difficulty in transport between Mildura and Broken Hill and suggested that NSW Rail link could potentially introduce a Broken Hill to Mildura rail service as a trial.
- Currently, many travellers to/through the region are low income earners/retirees; many of which self-drive.
- There is no bus from the Mildura Airport to the Mildura CBD; taxis are an issue in terms of availability; while there used to be a minibus service, this is no longer operating.
- There is also poor public transport in NSW across the border; tourists don't generally go past NSW based attractions, let alone stop in regional Victoria.
- The cost of flights between Mildura and capital cities is relatively high and is often seen as prohibitive, however the costs in more recent times are more competitive than they have been in the past.
- David did acknowledge that while there is a lot still to be achieved for passenger transport in Mildura and the wider region, the region is generally better connected than it has ever been before.

Key issues that have been raised by both stakeholders include:

1. The regional bus service is not user friendly from a number of perspectives, including in particular, timetabling.
2. The need for greater availability of taxi services.
3. The need for cross-border public transport.
4. Improved transport connections between the Mildura Airport and the Mildura CBD.
5. The lack of provisions for 'touring' visitors, for example walking and cycling routes and better connectivity to the river.

Health

Within the north west region of Victoria, the main hospital is the Mildura Base Public Hospital, formerly privately operated, but has recently returned to public operation. The hospital provides emergency, maternity, intensive care, general medicine and surgery, medical imaging, pathology, dialysis, mental health and ambulatory services. Work is currently being prepared for hospital expansion, which includes a future 5 operating theatre capacity.

The Mildura Base Public Hospital is located on Ontario Avenue, where public transport does exist, but is limited. Other smaller towns are generally serviced by smaller district hospitals and health care centres, but for more specialised services, travel to larger regional centres and capital cities is required. Travel to these destinations is generally limited to road-based travel via car, and in some cases, coach.



There is very real concern that the lack of affordability and ease of access to health services, particularly for specialist needs is having a detrimental effect on the region's overall health. Residents are likely to be less proactive in dealing with minor health issues which require costly and often inconvenient travel, waiting until they become serious or even critical before being forced to seek treatment options. These issues and concerns are further exacerbated by the rate of ageing population in the region and frustration with the NDIS process.

In Victoria, the Victorian Patient Transport Assistance Scheme (VPTAS) subsidises travel and accommodation costs incurred by rural Victorians and an approved escort(s) who have no option but to travel more than 100 kilometres one way, or an average of 500 kilometres a week, for one or more weeks, to receive approved medical specialist services, or specialist dental treatment. Patients are required to pay the first \$100, after this VPTAS covers all travel and accommodation costs for the remainder of the year. Travel costs are covered for both travel assistance and also public transport costs and for accommodations costs up to a nominated daily limit; all are accessible and claimable online and in 11 different languages. All LGA's within the study area are included within this scheme.

Despite many attempts, the team was unable to reach a suitable representative from the Mildura Base Public Hospital to provide input regarding current transport issues and opportunities for the region.

Discussions have been held however with other health care services in the region.

Mr John Bergin, Chief Financial Officer of the Sunraysia Community Health Service has offered the following comments:

- The Sunraysia Community Health Service is largely funded by Victoria and in result, therefore mainly services Victorians. The service does however include some New South Wales based clients.
- Most clients access the health service using their own transport. Some clients do however struggle to get to clinics.
- Clients often need to go to Melbourne for referrals. This does present difficulties; clients are often from low social economic background and travel costs can be prohibitive.
- Clients also experience difficulty in accessing clinics if they do not reside near public transport or do not have their own private transport. This can lead to chronic issues or worsening of conditions.

Eden Pemplepon (proxy while Bronwyn Hogan is on maternity leave) **from the Southern Mallee Primary Care Partnerships** has provided the following comments:

Needs for services

- Large geographic area across the Southern Mallee (Buloke Shire, Gannawarra Shire and Swan Hill Rural City), with limited health services available across the catchment
- There is a very real need to be able to access local health services
- Access to preventive health supports can be limited (i.e. safe places to be physically active or to attend organised activities, the availability of fresh fruit and vegetables, low social interaction)
- Provision of access to specialist services in Mildura, Bendigo, Melbourne, Echuca, Ballarat
- Provide an option for being able to leave domestic violence situation



Demand for services (seasonal? – when, to/from?)

- An ageing population across the region adds to the overall demand for services
- Harvest seasons, particularly horticultural and viticultural (November to April) result in an increased number of backpackers and itinerant workers. These workers rely on accommodation transport or workers others with their own transport; this adds a barrier when travel is needed for health or safety reasons.

Current transport provisions

Community transport services:

- Buloke Community Transport
- Gannawarra Non-Emergency Transport Service
- Swan Hill Community Transport Service

These services are limited (only at specific times/days) and are not available in all towns

There are also V-Line train and bus services and taxi services through the region.

Issues or gaps

- The train service through Kerang and Bendigo to Melbourne leaves Swan Hill train station twice a day at restricting hours (noting that there are no other passenger train services available across the Southern Mallee)
- Some community transport options available in smaller towns, but the operation of these is heavily reliant on volunteer support/Council financial support

Mr Greg Little, CEO of the Grampians Community Health (based in Stawell) has offered the following insight into his experience with the health service and transport needs:

- Grampians Community Health Service run drink and drug driving rehabilitation programs – these are run in certain towns; however participants can't always get there (due to loss of licence)
- There are a number of services offered in Horsham – these too however rely on people getting there from Warracknabeal, which is challenging
- The Service also runs domestic violence services – there are however issues with people being able to access those services; often they can't get away from their own environment
- The Service invests in a lot to face-to-face interaction with people, often through travel to those people that require relevant assistance and support. This is an added burden and cost to the service when other means of transport (i.e. using family members given the lack of public transport) is not available.
- The Grampians Community Health Service also runs a community transport program for people to access hospital appointments or travel to Melbourne (for specialist treatment). This program is designed for people who can't access the public transport system and need carers. The service is not funded to provide this and therefore relies upon volunteers; most people who need the service are either frail and/or aged.
- the reduced transport movements that have resulted from COVID-19 restrictions have proven to have positive outcomes. Workers can be located anywhere, which means a broader range of staff are available to assist in the region (in virtual form). This has assisted in the attraction of staff, of significant benefit to the region.



Discussions with Pat Croft, Director of Clinical Services at the East Wimmera Health Service also highlighted a number of issues and passenger transport needs:

- The East Wimmera Health Service provides a range of services, largely focused around health and aged care.
- Much of the workforce come from different ethnic backgrounds – patients and staff find it difficult to engage because of their backgrounds. Due to the sporadic nature of services, family often finds it difficult to come to visit patients from other areas.
- One of the key reasons for people moving from region is because of lack of services - families tend to move to more densely populated areas such as Bendigo because of the associated higher provision of health and other support services and the easier methods for their access.
- Disadvantaged people often need to be transported by private vehicle – due to the unavailability of public transport. This is a further financial burden for these people.
- There is a general feeling amongst people in the region that there is not enough public transport to get around
- COVID-19 has had an impact on resources for seasonal work. For all people within the region access to safe transport is limited as buses are not running during this time. In result, people are actually fitting into smaller vehicles such as mini-buses to travel through the region. This of course seems to be in contrast to social distancing principles but has become a necessary transport requirement.
- The increasingly ageing population is resulting in more passengers requiring non-private transport throughout the region. Those with physical limitations are also having access difficulties, including for example, getting on and off buses.

Education

The level of education and qualification in the region is generally lower than the state average. Low proportions of students are attending secondary school and have a form of formal qualification. Experience both in North West Victoria and other regional areas shows that lower education rates in the regions are often connected to higher unemployment rates.

There are however facilities both within and adjacent the region that offer both TAFE and tertiary education opportunities. TAFE campuses are located both in Robinvale (Vic) and Coomealla (NSW); La Trobe University is located in Bendigo and Federation University Australia is located in both Horsham and Ballarat. Students are known to be high users of public transport; efficient, connected passenger transport to and from education facilities is an important precursor to upskilling the region, retaining population and building the overall regional economy.

Discussions have been held with LaTrobe University and the Sunraysia Institute of TAFE to better understand the regional transport profile, key issues and opportunities for improved passenger transport. Federation University (Horsham Campus) was also contacted, but to date have been unavailable to provide comment.

Deb Neal, Head of Campus for the LaTrobe University offered the following insights into passenger transport needs for university students:

- There is a bus stop which services both La Trobe University (Mildura campus) and SuniTAFE. The bus stop however is located only a short walk from SuniTAFE, but approximately a 10 minute walk from the University. There is a desire for a second bus stop to be installed, located closer to the university entrance.
- Many also drive to the university, but a lower percentage when compared to those who travel to TAFE.
- There are a number of socio-economically disadvantaged students who heavily rely on the public transport system to attend university; the availability of bus connectivity is highly valued.
- The university has no comment on the need for the introduction of passenger rail; it is not considered to be core to their service offering or function.



Mr Geoff Dea from Sunraysia Institute of TAFE (SuniTAFE) provided the following commentary:

- A significant number of students live locally, some are more regional; for example Balranald, Ouyen, Murrayville and the like. A large percentage of students are aged over 25 and most choose to drive to SuniTAFE (Mildura), using private cars.
- There are issues however with the provision of adequate public transport; this has most direct effects for disadvantaged students. There have been some minor issues in getting public transport to the campus, but bus service do run.
- SuniTAFE also run programs for ESL students, who often rely on public transport.
- Those who live regionally generally come in blocks of time to study. They stay at SuniTAFE and rely on V-line for transport.
- By comparison, the Swan Hill Campus catchment is more spread out, drawing students from Kerang, Cohuna, Balranald, Horsham and some even from Melbourne. Study blocks generally take 20 boarders at a time; these are relatively small numbers. Carpooling activities are commonly noted.
- Public transport is not a considered to be a high priority item for attendance at SuniTAFE; it does not prevent most from studying, as there is only very small percentage who are isolated.

Employment

Mildura is the largest employment centre within North West Victoria; however the region's rich horticulture ensures that seasonal work opportunities are always available. These opportunities are largely filled by overseas workers and backpackers, who rely on regional passenger transport.

Road, rail and air are all important passenger transport links to and from the region for employment; their ranging price, scheduling and travel time offerings enabling a choice for travellers depending upon their travel needs. While passenger rail is not currently offered to and from Mildura, bus services to Swan Hill enable travellers to use rail between this point and Melbourne.

It has been difficult to engage with employment representatives during this time within the region; the pandemic too has affected the employment industry with the resulting economic downturn. From our observations, we therefore offer the following comments:

COVID-19 has had a significant impact on employment within the region over the past 9 months and will continue to influence the volume and type of seasonal workers travelling to and from the region. Until the pandemic is fully resolved, it is expected that higher proportions of workers may be sourced from other regional areas and states as domestic tourism increases. While this may result in a higher number of workers who own or share private vehicles in the short to medium term; the long term issues and opportunities for passenger transport however remain the same. These include:

- Improved public transport could be an enabler for more socio-economically disadvantaged members of the community to access employment.
- While public transport has been restricted and at times, unavailable during past months to minimise the spread of COVID-19, transport connectivity is key to economic growth in the region. Passenger transport is an important element of this.
- There is a lack of passenger connectivity between the Mildura Airport and the Mildura CBD; no shuttle bus service is available and taxi services can at times be poor. This increases cost and potentially travel time for business.
- The lack of convenient, regular public transport through Mildura, the broader region and across the river into New South Wales serves to encourage use of private vehicles for travel to and from places of employment.
- The availability of ample free public car parking within the Mildura CBD and the broader region makes it even easier to choose private car travel for work.



Ageing

Today, people are both working and living longer than previous generations. North West Victoria is an ageing region as youth and families are moving to bigger cities with more diverse employment opportunities, health and educational services. Busier lifestyles are less able to accommodate taking elderly family members and friends to appointments and outings; reliance on passenger transport for the elderly is often the outcome.

For ageing community members, accessible passenger transport provides key benefits, including:

- Improved safety for what would otherwise be aged drivers, and also for other road users
- Increased self-confidence of users who no longer have the worry of driving
- Social connectivity; passenger transport enables interaction with other members of the community
- Greater independence for those who no longer travel by car but can still get about on foot.
- Improved fitness, where the physical activity can form part of the beginning or end (or both) of the journey. This in turn too can improve the memory.

The ageing community is often the greatest user of passenger transport, and in the full range of forms. The quick travel time of air transport often makes it a preferred although more expensive choice for longer trips. Bus and rail are used also for inter-regional and/or longer trips at a more affordable price point and concession fares are also available. Community transport services however meet a wide range of health and social-based transport needs; providing flexibility, assistance with access and egress and at an affordable price point.



Appendix B - Relevant Case Studies

NORTH WEST VICTORIA REGIONAL TRANSPORT STUDY



CONTENTS

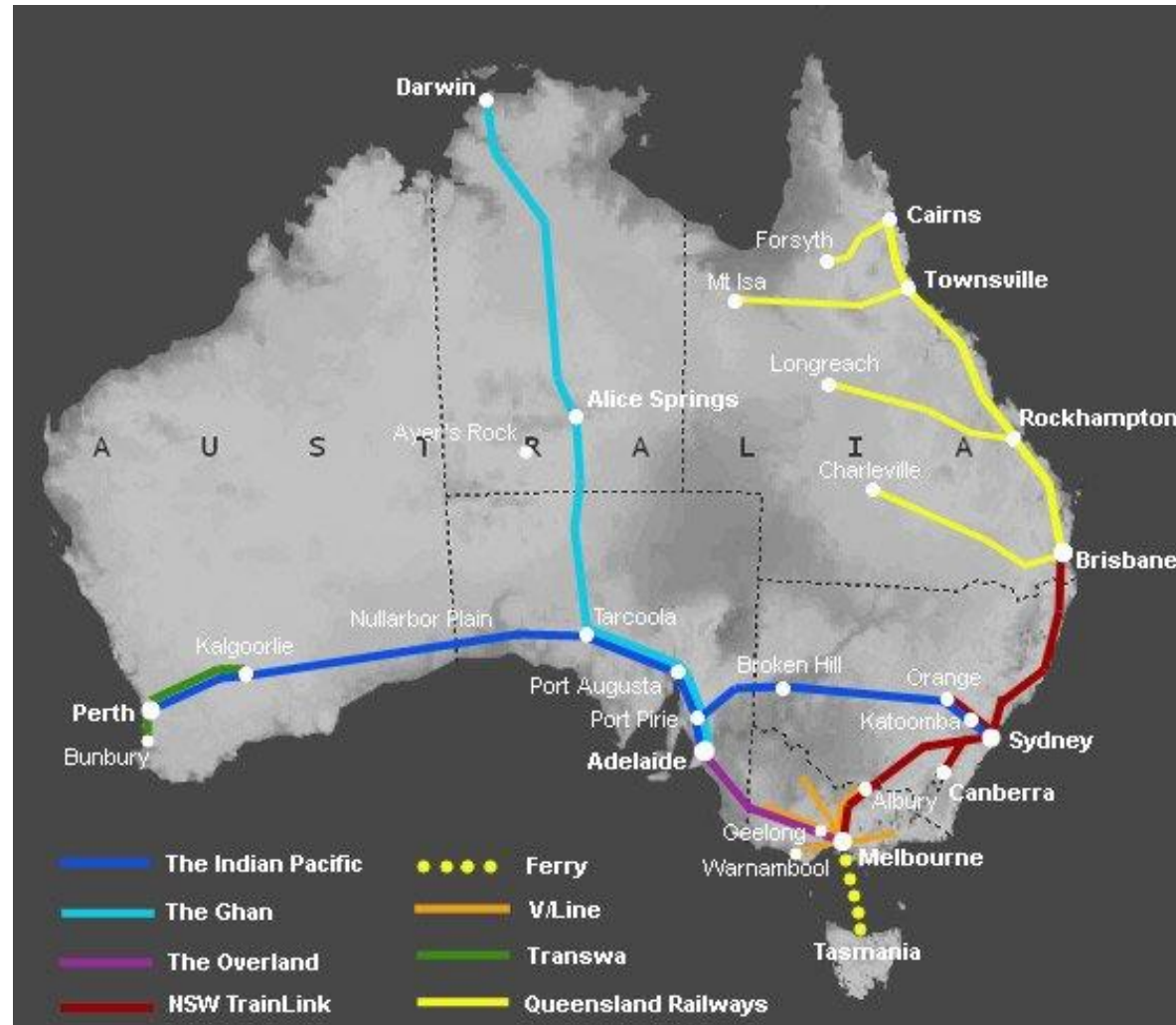
- Regional passenger train services:
 - Western Australia
 - Southern Highlands, NSW
 - Shepparton, Victoria
 - Bundaberg, Queensland
- Tailored demand transport options for regional areas
- Electric buses/coaches for local and long distance trips
- Autonomous buses in regional and rural communities
- Other initiatives to encourage patronage growth through promotional campaigns, ticketing and fares and stop security improvements

REGIONAL PASSENGER TRAIN SERVICES

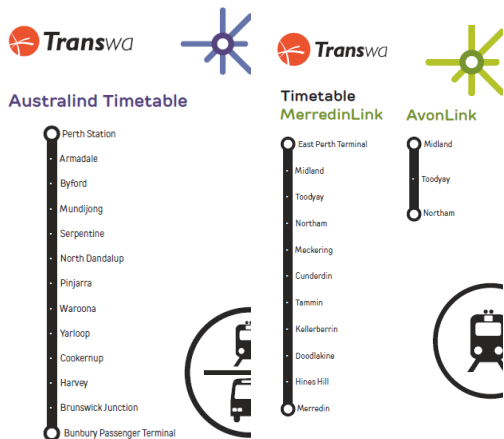
Case Study Examples



REGIONAL AND INTERSTATE PASSENGER TRAIN SERVICES



TRANSWA IN REGIONAL WESTERN AUSTRALIA



- 2 daily services on the Australind train between Perth and Bunbury
- 2 peak weekday on the AvonLink between Northam and Midland
- 2 daily services on Mon/Wed/Fri on the MerredinLink to East Perth



TRANSWA IN REGIONAL WESTERN AUSTRALIA

TransWA is the regional train and coach service provider for the Government of Western Australia that was established in May 2003 as part of the Public Transport Authority (PTA). Passenger train services are operated between Perth and Bunbury, Kalgoorlie, Merredin and from Northam to Midland.

The **AvonLink** operates 97 km between Northam and Midland with one return service each weekday (except public holidays). Passengers must transfer to the Midland Line on the Transperth network to continue to Perth CBD. The MerredinLink operates one return service on Monday, Wednesday and Friday between Perth and Merredin .

The AvonLink train services are mostly for daily commuters and business trips to Perth via Midland and the electric passenger trains on the Midland line. The Australink trains are mostly for business, tourist and social trips to Perth and Bunbury as destinations connecting the hinterland communities at stations along the route.

Kalgoorlie and Merredin train services provide regional connections to Perth and are not for daily commuters.

The AvonLink and MerredinLink (less than 260 km) are both shorter trips than between Melbourne and Mildura. The Australind from Perth to Bunbury is more comparable as a train service to Mildura.

REGIONAL NSW PASSENGER TRAIN SERVICES



REGIONAL NSW PASSENGER TRAIN SERVICES

NSW TrainLink is a division of Transport for NSW that operates passenger train and coach services throughout NSW and some services to Victoria, Queensland and South Australia.

The Southern Highlands Line is an Intercity rail service operated by NSW TrainLink that services the Macarthur, Southern Highlands and Southern Tablelands regions of New South Wales. First operating in 1869, the service runs from Campbelltown across the Main Southern railway line through to Goulburn, with peak hour services extending the route to Central. The railway service operates alongside a bus route from Picton to Bowral, operating on the route of the Picton – Mittagong loop railway line, and a regional coach service from Bundanoon to Wollongong on the South Coast Line, operating on the corridor of the Unanderra - Moss Vale railway line.

One of only two routes on the NSW TrainLink intercity network to run entirely on non-electrified railway lines, the Southern Highlands Line is operated with a rolling stock solely consisting of Endeavour railcars, with most services only using two cars. The service spans 169 km of railway, making it the most extensive route on the NSW TrainLink network apart from the Blue Mountains Line's Bathurst Bullet service. The route also spans 22 stations, making it also the route with the lowest number of stops. An additional 2 stations and 55 km of railway are traversed by Southern Highlands trains at peak hours.

REGIONAL RAIL TO SHEPPARTON, VICTORIA

Stage 1 - Complete



Additional train services

10 extra services a week between Melbourne and Shepparton



Stabling upgrade

in Shepparton to support extra services



Coach services

29 extra coach services for better transport connections

Stage 2 - Underway



Platform extensions at Mooroopna, Murchison East and Nagambie to suit VLocity trains



Crossing loop extension on the line to enable trains to pass each other



59 level crossing upgrades between Donnybrook and Shepparton



Stabling for VLocity trains

Stage 3 - In development



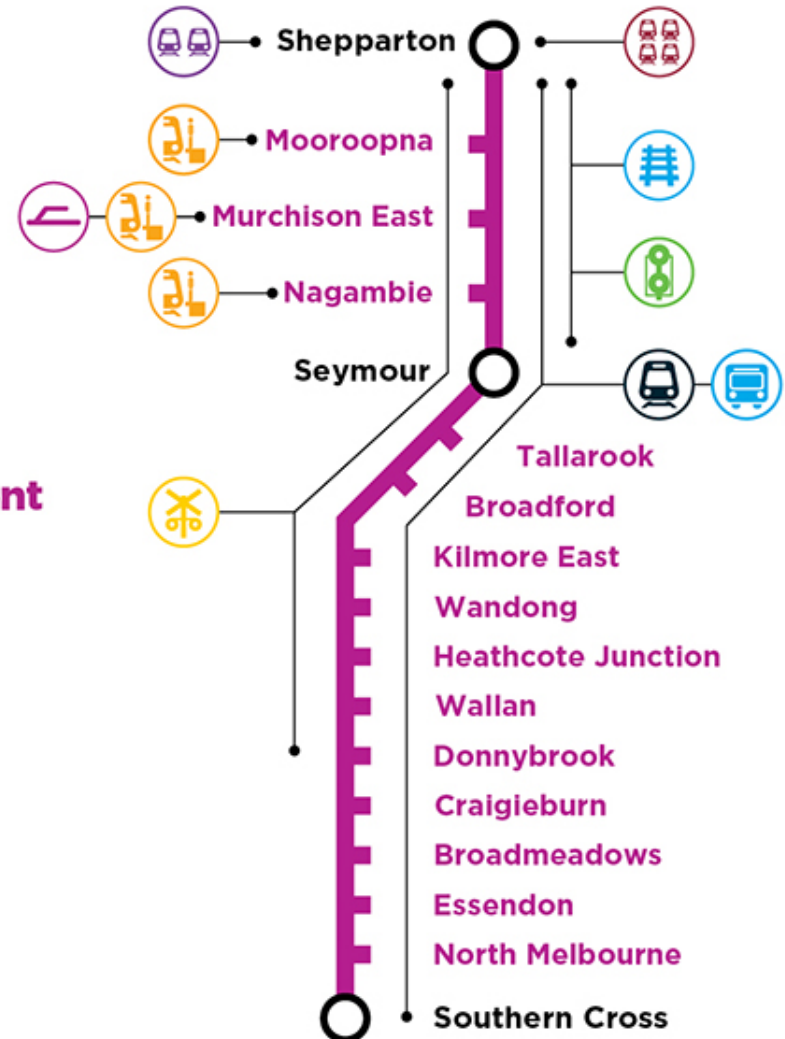
Track upgrades to enable trains to travel at higher speeds



Signalling upgrades to enable nine weekday return services



Expanded stabling for VLocity trains to support more services



REGIONAL PASSENGER TRAINS TO SHEPPARTON

V/Line operates hourly passenger services to Melbourne, with Sprinter and VLocity railcars used on quieter services, as well as locomotive hauled H type carriages during peak times. Beyond Seymour, three daily passenger trains run as the Albury Line and five daily services run as the Shepparton Line.

Passengers have already started realising the benefits of the Regional Rail Revival program. A total of 10 additional weekly services have also been introduced, as part of stage one works on the Shepparton Line Upgrade.

V/Line delivered additional stabling facilities at Shepparton, to enable the additional services, and the works were fast-tracked to deliver benefits for passengers sooner.

REGIONAL PASSENGER TRAINS TO BUNDABERG, QLD



Route: Brisbane to Bundaberg



Distance: 351 kms



Duration: 4 hrs 30 mins



Network Map: Train Stations

Departs Brisbane:

Mon, Wed, Thu & Fri at 4.55pm
Mon, Tue, Thu, Fri, Sat & Sun at 11.00am



Departs Bundaberg:

Mon, Tue, Thu, Fri & Sat at 5.15am.
Daily at 10.05am.



TILT TRAIN TO BUNDABERG, QUEENSLAND

In 1998, the electric Tilt Train started services from Brisbane to Rockhampton. With a top service speed of 160 km/h and the ability to tilt five degrees in each direction. It is the fastest train in Australia, but has the same maximum allowed service speed as the V/Line VLocity train which operates in Victoria. The train operates on the North Coast line and serves the intermediate towns of Gympie, Maryborough West railway station, Bundaberg and Gladstone. The Electric Tilt trains operate with a multiple unit configuration.

The electric Tilt Train features 2×2 economy seating, and 1×2 business class seating, visual entertainment along with in-seat audio entertainment. Economy class passengers have a regular trolley and a buffet style galley food service, while business class has a frequent trolley service and passenger attendants to tend to the needs of the passengers.

The train service from Roma Street to Bundaberg began in 2014.

Three long distance trains, namely the Spirit of Queensland, Spirit of the Outback and Tilt Train service Bundaberg with more than 91,000 visitors in 2017. **Bundaberg station is Queensland's most popular regional train station.**

In 2019, \$21.8M was invested in improvements to the existing signaling systems at Bundaberg and Bundaberg North to increase the rail reliability and safety for passenger trains with a system that is easier to maintain.

COMPARISON OF REGIONAL RAIL SERVICES

Terminus Location	Agency	Line History	Line Name	Line Description
Bunbury	TransWA	Nov-1947	Australind	Bunbury - Perth via Armadale
Kalgoorlie	TransWA	Nov-1971	Prospector	Kalgoorlie - East Perth via Midland
Northam	TransWA	Sep-1995	AvonLink	Northam - Midland via Toodyay
Merriden	TransWA	Jun-2004	MerridenLink	Merriden - East Perth via Midland
Bathurst	NSW TrainLink	1868	Blue Mountains	Bathurst - Sydney (Central) via Western Line
Goulburn	NSW TrainLink	May 1869	Southern Highlands	Goulburn - Campbelltown via Bowral
Shepparton	Public Transport Victoria	January 1880	Shepparton	Shepparton - Southern Cross station (Melbourne)
Mildura	Victorian Railways	Opened November 1903; closed September 1993	Mildura	Mildura – Ballarat – Melbourne
Bundaberg	Queensland Rail	1997	Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg
Rockhampton	Queensland Rail	1997	Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton

COMPARISON OF REGIONAL RAIL SERVICES

Line Name	Line Description	Number of Stations	Length (km)	Average Station Spacing (km)	Travel Time (h:mm)	Average Speed (km/h)
Australind	Bunbury - Perth via Armadale	13	167	13.9	2:30	66.8
Prospector	Kalgoorlie - East Perth via Midland	19	653	36.3	6:45	96.7
AvonLink	Northam - Midland via Toodyay	3	97	48.5	1:20	72.8
MerridenLink	Merriden - East Perth via Midland	11	261	26.1	3:15	80.3
Blue Mountains	Bathurst - Sydney (Central) via Western Line	21	825	41.3	6:21	129.9
Southern Highlands	Goulburn - Campbelltown via Bowral	22	224	10.7	2:16	98.8
Shepparton	Shepparton - Southern Cross station (Melbourne)	16	191	12.7	2:30	76.4
Mildura	Mildura – Ballarat - Melbourne	61	474	7.9	N/A	N/A
Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg	9	351	43.9	4:30	78.0
Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton	13	639	53.3	7:45	82.5

COMPARISON OF REGIONAL RAIL SERVICES

Line Name	Line Description	Annual Line Patronage	Other Comments
Australind	Bunbury - Perth via Armadale	71,000	Standard gauge track
Prospector	Kalgoorlie - East Perth via Midland	70,000	Standard gauge track
AvonLink	Northam - Midland via Toodjay	7,500	Standard gauge track
MerridenLink	Merriden - East Perth via Midland	6,000	Standard gauge track
Blue Mountains	Bathurst - Sydney (Central) via Western Line	7,670,000	Standard gauge track; includes patronage at stations to Sydney
Southern Highlands	Goulburn - Campbelltown via Bowral	817,000	Standard gauge track
Shepparton	Shepparton - Southern Cross station (Melbourne)	1,570,000	Broad gauge track; included patronage at stations to Melbourne
Mildura	Mildura – Ballarat – Melbourne	0	Broad gauge track; discontinued in September 1993; freight line
Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg	unknown	Electric tilt train on narrow gauge track
Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton	unknown	Electric tilt train on narrow gauge track

TAILORED ON DEMAND TRANSPORT AND FLEXIBLE BUS SERVICES

Case Study Examples



TYPES OF ON DEMAND TRANSPORT SERVICES

For rural low-density towns where passenger volumes do not warrant a regular transport service, on demand transport is a more effective way of providing services. Routes are optimised according to passenger requests.

A WIDE RANGE OF USES

FOR LOCAL AUTHORITIES



- **Route Deviation** with a **regular schedule that deviates** to serve demand-responsive requests within a zone
- **Point Deviation** serving demand-responsive **requests within a zone with no regular path** between the stops
- **Demand-Responsive Connector** operating on request **within a zone to a fixed-route** network with most trips to or from transfer points
- **Request Stops** operating in conventional fixed-route timetabled service with a limited number of **undefined stops** responding to passenger requests
- **Flexible-Route Segments** operating a conventional fixed-route timetable service, but **switching to a demand-responsive mode for parts of the route**
- **Zone Route** operating in demand-responsive mode **along a corridor** with established departure and arrival times at one or more end points

REGIONAL NSW ON-DEMAND TRANSPORT SERVICES

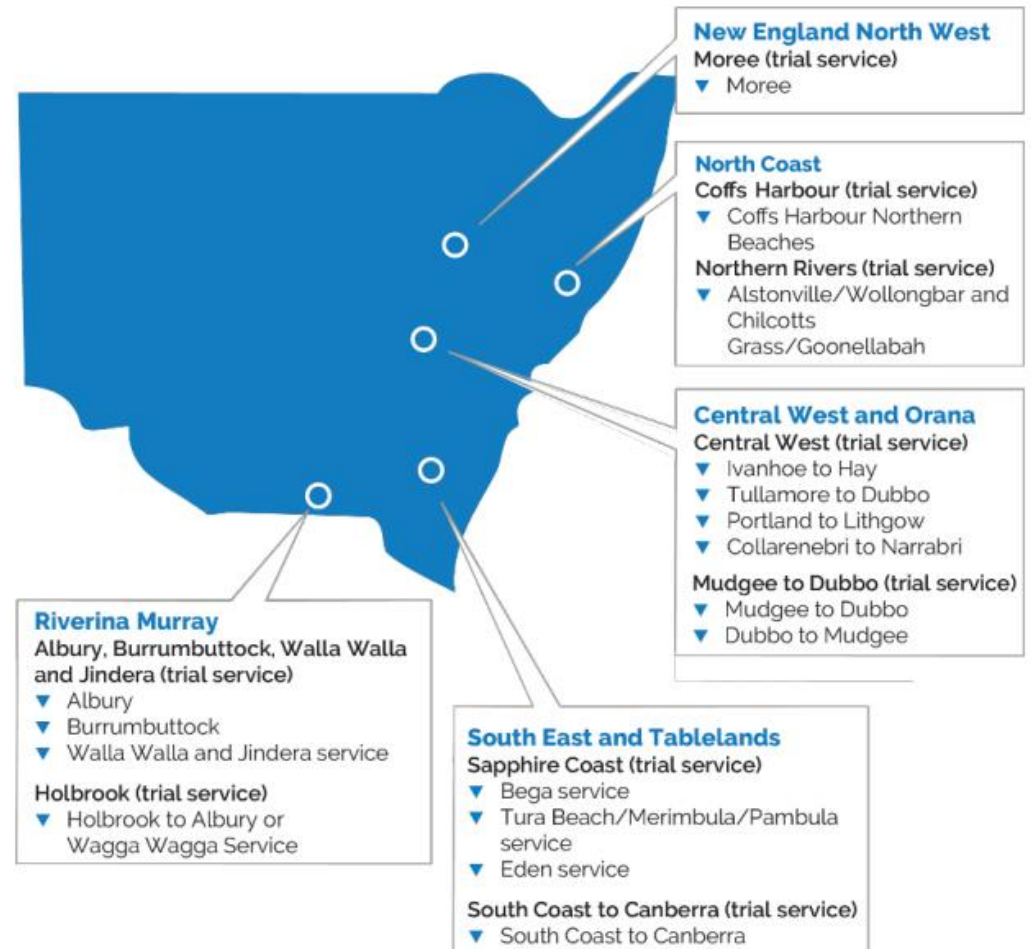


ON-DEMAND TRANSPORT SERVICES IN RURAL AND REGIONAL NSW



Information Paper

October 2020



ON-DEMAND TRANSPORT TRIALS IN REGIONAL NSW

	Location	Type of service	Operator
1	Moree	Geo-fenced point-to-point service in Moree town. Also a first- and last-mile service from train station.	Reynolds & Fogarty
2	Northern beaches of Coffs Harbour	Geo-fenced point-to-point service	Forest Coaches
3	Northern Rivers – linking villages (Alstoneville/Chilcotts Grass) to Lismore/Ballina route	Geo-fenced point-to-point service and first- and last-mile service connecting to trunk bus route.	Buslines
4	Sapphire/South Coast (Bega, Merimbula, Eden, etc)	Geo-fenced point-to-point service with potential to replace route service	Sapphire Coast Buslines
5	Villages to Port Macquarie and Coffs Harbour	Village to town services	Busways
6	Moore Creek to Tamworth	Village to town services	Macphersons
7	South Coast to Canberra	Villages to regional town service offering flexible pick-up and drop-off points	Rixons
8	Villages to Albury	Village to town service	Regional buses
9	Villages to Wagga Wagga	Village to town service	Regional buses
10	Villages to Narrabri, Dubbo, Lithgow, Hay	Village to town service	Live Better
11	Mudgee to Dubbo via Gulgong	Village to town service.	Ogdens

Source: TfNSW, *On demand public transport, R&R learnings*, unpublished presentation, 28 May 2020.



On Demand public transport services for Moree



Monday 26 November 2018

Moree will have a greater choice of public transport with the launch of a new trial of On Demand services.

ON-DEMAND TRANSPORT TRIALS IN REGIONAL NSW

Outcome of on-demand trials

TfNSW has not published a formal evaluation of the on-demand trials, but has undertaken internal analysis which shows that the trials have had differing success in attracting patronage and in the extent to which the costs of the service have been recovered.

Improved customer outcomes

In surveys by TfNSW the majority (62%) of on-demand customers have indicated that they are 'very satisfied' with the on-demand service.¹⁵ This exceeds the satisfaction levels of customers using traditional buses. The primary reason for overall satisfaction is the friendliness and helpfulness of the driver.

Over half the on-demand customers in rural and regional areas say they are making a lot more journeys than before on-demand was available, while a further third say they are making a few more journeys.

A quarter of on-demand customers say they would not have made the trip if on-demand had not been available.

The majority of on-demand customers see on-demand as much better than any alternative including car, bus, train, rideshare and walking.

NCOSS has submitted that regional organisations support the trial services, and have "provided low income and vulnerable groups greater access to transport, and increased flexibility for households when accessing critical services".¹⁶

Coffs Harbour City Council state that anecdotal evidence supports the on-demand trials undertaken in Coffs Harbour, and potential expansion elsewhere in the area.¹⁷

The trials attracting the highest patronage (as a percentage of the local population) are the Moree, Coffs Harbour and Sapphire Coast services. These services offer:

- Point-to-point flexibility for pick-up and drop-off
- A geo-fenced area of service (ie, service within a defined geographical zone)
- Availability of concession tickets
- 6-7 day service for either half or full day

The trials recovering the highest proportion of costs are the Moree, villages to Albury, and Coffs Harbour services. Some trials were costly (in terms of cost per trip) and did not attract patronage. TfNSW and the operators need to undertake further analysis to understand why these trials did not meet customer needs, or how they could be improved.

ON DEMAND TRANSPORT TRIALS IN REGIONAL NSW

A BUS THAT COMES WHEN YOU CALL IT

On Demand Public Transport Starting Wednesday 16th January 2019

Same day return every Wednesday morning & afternoon

- Coramba - Coffs Harbour
- Crossmaglen - Coffs Harbour

Book your trip
busways.com.au/cooeebusways
or call 9497 1870

COEE BUSWAYS

NSW GOVERNMENT Transport

on demand public transport

Now being trialled in this area



ON DEMAND TRANSPORT IN COFFS HARBOUR, NSW



OPERATED BY **FOREST**

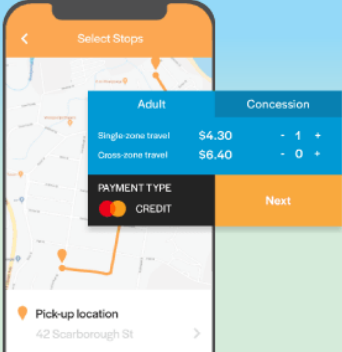
A bus that's ready when you are





OPERATED BY **FOREST**

Download the Woopi Connect app from the App Store or Google Play to book your next ride.





Fares

Travel type	Adult	Concession
Single-zone travel	\$4.30	\$2.10
Cross-zone travel	\$6.40	\$3.30



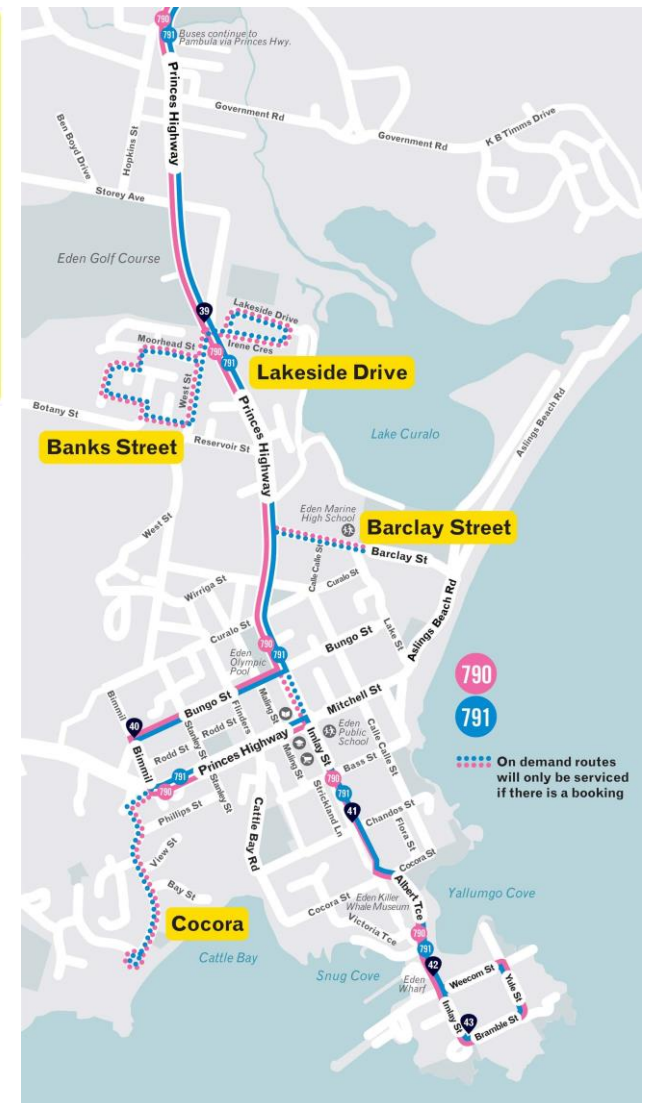
FOREST

FLEXIBUS SERVICES IN EDEN, NSW



Want
door to door
bus service?

Phone **6495 6452** to book
your seat on **Flexi Bus** –
don't forget to book the day before



ON DEMAND TRANSPORT IN MOUNT BARKER, SA

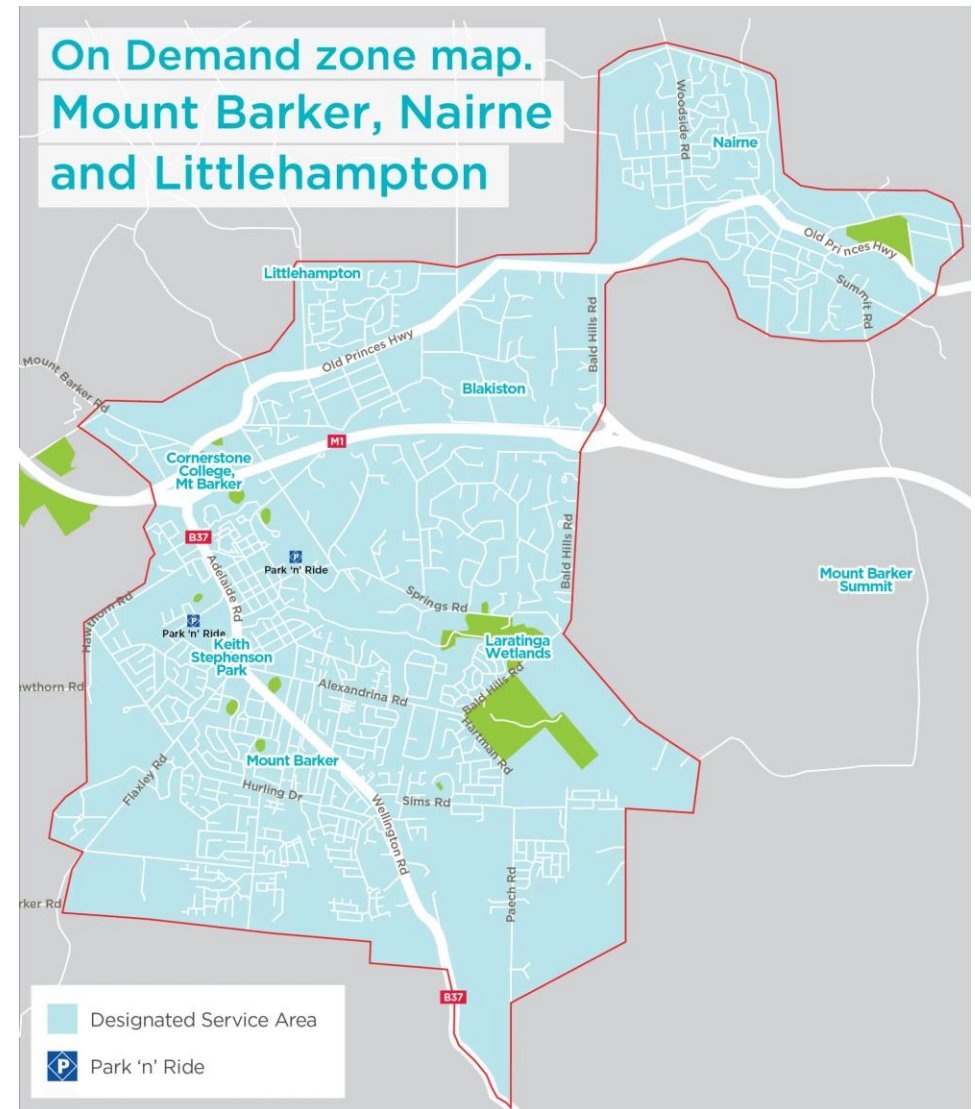
MOUNT BARKER, NAIRNE AND LITTLEHAMPTON SERVICE TIMES

Weekdays: 6am-9pm

Weekends: 9am-7pm

The trial is a shuttle bus service that **aggregates demand at the pick-up point** and delivers passengers to their destination in a fast and efficient manner. Bookings are made via the mobile phone app to pick passengers from either:

- Their home
- A designated point of interest within the service area
- A bus stop



FLEXLINK BUS IN IPSWICH, QUEENSLAND

FlexiLink is a maxi cab service operating in Ipswich and surrounding suburbs.

Passengers are picked up from their home and dropped at any location within the service's roam zone or a key location in the area, such as a train station or shopping centre.

Vehicles are wheelchair accessible and display the 'FlexiLink' sticker.



KAN-GO BUS IN TOOWOOMBA, QUEENSLAND

The Kan-go service is a partially demand-responsive service (roam zone) and a partially fixed-route service. The fixed route is between the Range Shopping Centre, St Vincent's Hospital and Toowoomba City (Grand Central), and operates the same as any other bus service with designated stops and passengers can get on or off at any of these stops.

The roam zone allows passengers to be picked up at variable locations and dropped along the fixed route, or alternatively, picked up along the fixed route and dropped at variable locations. (Note it does not allow for pick up and drop off in the roam zone).

Passengers are picked up from their home and dropped at any location within the service's roam zone or a key location in the area, such as a train station or shopping centre. Bookings must be made at least one hour before travel.



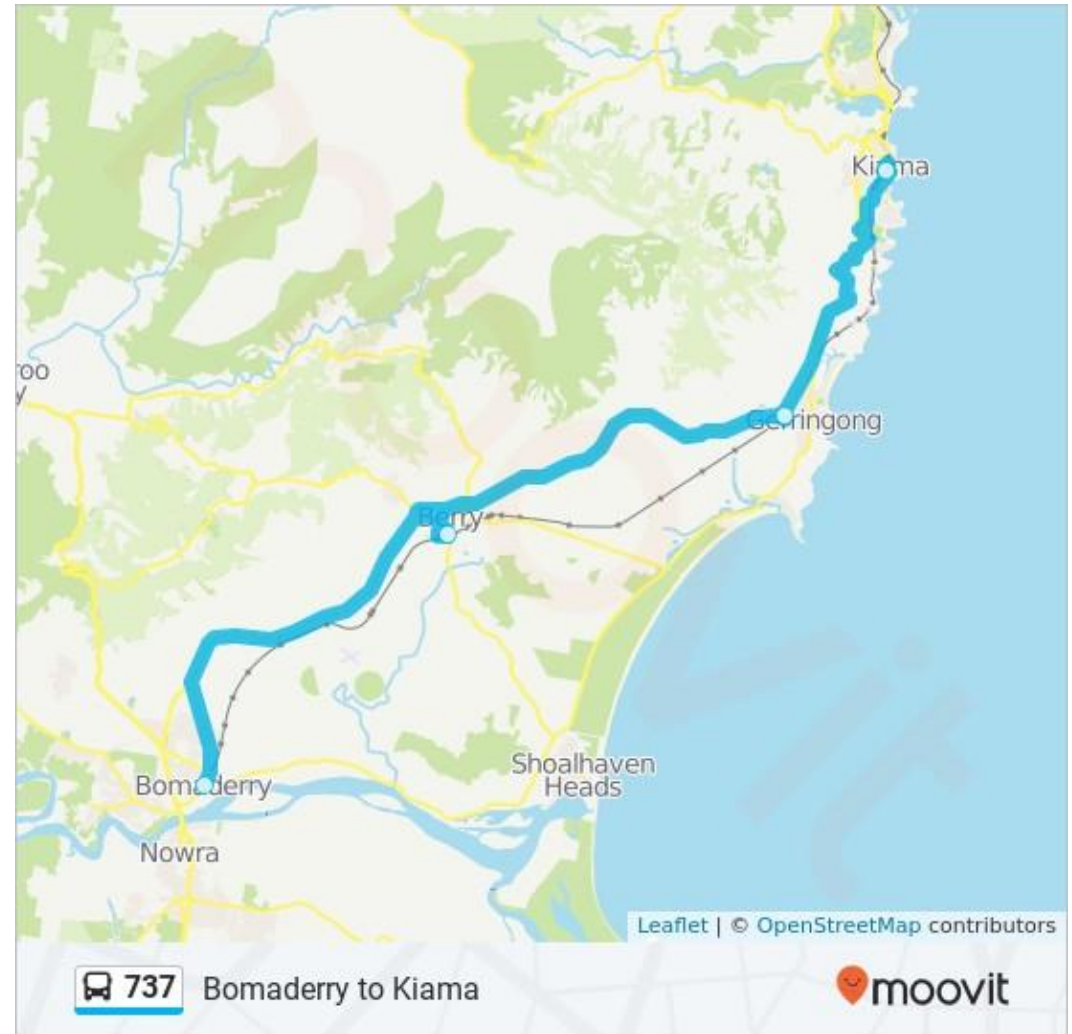
EMERGING TRENDS IN PASSENGER VEHICLES

Case Study Examples



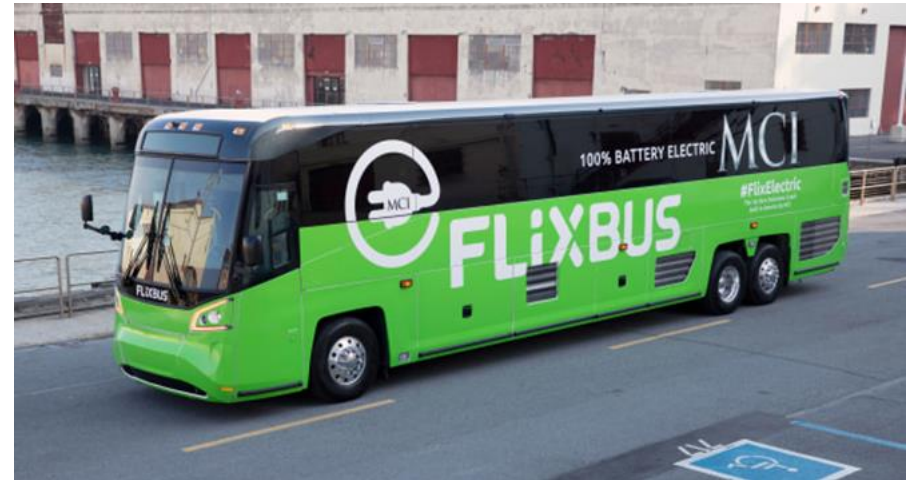
REGIONAL ELECTRIC BUSES IN NSW

Route 737 between Kiama and Bomaderry on the NSW South Coast will be operated with low-floor electric buses with funding support from the NSW State Government.



ZERO EMISSIONS BUSES FOR REGIONAL VICTORIA

- Zero Emissions Buses (ZEB) with electric, hydrogen and hybrid-fuel buses are an emerging opportunity for clean and quiet alternatives to diesel buses and coaches



AUTONOMOUS BUS TRIALS IN AUSTRALIA

- Driverless bus trials with the Olli in Glenelg and the FLEX at the Tonsley – Flinders precinct
- EasyMile driverless bus trial in Renmark, South Australia and Coffs Harbour, NSW



AUTONOMOUS BUS TRIAL IN RENMARK, SA

- Vehicle capacity for **6 seated** and up to 12 passengers with accessible access
- Does not replace local bus services
- Slow speed (**16 km/h in autonomous mode**) (up to 40 km/h under control)
- **Free service** funded by City of Renmark and State Government
- The initial trial had some “teething” problems, so the route was shortened
- Designed for people with mobility and access issues as a **first and last “mile”** alternative connecting local destinations



NOW OPERATING

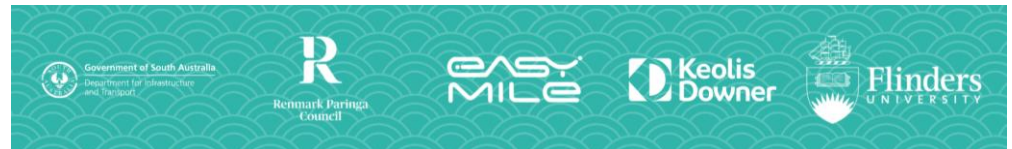
Tuesday 10am - 1pm,
Wednesday to Saturday
10am to 4pm

See you onboard!

AUTONOMOUS BUS TRIAL IN RENMARK, SA

The purpose of the trial is to demonstrate the capability of driverless vehicles to:

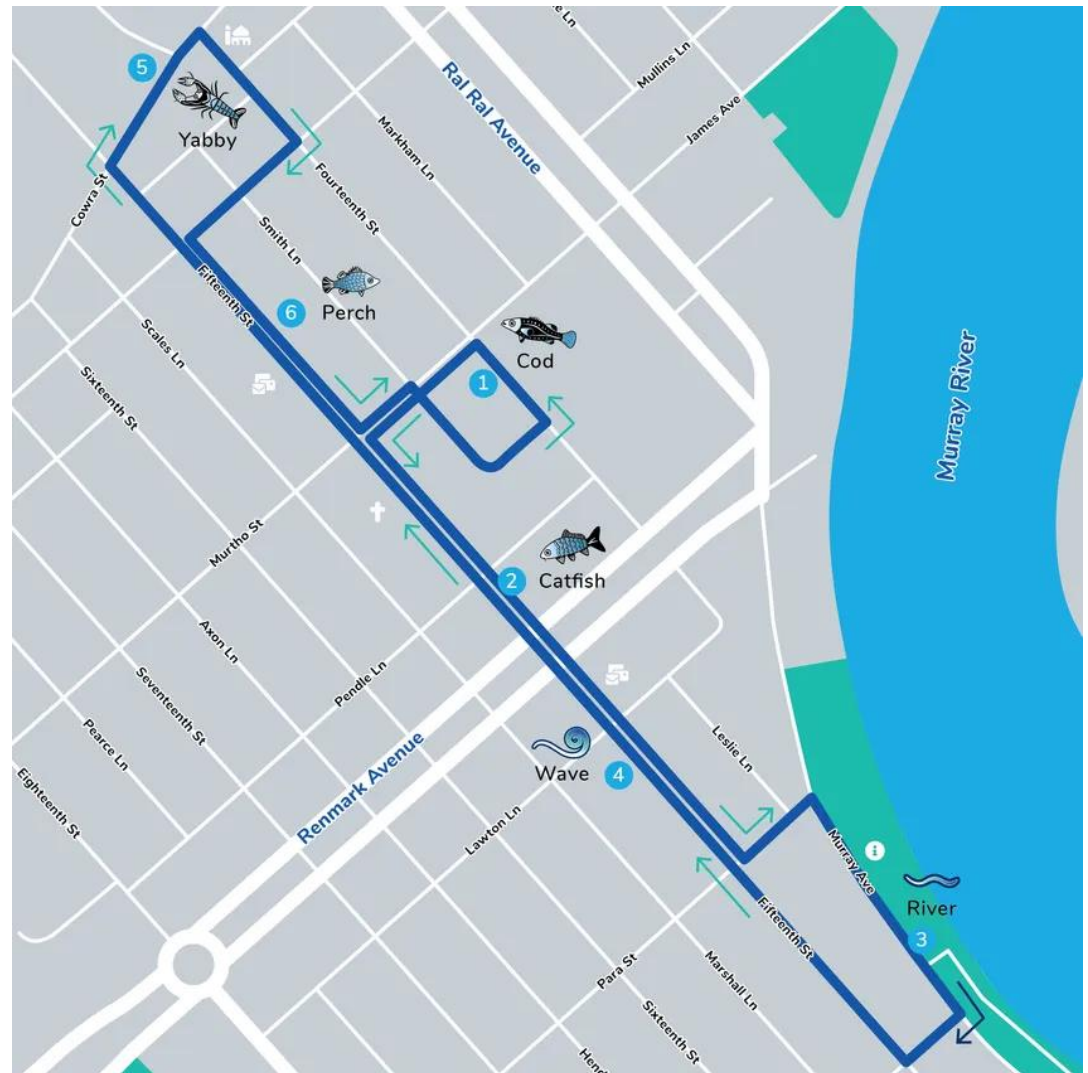
- Improve **mobility of residents** to community facilities
- Understand levels of **acceptance of automated vehicle technology** by the community
- Service the local community in providing a **first and last mile public transport mobility solution**
- Capability of the **technology in a complex regional environment**
- Utilisation of the technology for the **aged, tourism and feeder service to existing public transport**
- Contribution of autonomous vehicle to **smart city solutions**



<https://www.facebook.com/RenmarkParangaCouncil/videos/120890843270632>

AUTONOMOUS BUS TRIAL IN RENMARK, SA

- 2.4 km route with **6 named** stops
- **No need to book, just turn up and go with Murray arriving approximately every 30 minutes**
- Murray provides a hop on and hop off service at six bus stops along the route, operating approximately every 30 minutes on Tuesdays from 10am to 1pm and Wednesdays to Saturdays from 10am to 4pm.
- Service does not operate on Public Holidays.



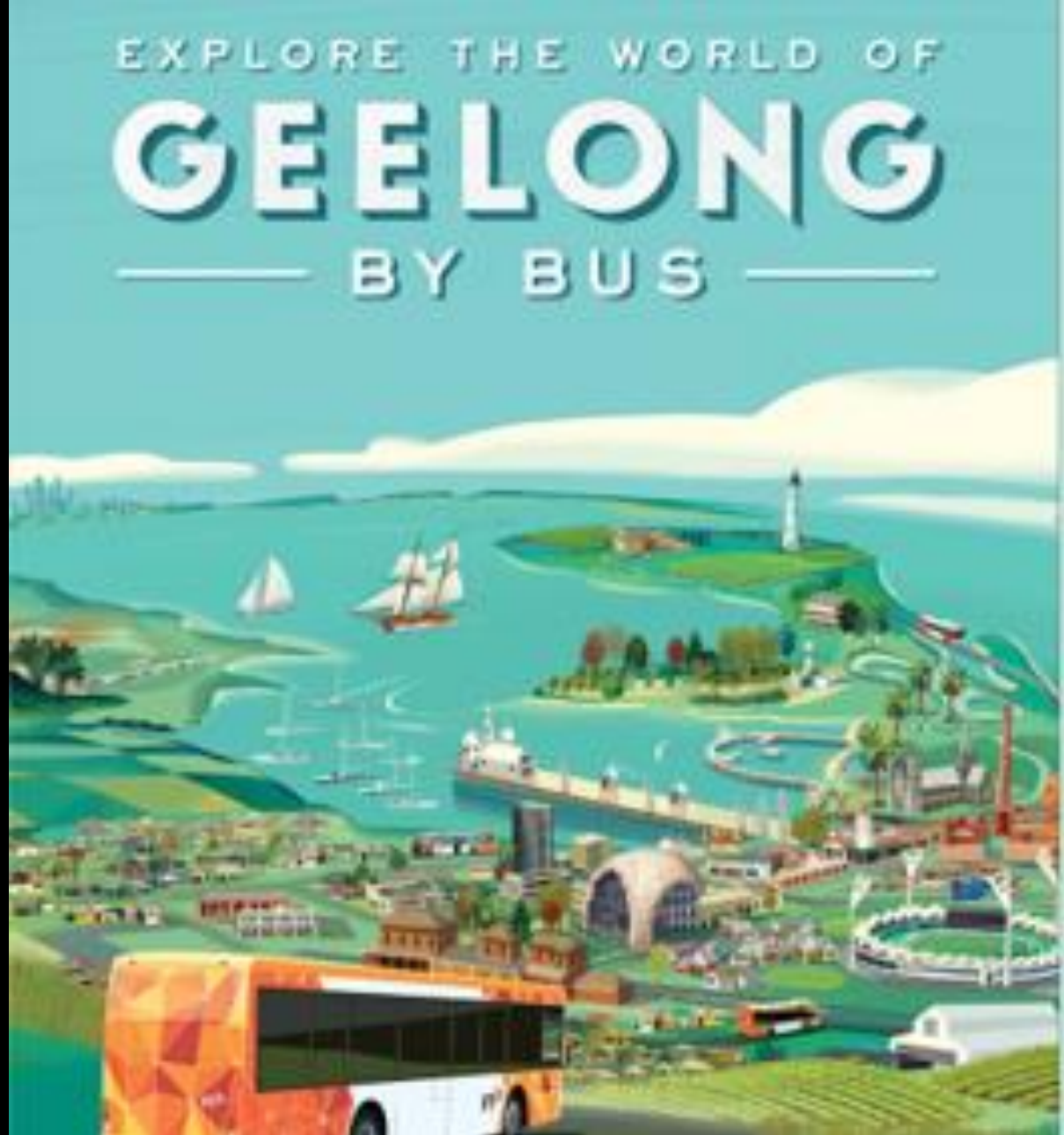
AUTONOMOUS BUS TRIAL IN RENMARK, SA



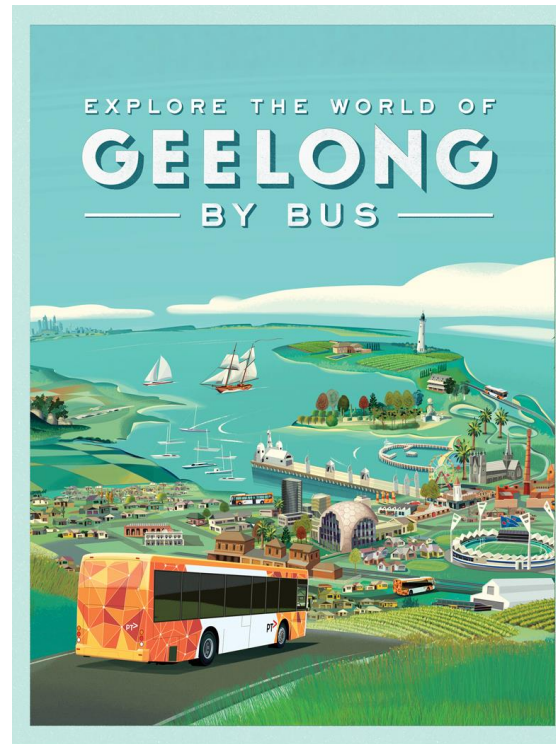
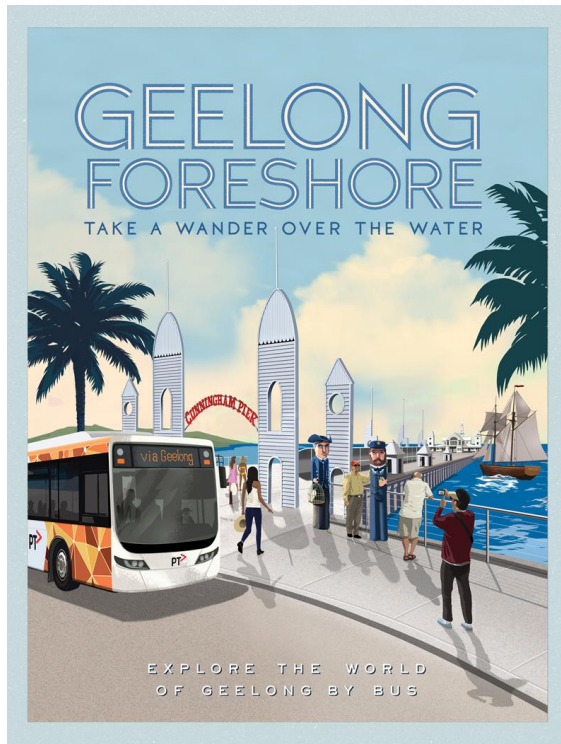
<https://www.9news.com.au/world/australian-transport-officials-trialling-driverless-buses-in-sweden/cb31f0ea-029a-4c88-b538-7a595642eba3>

PROMOTIONAL INITIATIVES FOR PATRONAGE GROWTH

Case Study Examples



PUBLIC TRANSPORT PROMOTIONS IN GEELONG



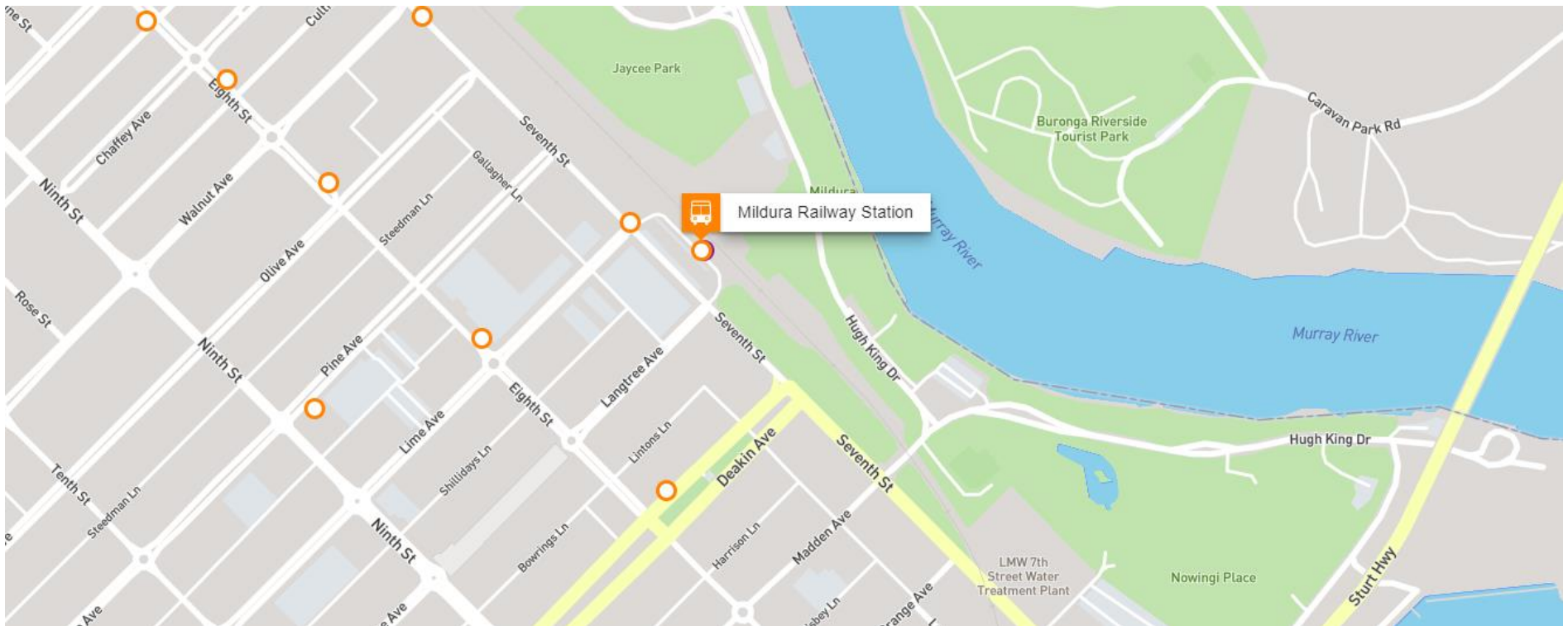
REGIONAL TRAIN AND COACH FARE PAYMENT

Mobility as a Service options integrated fare payment for all types of passenger transport with discounts for multi-modal travel (bus, train, taxi, Uber, etc)

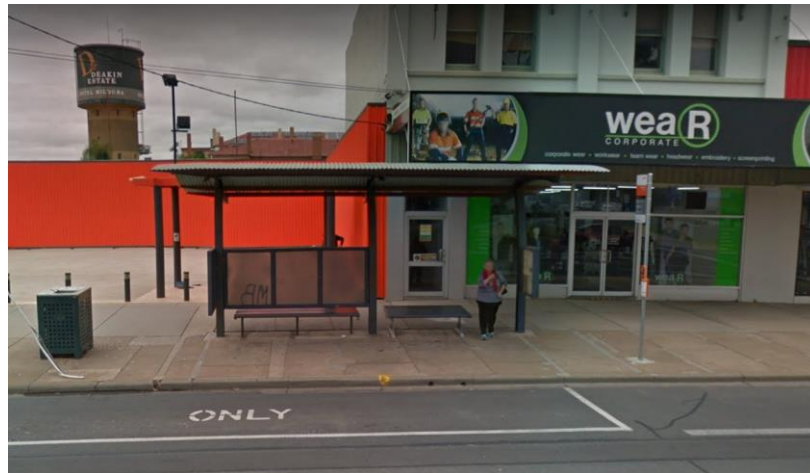


IMPROVED SECURITY AT BUS STOPS

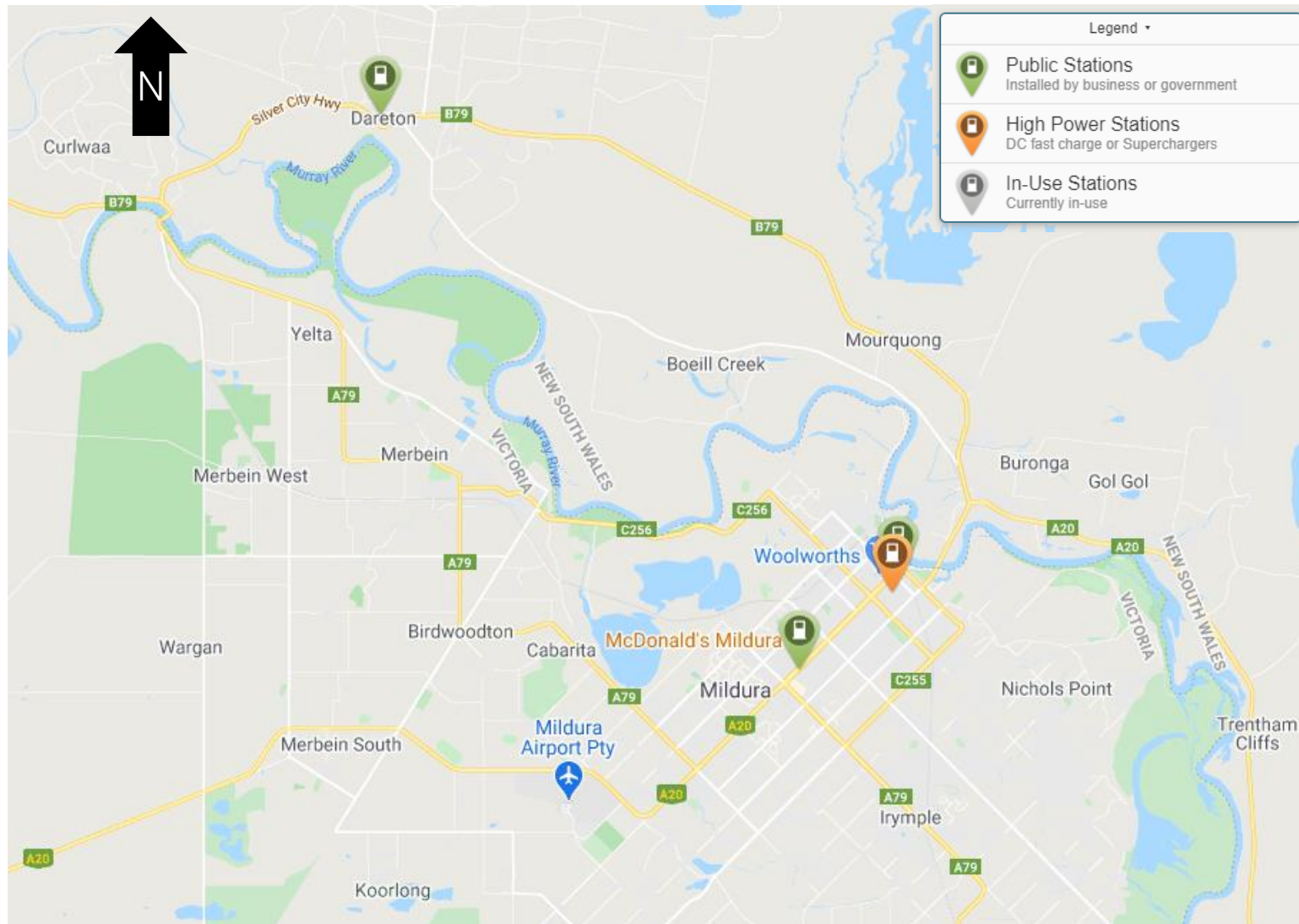
Provide better security at bus stops in Mildura and other regional towns with improved lighting and video surveillance cameras



IMPROVED SECURITY AT BUS STOPS



ELECTRIC CHARGING STATIONS IN NORTH WEST VICTORIA

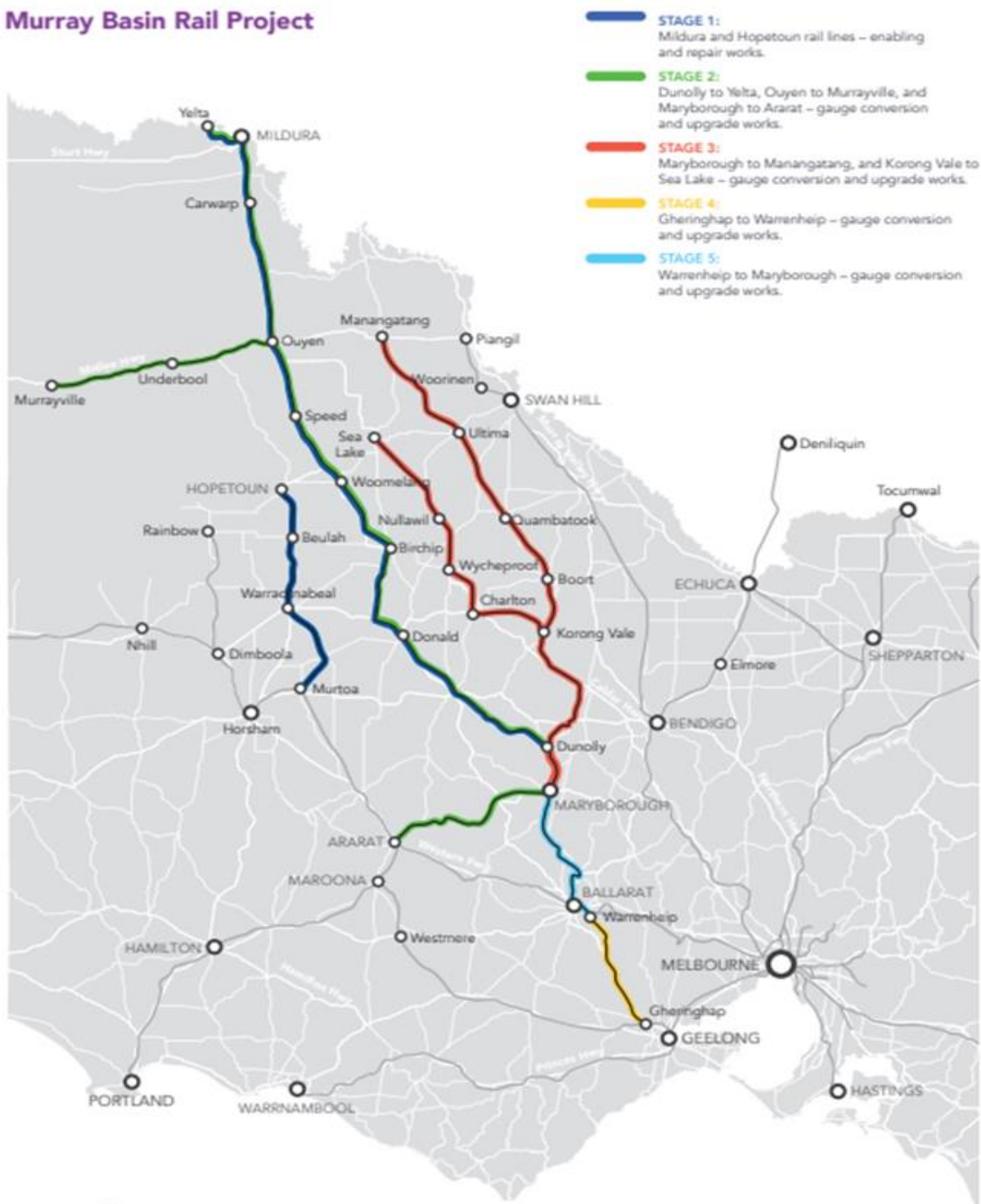




Appendix C – Murray Basin Rail Project Status



Murray Basin Rail Project





Appendix D – Comparison of Regional Rail Services

COMPARISON OF REGIONAL RAIL SERVICES

Terminus Location	Agency	Line History	Line Name	Line Description
Bunbury	TransWA	Nov-1947	Australind	Bunbury - Perth via Armadale
Kalgoorlie	TransWA	Nov-1971	Prospector	Kalgoorlie - East Perth via Midland
Northam	TransWA	Sep-1995	AvonLink	Northam - Midland via Toodyay
Merriden	TransWA	Jun-2004	MerridenLink	Merriden - East Perth via Midland
Bathurst	NSW TrainLink	1868	Blue Mountains	Bathurst - Sydney (Central) via Western Line
Goulburn	NSW TrainLink	May 1869	Southern Highlands	Goulburn - Campbelltown via Bowral
Shepparton	Public Transport Victoria	January 1880	Shepparton	Shepparton - Southern Cross station (Melbourne)
Mildura	Victorian Railways	Opened November 1903; closed September 1993	Mildura	Mildura – Ballarat – Melbourne
Bundaberg	Queensland Rail	1997	Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg
Rockhampton	Queensland Rail	1997	Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton

COMPARISON OF REGIONAL RAIL SERVICES

Line Name	Line Description	Number of Stations	Length (km)	Average Station Spacing (km)	Travel Time (h:mm)	Average Speed (km/h)
Australind	Bunbury - Perth via Armadale	13	167	13.9	2:30	66.8
Prospector	Kalgoorlie - East Perth via Midland	19	653	36.3	6:45	96.7
AvonLink	Northam - Midland via Toodyay	3	97	48.5	1:20	72.8
MerridenLink	Merriden - East Perth via Midland	11	261	26.1	3:15	80.3
Blue Mountains	Bathurst - Sydney (Central) via Western Line	21	825	41.3	6:21	129.9
Southern Highlands	Goulburn - Campbelltown via Bowral	22	224	10.7	2:16	98.8
Shepparton	Shepparton - Southern Cross station (Melbourne)	16	191	12.7	2:30	76.4
Mildura	Mildura – Ballarat - Melbourne	61	474	7.9	N/A	N/A
Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg	9	351	43.9	4:30	78.0
Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton	13	639	53.3	7:45	82.5

COMPARISON OF REGIONAL RAIL SERVICES

Line Name	Line Description	Annual Line Patronage	Other Comments
Australind	Bunbury - Perth via Armadale	71,000	Standard gauge track
Prospector	Kalgoorlie - East Perth via Midland	70,000	Standard gauge track
AvonLink	Northam - Midland via Toodjay	7,500	Standard gauge track
MerridenLink	Merriden - East Perth via Midland	6,000	Standard gauge track
Blue Mountains	Bathurst - Sydney (Central) via Western Line	7,670,000	Standard gauge track; includes patronage at stations to Sydney
Southern Highlands	Goulburn - Campbelltown via Bowral	817,000	Standard gauge track
Shepparton	Shepparton - Southern Cross station (Melbourne)	1,570,000	Broad gauge track; included patronage at stations to Melbourne
Mildura	Mildura – Ballarat – Melbourne	0	Broad gauge track; discontinued in September 1993; freight line
Bundaberg Tilt Train	Brisbane (Roma Street) - Bundaberg	unknown	Electric tilt train on narrow gauge track
Rockhampton Tilt Train	Brisbane (Roma Street) - Rockhampton	unknown	Electric tilt train on narrow gauge track



Appendix E – Assessment Criteria: Definitions for each level of assessment

Assessment Criteria

Number	Criterion Name	Criterion Objective	Triple Bottom Line	High Negative	Low Negative	Neutral Outcome	Low Positive	High Positive
1	Improved Customer Benefits	Increasing Passenger Transport Usage (who and how many transport users that will benefit from the option?)	Social	No increases to usage	Minimal increase from selected markets	Minimal increase from multiple markets	High usage from selected markets	High usage growth from multiple markets
2	Aligns with Government Goals and Objectives	Achieving Government Objectives (does it achieve the Government policy positions at all levels?)	Social	No alignment with Government policy	Support from only one Government policy	Local and regional Government support	Local, regional and State Government	All levels of Government
3	Wider Community Benefits	Supporting Wider Community Objectives (reduced carbon footprint, greater economic and business activity, including tourism, higher equity for transport disadvantaged groups, safety and security, improved aesthetics and amenity)	Social	No objectives met	Minimal objectives met	Some objectives met	Multiple objectives met	All objectives met
4	Risks and Impacts to Deliver Option	Minimising the Impacts and Risks (property acquisition, loss of access, noise, air pollution, environmental flora and fauna, visual impacts)	Transport	Major risks from multiple categories	One major risk identified	Identified risks are manageable	Minimal risk to deliver the project	No risk or impact to deliver the project
5	Ease of Implementation	Level of planning approvals, community engagement, government stakeholder input, feasibility studies, cost/benefit assessments	Transport	Major feasibility studies, business cases and approvals with community and stakeholder engagement needed	Business cases and approvals needed with community and stakeholder engagement to be undertaken	Business cases and approvals needed with community and stakeholder engagement completed	Planning approvals needed, but feasibility studies and business cases are completely	Ready for implementation with no further documentation required
6	Costs	Minimising Capital and Operational Costs (how much money is needed?)	Economic	Very high cost (>\$50M)	High cost (\$5-50M)	Medium cost (\$1-\$5M)	Low cost (\$100,000-\$1M)	Minimal cost (<\$100,000)
7	Timing/Availability of Funding	Availability of Government Funding or Private Financing (where is the money coming from?)	Economic	Not likely to be funded in the long term	Potential for funding in the long term	Potential for funding in the medium term	Potential for funding in the short term	Funding available, but not committed to a specific project