

# WIMMERA SOUTHERN MALLEE REGIONAL TRANSPORT STRATEGY BACKGROUND REPORT



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# 1 Introduction

This report has been prepared to support the Wimmera Southern Mallee Regional Transport Strategy.

The purposes of this document are to:

- highlight the key strategic policies and directions which influence the development of the Wimmera Southern Mallee Regional Transport Strategy
- set out the evidence base for the Wimmera Southern Mallee Regional Transport Strategy by establishing a regional context for future transport planning.
- identify the methodology used to select and prioritise projects included in the Wimmera Southern Mallee Regional Transport Strategy.

This background report has been prepared by the Department of Transport, Planning and Local Infrastructure's Grampians Region office. It has been prepared on behalf of the Wimmera Regional Transport Group to assist the region in developing a robust, evidence-based transport strategy.

## 1.1 What area comprises the Wimmera Southern Mallee?

For the purposes of this project the Wimmera Southern Mallee comprises the municipalities of Northern Grampians, Buloke, Yarriambiack, West Wimmera, Hindmarsh and Horsham. Whilst this report captures key trends and issues affecting this region, at times the data used in this report may not include all the municipalities listed above due to differences in regional boundaries. These discrepancies have been noted where relevant. In some cases data is from neighbouring regions or interstate, however it is relevant due to the links with the Wimmera Southern Mallee's transport network.

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Figure 1: Wimmera Southern Mallee location context



## PART A – STRATEGIC CONTEXT

### 2 National policy overview

#### 2.1 National Land Freight Strategy – A place for freight

The strategy is a partnership between the three levels of Australian governments and aims to improve the efficiency of freight movements across infrastructure networks, minimise the negative impacts associated with such freight movements and influence policy making relevant to the movement of freight.

There are six core challenges to which the strategy seeks to respond:

- **Ensure there are long-term and integrated plans in place for freight** – This includes recognising the need for integrated, long-term planning, identifying important freight routes and places, and protecting corridors and precincts from encroachment by sensitive uses.
- **Invest in the right infrastructure at the right time** – Planning and critical assessment of investments is considered vital. This includes ensuring investments reflect the importance of the freight task, supporting rail freight, funding first and last mile projects and finding new ways to finance infrastructure.
- **Improve access, investment and charging arrangements for heavy vehicles** – The Heavy Vehicle Charging and Investment Reforms to road pricing will potentially see more direct charging of heavy vehicles, with funds provided to road owners for construction and maintenance.
- **Create better and more consistent regulation** – New national railway safety and heavy vehicle regulators will ensure regulatory consistency across Australia's land freight system.
- **Enhance understanding of the freight task and its associated challenges** – Obtain better freight data to assist decision making.
- **Build community understanding and support for the role of freight in society** – This is to be achieved by better engagement processes and managing the community effects of freight, particularly safety.

#### 2.2 National Land Transport Network and Commonwealth infrastructure investment

The National Land Transport Network is a single integrated network of land transport linkages of strategic national importance, which is funded by Federal, State and Territory Governments. The National Network is based on national and inter-regional transport corridors including connections through urban areas, links to ports and airports, rail, road and intermodal connections that together are of critical importance to national and regional economic growth development and connectivity.

Within the Wimmera Southern Mallee the National Network comprises the Western Highway, the Calder Highway, the Melbourne – Adelaide railway, the Geelong-Ballarat-Mildura railway.

The new Commonwealth Infrastructure Investment Programme commencing in July 2014 will provide funding through a range of sub-programmes such as Roads to Recovery, Heavy Vehicle Safety and Productivity Program and the Bridges Renewal Program.

## 3 State policy overview

### 3.1 Victoria - The Freight State – the Victorian Freight and Logistics Plan (2013)

The plan outlines the government's long-term strategy to improve freight efficiency, grow productivity and better connect Victoria businesses with their markets. It is built on the following principles:

- Maximise efficiency of freight movements on the transport network
- Maximise the contribution of freight and logistics to overall economic performance
- Ensure continuity of international and interstate gateway capacity
- Ensure integration of freight and logistics activities with other land uses
- Minimise impacts of freight and logistics activity on safety, amenity and the environment
- Maximise affordability and private sector investment.

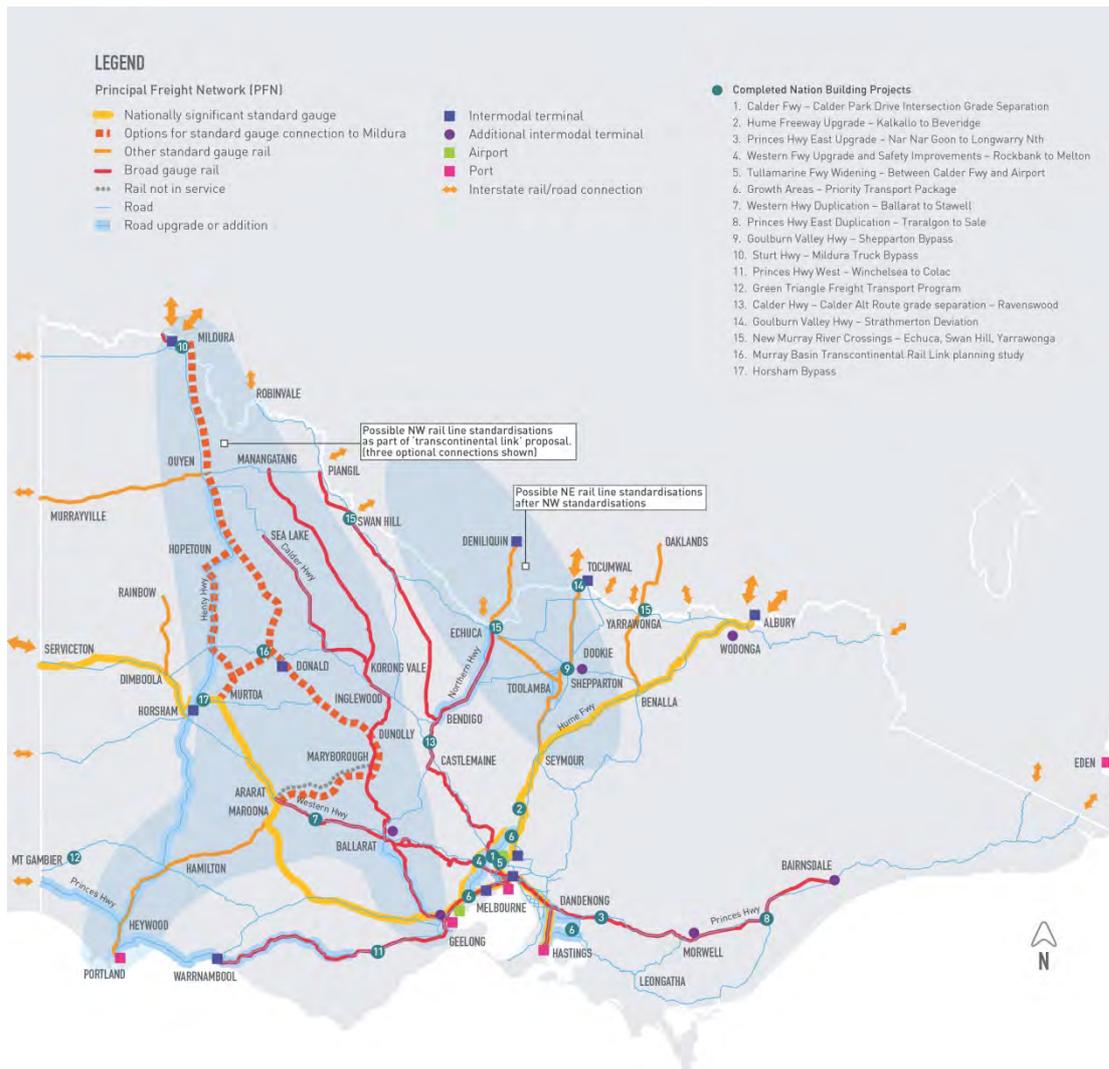
As context, the plan notes the importance of the freight and logistics sector to the Victorian economy (direct contribution of 6-8% of GSP in 2011) and that Victoria has a pre-eminent national role in these sectors. The strategic aim is to secure and build on this competitive advantage.

There are a number of strategic approaches outlined in the plan with a high degree of relevance to the Wimmera Southern Mallee. Many of the initiatives proposed are not in the region itself, but are recognised as having a broader benefit due to the nature of supply chains and the need for efficient access to external markets.

- **Principal Freight Network** – The Principal Freight Network for both rail and road are identified including the Western Highway, Wimmera Highway (west of St Arnaud), Borung Highway, Henty Highway and Melbourne – Adelaide, Mildura, Sea Lake, Hopetoun and Rainbow railway lines. The plan promotes various major road enhancements and an increased role for rail freight.
- **Regional supply chains** – The plan recognises that freight challenges revolve around bottlenecks in the supply chains and maintenance issues. The Transport Solutions package is identified to help target bottlenecks.
- **Port capacity and access to markets** – Efficient road and rail access to ports is recognised as critical for products from regional Victoria, particularly Portland and Geelong which are critical for commodities originating from and travelling through the Wimmera Southern Mallee. To manage the long term expected growth in containers the Port of Hastings is identified to become the largest container port in Australia over the long term
- **Better use of the freight network** – The network for High Productivity Freight Vehicles (HPFV) will be extended. In the Wimmera Southern Mallee the Mass HPFV network includes limited parts of the Western, Henty, Sunraysia and Wimmera Highways and some C class roads around Murtoa and Minyip.
- **Cross-regional routes** – The plan outlines the importance of upgrading regional Victoria's cross-regional freight links, such as the Henty Highway and Sunraysia Highway.
- **Intermodal terminal network** – The government will work to develop the regional intermodal terminal network, including the terminals at Donald and Doon. A metropolitan intermodal system is proposed for Melbourne to help relieve pressure on road connections to the port (see below).
- **Amenity** – There is a need to manage amenity impacts of freight movements, including bypass routes in key freight corridors in regional Victoria.

The ultimate long term vision for the regional freight network is as follows:

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Key projects under consideration that would affect the Wimmera Southern Mallee are:

- Completion of the Western Highway duplication to Stawell
- Development of a proposal to standardise the Mildura railway line and develop a link to the transcontinental line near Broken Hill. This could include a new link between the Mildura and Hopetoun lines.
- Planning for a bypass of Horsham.
- Western Interstate Freight Terminal and Outer Metropolitan Ring Transport Corridor – a new freight precinct and terminal in Melbourne’s west with connections to the national highway and rail network. The relocation of the state’s freight terminal facilities from central Melbourne to the west of the city will enhance accessibility for the Wimmera Southern Mallee to warehousing and distribution servicing regional and interstate markets.

## 3.2 Victoria’s Road Safety Strategy 2013-2022 and Action Plan

The strategy sets out the government’s approach to making roads, vehicles and roadsides safer. It targets reducing deaths and injuries by more than 30 per cent. This is to be achieved through engineering, education and enforcement.

The associated action plan includes proposals to:

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- Provide safer infrastructure on local roads for pedestrians and cyclists
- Expanding the Safer Road Infrastructure Program
- Delivering works to improve country roads, bridges and level crossings
- Incorporating road safety in the design of new suburbs
- Undertaking the SmartRoads management approach to direct priority routes.

### 3.3 Cycling into the Future 2013 – 23, Victoria's Cycling Strategy

*Cycling into the Future 2013-23* aims to grow and support cycling to: improve the well-being of Victorians; provide better places to live; support a stronger economy and generate jobs; and contribute to a healthier environment. The strategy notes there has been significant growth in cycling over recent years, although only 1.1% of people cycle to work in regional centres. There remains a great opportunity for cycling to be used more frequently given the topography, climate and improved road and cycling networks. In regional Victoria use of regional trains and tourism-based cycling is noted as a particular opportunity.

Relevant directions and actions include:

- **Reducing safety risks** – This is to be achieved, in part, by managing road space through SmartRoads to identify priority routes and areas.
- **Growing the cycling economy** – Cycling tourism is to be developed through *Victoria's Cycle Tourism Action Plan*.
- **Planning networks and prioritising investment** – Planning for cycling networks in regional centres is considered crucial in growing and supporting cycling across Victoria. The government will:
  - develop investment plans for cycling networks based on priorities, such as missing links on existing paths.
  - focus on high quality regional trails and specialist sporting facilities that are significant to the state.

The importance of integrating cycling infrastructure and facilities into the design of new public infrastructure is also noted.

### 3.4 Plan Melbourne – Metropolitan Planning Strategy (2014)

*Plan Melbourne* presents the government's vision to guide Melbourne's land use and development through to 2050 and the transport infrastructure required to meet future needs.

Parts of the strategy have a high degree of relevance to regional Victoria. In particular the plan promotes the concept of a '**State of cities**'. To this end the strategy supports rebalancing population growth to urban and regional Victoria, by:

- Establishing a permanent boundary around Melbourne
- Improving transport connections between Melbourne and regional cities
- Accelerating growth in regional cities.
- Strengthen transport links on national networks for the movement of good between regional cities, Melbourne, interstate and internationally.

### 3.5 Public Transport Victoria's Network Development Plans

Public Transport Victoria has developed the Network Development Plan – Metropolitan Rail (2012), which is a detailed examination by Public Transport Victoria of how Melbourne's train system needs to

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evolve to meet the needs of the city and of train passengers in the short, medium and long term. The plan is intended to inform government in its process of policy formulation.

Public Transport Victoria intends to develop Network Development Plans for on-road public transport and regional public transport in 2014-15, which will include the Wimmera Southern Mallee.

### 3.6 Victoria's 2020 Tourism Strategy (July 2013)

*Victoria's 2020 Tourism Strategy* sets out the government's vision for how the tourism industry can increase its economic and social contributions to the State. The vision is for:

- Victoria to be a leading tourism destination in the Asia Pacific region;
- Tourism to be a leading contributor to the Victorian economy; and
- Victoria to provide a range of experiences and an environment that supports the aspirations and culture of strong growth economies such as China, India and Indonesia.

The success of the strategy is underpinned by building stronger collaboration between the Victorian Government and the regions to ensure State wide priorities are met, whilst activity supporting the regional tourism industry to address local issues. Ensuring the benefits of tourism are spread across the State is a fundamental goal of the Victorian Government and an overarching priority in the Strategy.

Specific challenges identified in the Tourism Strategy that are relevant to the Wimmera Southern Mallee Regional Transport Strategy include:

- A lack of investment in regional areas; and
- The distance and travel time from the city to a regional destination.

The Strategy has identified seven priority areas, and while all could have some relevance to the Wimmera Southern Mallee Regional Transport Strategy, Priority 6 Investment Attraction and Infrastructure Development has specific relevance as it recognises the importance of nature based tourism with support of the Victorian Trails Coordinating Committee and the development of the Draft Victorian Trails Strategy, discussed below in section 3.9.

### 3.7 Victoria's Regional Tourism Strategy 2013-2016 (December 2013)

The Strategy outlines how Tourism Victoria will address challenges for regional tourism in the period 2013 – 2016 and discusses priorities for individual regions. The Strategy highlights regional Victoria product strengths of food and wine; nature based; spa and wellbeing; art and culture, all of which are represented to some level in the Wimmera Southern Mallee region. Strategic responses identified in the Strategy that are relevant for the Wimmera Southern Mallee Regional Transport Strategy include:

- Development and promotion of:
  - Regional Touring Routes
  - Tracks and Trails

### 3.8 Victorian Trails Strategy 2014-24

There are a wide variety of trails across Victoria that provide opportunities for health, wellbeing and economic development. The draft strategy seeks to provide a whole-of-government approach to the planning, management and promotion of Victoria's trails so that they may achieve their full potential.

The strategic directions of the strategy are:

- Provide a strategic framework for trail investment.
- Share information to support effective planning, development and maintenance of trails

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- Provide high quality information on trails
- Create better trail experiences
- Market trails

The trail of international, national or state significance within the Wimmera Southern Mallee that is referred to in the document is the Grampians Peak Trail (in planning). This will connect various parts of the national park and the towns of Dunkeld and Halls Gap.

### 3.9 Victoria's Cycle Tourism Action Plan 2011-2015

The Plan outlines a range of initiatives aimed at growing cycle tourism in Victoria. The key objectives of the Plan are:

- Strengthening the supply of cycle tourism experiences
- Building consumer demand for cycle tourism experiences
- Attracting and leveraging events.

A key action from the Plan is to position regional Victoria as the premier destination for cycling trails and road cycling. This action is relevant for the Wimmera Southern Mallee Regional Transport Strategy as it considers cycle tracks and trails, both on and off-road in the region.

### 3.10 Food to Asia Action Plan (2014)

The Food to Asia Action Plan supports the Victoria food sector to increase exports of premium food and beverage products to markets throughout Asia. It examines areas across the food export supply chain where government and industry can work together to increase exports, thereby supporting the economy of regional Victoria.

One of the seven key areas for action pertains to more efficient movement of products, which emphasises removing road and rail bottlenecks. Particular actions identified include:

- A further round of the Transport Solutions program, focusing on the food sector
- Upgrading the Mildura railway line and intermodal hubs
- A food to port co-investment program that will provide grants for targeted first and last mile road and rail capacity upgrades to support the food and agricultural supply chain.
- Improving incentives to maintain and develop the broad gauge rail freight network
- Advocating for customs clearance centres to be located at regional hubs to improve the movement of goods through ports.

## 4 Regional policy overview

The Wimmera Southern Mallee region has a strong history of collaborative regional planning, particularly in relation to transport under the auspices of the Wimmera Regional Transport Group (WRTG).

### 4.1 Wimmera Southern Mallee Regional Plan (2010, updated 2012)

The *Wimmera Southern Mallee Regional Plan* (otherwise known as the Regional Strategic Plan) sets a common strategic framework for local, state and Commonwealth governments to deliver on the collective aspirations of communities across the region. Its vision is that the Wimmera Southern Mallee is a productive agricultural region where participating in the life of its small towns and communities has been and continues to be a defining trait of the community.

Three broad goals form the basis of the plan:

- A competitive and innovative economy
- A healthy and resilient environment
- Community well-being

The regional strategic plan identifies a number of strategic directions which can be delivered in part through appropriate transport systems and services.

- **Build the region's nature-based & outback tourism industry** – This will include outdoor activities requiring suitable transport infrastructure such as walking, four wheel driving and cycling. The region will need to leverage the Grampians' role as a high profile tourism hub and provide access to other nature-based tourism experiences across the region.
- **Facilitating industry clusters and building on regional strengths** – Building on industry clusters and regional strengths such as food processing, agriculture, transport and mining.
- **Broadband and mobile phone coverage standards enable the whole region to be competitive and liveable** – This will help enhance liveability for remote communities and provide innovative ways to access services aside from the traditional transport network.
- **Transport infrastructure supports the needs of the region's industries & communities** – Improving transport infrastructure and services will help better connect people to services (particularly in Melbourne) and address issues around the growth of traffic and safety.
- **Education and training** – Given the need to retain workers and build skills, access to education is identified as a key strategic direction of the plan.
- **A community living more sustainably** – There is a need to mitigate the impacts of climate change and its risks.
- **Health and community services responds to population change** – Social isolation and challenges in accessing services contribute to poor health outcomes.

### 4.2 Wimmera Regional Transport Plan (2005)

The *Wimmera Regional Transport Plan* was established as a 20 year plan, providing a framework for maintaining, improving and developing freight routes throughout the region to support safe and efficient movement of freight to producers, markets and ports.

The project proposals set out in the plan were strongly influenced by the Commonwealth funding streams available at the time. To this end the focus of the plan was on freight, although also touched on tourism, passenger transport and safety. The plan assessed current transport operations and forecasted future demands. It identified planning actions and infrastructure projects that were

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required to ensure that economical and reliable movement of freight was achieved, with a particular emphasis on removal of constraints and support to growth industries.

There are a large number of potential projects identified by the plan, although these are not prioritised. They include project categories around local roads (including safety, bridges, heavy vehicle routes, tourist routes and freight access), arterial roads, railways, passenger services, aerodromes.

### 4.3 Wimmera Regional Transport Plan 2008 Review

The 2008 update provided supplementary information to support the directions and focus of the WRTG. The review responded to changing Commonwealth and State government policies and emerging policy and economic circumstances at the time. For example the document contains a strong focus on the importance of railways to the region's transport needs, in the context that the Victorian regional rail freight network was then under significant threat. It provides updates in relation to key commodities and other major proposed regional developments. A number of the major developments referred to in the document have subsequently been implemented, such as the Wimmera Mallee pipeline and Nhill Trailer Exchange. Outstanding items include:

- Horsham Ring Road
- Adelaide-Melbourne railway line realignment to the north of Horsham
- Western Highway duplication (partially implemented or in planning)
- Grampians Tourist Route
- Passenger rail services.

The review contains an updated list of priority regional projects seeking Commonwealth funding, with 5-6 identified from each municipality. These are primarily focused on road improvements, although include the Wimmera Intermodal Freight Terminal and Horsham Aerodrome.

### 4.4 Arterial Road (C Route) Strategy (2009)

The strategy recognises the important role that C routes play in the Wimmera Southern Mallee in meeting the needs of industry, agriculture, tourism and communities. It states that road users have an expectation that roads of similar classification and strategic importance will provide them with a consistent level of performance. As such the strategy notes C routes are generally expected to be two lane sealed roads with shoulders. Whilst the majority of C routes in the region meet the desired seal width expectations, there are however long lengths of these routes where the pavement is predominantly less than the desired width. Furthermore the strategy opines that there are other deficiencies which mean the roads do not meet expected performance levels. In providing some context to these observations, the strategy identifies concerns around reduction in rail transportation of bulk grain on some lines, which will lead to increased heavy vehicle traffic.

Identified concerns include pavement roughness, narrow seal widths, shoulder maintenance, roadside hazards, bridge capacity and line marking. There are a number of roads identified which are over-represented with regards to vehicle crashes, particularly near Horsham and in the northern Grampians area. Railway crossings and intersections which require upgrading are also highlighted.

### 4.5 Bridges to Recovery Strategy (2010)

The strategy assesses the region's bridges and identifies a range of issues around load limits, narrow structures, poor conditions, safety and flooding. This includes a strategic assessment based on the road hierarchy/use of the road to identify critical bridges. A series of around 30 priority projects are proposed, including some new bridge structures.

## 4.6 C Routes Detour Route Improvement Strategy (2011)

When higher order roads are closed, C routes are used as detour routes, sometimes for lengthy periods. This strategy notes that such occurrences have exposed deficiencies with many C route roads. A number of priority projects are identified to address these deficiencies.

## 4.7 Grey Spot Strategy (2012)

This report was commissioned to provide a strategy that supports funding applications to address grey spots and provides a tool for prioritising funding requests. It identifies a large number of existing and potential projects, including treatments. Priorities reflect the number of crashes and then the hierarchy of roads.

## 4.8 Regional Freight Transport Issues (2012)

The issues paper sets out road and rail constraints that are impacting on the safe and efficient movement of the region's commodities, with a focus on:

- Existing transport and logistical challenges/bottlenecks in moving the Wimmera Grain Harvest over coming seasons
- Local transport issues associated with the Wimmera Intermodal Freight Terminal (WIFT)
- Future High Productivity Vehicle Freight Routes

Issues are identified in the paper are set out below:

Issue	Key transport issues
<b>Commodities</b>	
Grain	<ul style="list-style-type: none"> <li>• Reductions in silos and rail services as well as a growth in private grain marketing has seen changes in transport patterns and an increased number of movements by road.</li> </ul>
Mineral sands	<ul style="list-style-type: none"> <li>• Expansion of this industry in this region and the Murray Basin, with resultant pressure on road and rail networks.</li> </ul>
Timber	<ul style="list-style-type: none"> <li>• Plantation timber in southern part of West Wimmera Shire places demands on roads in south-west Victoria and into South Australia.</li> </ul>
Other significant commodities	<ul style="list-style-type: none"> <li>• Other significant regional commodities include hay, stone, livestock and horticulture.</li> </ul>
<b>Railways</b>	
Rail network	<ul style="list-style-type: none"> <li>• Supports for the retention and upgrade of the regional rail network, eg the Rainbow-Yaapeet Line and Mittyack Silo on the Kulwin line.</li> <li>• Supports expansion of rail network eg Mildura-Broken Hill, realignment of the Adelaide-Melbourne line.</li> </ul>
Changing transport task	<ul style="list-style-type: none"> <li>• Reduction of rail freight has issues around local road performance and safety.</li> <li>• Forecast to be a greater reliance on intermodal terminals with containerisation of grain.</li> </ul>
<b>Local roads</b>	
Bridges	<ul style="list-style-type: none"> <li>• Performance of bridges is critical for community access, freight and emergency services.</li> <li>• Prioritisation of bridge projects is critical due to limited funds and vast area.</li> <li>• Estimated \$23m to remove deficiencies across 330 bridges on the local road network.</li> </ul>

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Other road infrastructure constraints	<ul style="list-style-type: none"> <li>• Access routes to grain receival centres</li> <li>• Freight supply routes to markets</li> <li>• Heavy vehicle routes</li> <li>• Tourist routes</li> <li>• Road safety</li> </ul>
<b>Arterial roads</b>	
C road constraints	<ul style="list-style-type: none"> <li>• Vital role in meeting the needs of local industry, communities and tourism</li> <li>• Identified constraints include roughness, narrow width and safety issues</li> <li>• Appropriate detour routes required.</li> </ul>
<b>Access to WIFT</b>	
Local road network	<ul style="list-style-type: none"> <li>• Needs better access from the north-west</li> </ul>
Horsham bypass	<ul style="list-style-type: none"> <li>• Benefits associated with a freight route around Horsham</li> </ul>
Adelaide-Melbourne rail line realignment	<ul style="list-style-type: none"> <li>• Benefits associated with moving the railway line to the north of Horsham</li> </ul>
<b>High productivity freight vehicles</b>	
Improvements to the local road network	<ul style="list-style-type: none"> <li>• Councils are examining strategic route plans.</li> <li>• Current infrastructure will not generally support high productivity vehicles. Major improvements required.</li> </ul>

The document outlines around 30 priority projects across the local and arterial road networks, as well as an upgrade to the Rainbow-Yaapeet railway line. Some projects listed are not location-specific though; eg Widen narrow seals on C routes.

### 4.9 Wimmera Southern Mallee Regional Growth Plan (2014)

Taking in the municipalities of Northern Grampians, Yarriambiack, West Wimmera, Horsham and Hindmarsh, the *Wimmera Southern Mallee Regional Growth Plan* provides a regional approach to land use planning. It builds on the directions of the Regional Strategic Plan and provides a long term view of how growth and change should occur.

Relevant principles and directions are as follows:

- **Growth should be encouraged throughout the region to create a network of integrated and prosperous settlements** – The spatial approach to settlement planning is centred around communities of interest; groups of settlements which have a strong social and economic relationship with each other. Examples include St Arnaud-Stawell-Charlton, Horsham-Murtoa-Dimboola, Nhill-Kaniva and Stawell-Ararat.
- **Key centres should be a focus to manage population change and access to services** – Opportunities for growth and development are supported in key centres (Horsham and a series of district towns) across the region which can provide a focal point for services, employment and population growth, servicing surrounding smaller settlements to ensure they remain liveable and viable.
- **Key agricultural resources should be protected, productivity maintained, and the development of industry supported** – As the dominant economic driver of the region, supporting land uses and infrastructure which will enhance agricultural productivity is a focus for the plan. Diversification of agricultural production is encouraged, particularly around intensive agriculture in parts of the region serviced by the Wimmera-Mallee pipeline.
- **The region's assets should be used to facilitate the diversification of the economy and ensure a resilient community** – The reliance on broad hectare farming means

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diversification of the economy is supported. Particular opportunities identified include tourism, energy, mining and alternative forms of agriculture.

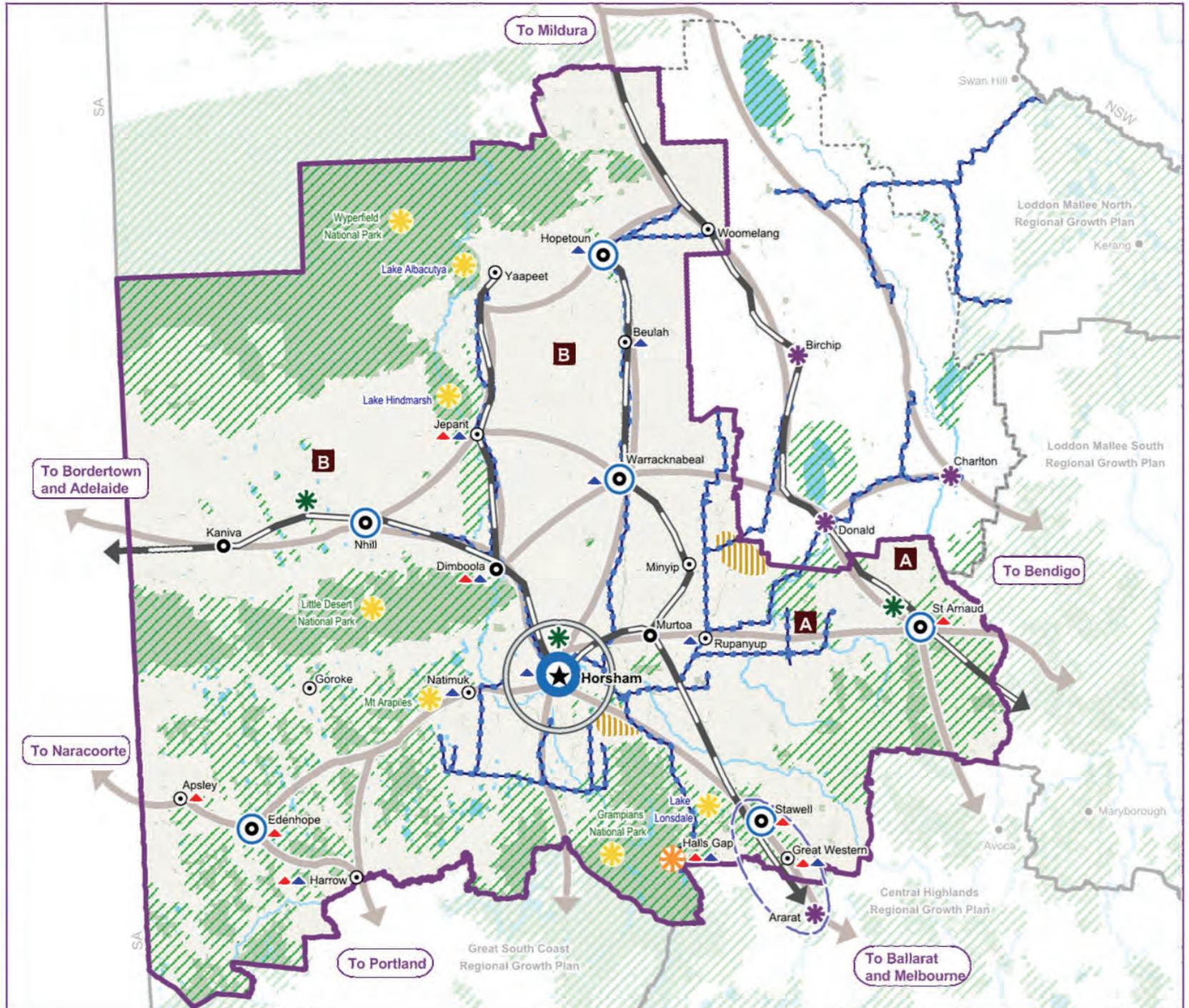
- **Planning should support adaptation to changes in climate** – The plan acknowledges the potential for long term changes in rural land uses to adapt to a changing climate and the need for infrastructure which can support this transition. The need to manage the risks associated with extreme weather events is also recognised.
- **The development of distinct settlements should be supported to create healthy, attractive and liveable communities** – Liveability is a central theme of the plan's approach to urban settlements, including easy access to facilities and employment.
- **Infrastructure required to support growth should be identified** – There is a need to integrate planning for freight and passenger transport with the land use directions of the plan. In particular, infrastructure which supports identified development and growth opportunities is encouraged.

Further details are provided around a range of land uses and high level strategic direction provided for the region's ten most significant urban settlements.

In relation to transport, the Regional Growth Plan seeks to:

- **Develop freight gateways and hubs as places to collect and distribute goods** – The plan supports developing the freight precinct at Doon, or other key freight gateways such as airports.
- **Understand and ensure efficient ways to transport products between producers and markets** – There is a need to understand supply chains and movements. The plan recognises that local roads may not be able to cope as transport needs evolve (for example heavier vehicles).
- **Improve the capacity and functioning of the transport network** – A range of opportunities to improve the network are identified, including realignment of road and rail routes through Horsham. Existing infrastructure can also be harnessed, such as expanding road space or providing more frequent public transport services.
- **Ensure access and connectivity** – This includes links to other cities and international gateways, flexible and accessible public transport, intra-regional connections to surrounding small communities and improved bicycle access.
- **Provide for a reliable and resilient network** – The transport network needs to be able to stand up to disruptions to maintain connectivity. This includes contingencies for major disasters, maintenance and on-time running limitations.
- **Consider technological advancements in the transport provision mix** – Opportunities may exist around new technology to improve access and communication.
- **Ensure amenity and useability** – The network should be able to assist diversification of economy by providing tourist routes and facilities.

The plan's overarching regional land use strategy is set out below.



## SETTLEMENT NETWORK

-  Horsham – Regional city
-  District town
-  Town
-  Small settlement
-  Stawell-Ararat relationship
-  Halls Gap – tourism hub
-  Key hubs external to the region
- Partner council

### Horsham – Regional city

Reinforce the role of Horsham as the key population and employment centre for the region. Locate major regional facilities in this city, particularly commercial activities in the central activities district. Provide for residential growth through infill development and investigate further greenfield sites to the west for medium to long term expansion of the city.

### District town

Support the ongoing growth and development of District Towns as the key service hubs within their sub-regional communities of interest. Ensure that these towns provide a supply of residential and employment land to facilitate growth as required.

### Town

Continue to provide local and some sub-regional services. Residential growth will generally be provided by infill development.

### Small settlement

Plan for change in small settlements to make them more resilient and adaptable. Ensure that these communities retain access to services within the town or local community of interest.

### Halls Gap – tourism hub

Support the development of Halls Gap as a resort town and tourism focal point for the region.

### Stawell-Ararat relationship

Recognise the close relationship between Ararat and Stawell and plan for these towns as a cohesive sub-regional cluster of housing, employment and services.

## INFRASTRUCTURE

-  Key road corridor
-  Key rail corridor
-  Wimmera Mallee Pipeline trunk routes

Improve passenger access to services in towns throughout the region and to other large centres. Ensure that the capacity of the network meets freight demands around the region and to external markets.

### Wimmera Mallee Pipeline trunk routes

Take advantage of water security to encourage more intensive agriculture and industry in areas serviced by the pipeline and encourage tourism based on the region's wetlands and lakes.

## ECONOMIC DEVELOPMENT

-  Preferred location for medium-large piggery and broiler farm intensive agriculture
-  Preferred location for medium-large cattle and lamb feedlot intensive agriculture
-  Freight and industry gateway
-  Mineral sands mining proposal
-  Bioenergy cluster
-  Key tourism asset

*Note that application of these principles should not be limited to the resource and economic development opportunities shown on this plan.*

### Rural land use

Support and protect agriculture as the key driver of the regional economy. Encourage diversification and value adding which builds on existing infrastructure.

### Freight and industry gateway

Capitalise on the Wimmera Intermodal Freight Terminal and value adding from the agricultural industry to create a regional freight and industry gateway in and around Horsham.

### Mineral sands mining proposal

Protect significant earth resources from incompatible land uses. Ensure that the impacts of these projects are carefully managed.

### Bioenergy cluster

Exploit the potential for bioenergy where clusters of agricultural and other waste products exist.

### Key tourism asset

Support the development of the tourism sector by building on key natural and agricultural assets throughout the region.

## ENVIRONMENT

-  Areas containing high value terrestrial habitat
-  Public land
-  Lakes and wetlands
-  Rivers

### Manage risks to settlement growth from natural hazards

-  Urban flood considerations<sup>(1)</sup>
-  Urban bushfire considerations<sup>(2)</sup>

(1) Urban flood and salinity considerations are based on existing overlays.  
 (2) Bushfire considerations may be based on one or more of the following: existing overlays, advice from CFA or Regional Bushfire Planning Assessments. Does not include Bushfire Prone Areas.

### Areas containing high value terrestrial habitat

Protect the region's environmental assets and encourage greater connectivity between areas with high natural values. Ensure significant landscapes are recognised and protected.

#### 4.10 Loddon Mallee North Regional Growth Plan (2014)

Buloke Shire is located in the *Loddon Mallee South Regional Growth Plan*. Principles of the plan include:

- Align population and economic growth
- Strengthen and diversify the regional economy, particularly around strengths such as primary production, services, manufacturing and tourism industries. Emerging opportunities include mining, food production and energy.
- Develop a living network of towns – this includes improving links between the region's communities of interest.
- Strategically retain, renew and build infrastructure to support growth and enable healthy and supportive communities.

Towns in the southern part of the shire are considered to be part of a community of interest including St Arnaud, whilst the northern part of Buloke is more closely aligned with Swan Hill. Donald, Charlton, Wycheproof and Birchip are identified as key service centres for surrounding isolated rural settlements.

Transportation issues revolve around transporting goods from the Murray Darling Basin towards the coast. Mining and agriculture are key transportation tasks.

## 5 Other regional project initiatives

### 5.1 Western Highway duplication

The Western Highway is progressively being upgraded to a four lane divided highway between Ballarat and Stawell. This is a significant project for the region given it the main transport link to Melbourne and Ballarat.

Parts of the road between Ballarat and Beaufort are already complete, with the remaining 23 km section expected to be finished by the end of 2014. Between Beaufort and Ararat, VicRoads has received all major planning approvals for this section and can now commence construction between Beaufort and Buangor. This should commence in 2014. At present there is no funding allocated for the construction beyond Buangor.

The Ararat to Stawell section of the project is still in the planning stage. The Environmental Effects Statement process is complete with the Minister for Planning now having made his assessment of the VicRoads proposal. VicRoads is now finalising the Planning Scheme Amendment documentation for the Minister for Planning and expects approval in 2014.

### 5.2 Western Highway Horsham bypass

VicRoads is undertaking a planning study to determine a preferred alignment for a future Western Highway bypass of the town. This is due to an increase in the volume of car and freight traffic through the centre of Horsham. The planning study will identify an alignment that will improve road safety and freight efficiency.

After undertaking targeted impact assessments and consulting with affected landowners and members of the community, VicRoads proposes to present two options at the upcoming public exhibition.

VicRoads will request to apply a Public Acquisition Overlay to secure land for the future Horsham bypass. During this phase, VicRoads will formally exhibit all documentation including project reports and maps to inform the community on the potential impacts. The public exhibition, which will run for four to six weeks, will give landowners, stakeholders and the community an opportunity to make a submission regarding the proposal. There is no funding allocated to construction of this project as yet.

### 5.3 Western Highway Action Committee

The committee represents the combined interests of councils along the Western Highway from the outskirts of Melbourne to the South Australian border. The committee has established its own priorities for improvements to the Western Highway, based on safety and transport efficiency. These are:

- Completion of the duplication to Stawell
- Detailed planning of Beaufort and Ararat bypasses
- Grade separation – Deer Park to Melton
- Horsham bypass
- Leigh Creek to Woodmans Hill – upgrade to freeway status

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A range of other projects have also been suggested by the committee including large scale projects, intersection improvements, rest stops and strategic planning. For example one of these projects is undertaking ongoing improvements to the highway between Stawell and the border.

### 5.4 Horsham railway bypass

A study examining the synergies between planning for the Western Highway bypass of Horsham and a possible rail bypass of the city was recently undertaken.

The report assessed various possible alignments and identified a preferred option between Doon and south of Dahlen. It was found that the project would cost \$79-95 million and save five minutes travel time on the Melbourne-Adelaide route. The cost-benefit ratio was forecast to be significantly less than 1.0. It is not intended to amend the Horsham Planning Scheme at this stage to include the alignment.

The proposed alignment of the Western highway bypass will not adversely affect the recommended railway bypass alignment. The timing of the highway bypass however needs to consider the rail bypass. If the rail bypass works precede the highway bypass then the highway bypass will not need to construct rail overpasses.

### 5.5 Murray Basin Rail Project

This project is examining opportunities to enhance the role of rail in supporting freight movements from the Murray Basin, including to export gateways at the Victorian ports of Geelong and Portland. The *Murray Basin Region Freight Demand & Infrastructure Study (2014)* has been prepared to examine current and future freight demand in the north-west of Victoria and adjoining areas into New South Wales and South Australia.

The study investigates a transcontinental rail link between the existing Victorian network and the east-west Sydney-Adelaide-Perth line given the increased mining activity in the north of the study area. It finds that there is insufficient demand for such a link, but this situation should be reviewed progressively until the mid-2020s as the demand profile could change rapidly if mining operations are established.

A second part of the study examines the Victorian rail network. It identifies opportunities to improve the productivity of the rail network to alleviate pressure on the road network through standardisation of rail gauges and providing for higher axle loads. Four options for change are identified (see Figure 2):

- A new link from Lascelles to Hopetoun and standardisation of the Mildura line north of Lascelles
- A new link from Litchfield to Minyip and standardisation of the Mildura line north of Donald
- Standardisation of the line from Geelong to Mildura (via Ballarat and Maryborough) and the branch lines to Sea Lake and Manangatang.
- Standardisation of the line from Maryborough to Mildura and the branch lines to Sea Lake and Manangatang. This option would also require refurbishment of the existing standard gauge Maryborough to Ararat line.

The Government has announced funding for the standardisation of the railway to Mildura in the 2014-15 budget. This includes finalising the business case for the standardisation of the Mildura line which will allow network access from Mildura to Portland. It will also provide for upgrades which will support heavier train loads. In the short term there will be maintenance to the Mildura and Hopetoun lines to ensure they are fit for purpose.

The outcomes of the project will impact on the Wimmera Southern Mallee depending on the preferred line or lines selected for standardisation. For example this could see the existing Hopetoun branch line become the main route to Mildura. There will also be potential benefits to exporters along the Mildura



## 5.6 Draft Central Murray Region Intermodal Opportunities Study (2014)

Commissioned by councils in the Central Murray region (including Buloke), this study outlines opportunities to support an increase in volumes of freight transported by rail and the local and regional activities that support such an outcome. The document details the region's main freight generators and sets out the transport supply chains maps for the key commodities. This work:

- Enables prioritisation of road upgrades, based on commodity supply chain and future outlook for production
- Provides support for a shift of freight transport onto to rail, by local actions, such as prioritised road upgrades
- Outlines local economic development opportunities that include consideration of prime locations for businesses that have a freight task that is suited to rail transport
- Give considerations to establishment of local freight consolidation centres, for smaller volumes of freight, so that a critical mass could be achieved to then transport by rail
- Provides an evidence base for regional advocacy for upgrades to rail lines to improve efficiency and reliability and the Mode Shift Incentive Scheme.

## 6 Setting a vision and objectives for the strategy

One of the objectives of the project is to revisit the region's transport plans and update the strategic context to ensure the Wimmera Southern Mallee's transport strategies and projects remain relevant and aligned to government policy.

Since the preparation of some of the earlier plans, the State Government has undertaken additional policy work which needs to be considered in establishing a new regional transport strategy. Key documents with reference to regional transport planning are:

- *Victoria – The Freight State 2013 The Victorian Freight and Logistics Plan*
- Regional growth plans
- *PLANMELBOURNE the Melbourne metropolitan planning strategy*
- *Victoria's Road Safety Strategy 2013 - 2022*
- *Cycling into the Future 2013-23 - Victoria's cycling strategy.*

The *Victorian Freight and Logistics Plan* and the regional growth plans are considered particularly relevant as they have a strong regional emphasis.

### 6.1 Objectives

The 2005 *Wimmera Regional Transport Plan* contained a number of goals. However the goals primarily related to what the plan was proposing to include (eg identify project priorities), rather than setting a strategic framework (ie what the plan was trying to achieve). It is considered the updated strategy would benefit from defining some overall strategic directions to clarify what the strategy's provisions are seeking to achieve and show how it aligns with the policy directions of Commonwealth and State governments.

The *Wimmera Southern Mallee Regional Growth Plan* contains seven transport "Future Directions".

- Develop freight gateways and hubs as places to collect and distribute goods
- Understand and ensure efficient ways to transport products between producers and markets
- Improve the capacity and functioning of the transport network
- Ensure access and connectivity
- Provide for a reliable and resilient network
- Consider technological advancements in the transport provision mix
- Ensure amenity and useability

Importantly, the regional growth plans were prepared as partnership between local and State governments and have been formally endorsed by all councils. This provides a strong common policy basis between the State and the region. There is also a close alignment between these directions and the objectives of the *Victorian Freight and Logistics Plan*.

### Recommendation

It is therefore recommended that the *Wimmera Southern Mallee Regional Transport Strategy* adopts the transport future directions from the *Wimmera Southern Mallee Regional Growth Plan* as its overarching strategic objectives. The Technical Working Group and Project Steering Committee

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should consider whether they wish to add or modify this framework. For example the concept of safety is not explicitly referred to, although is implicit in providing for a reliable and resilient network.

### 6.2 Vision

There was no vision established by the 2005 *Wimmera Regional Transport Plan*. The Regional Strategic Plan and Regional Growth Plan both contained lengthy vision/region-in-the-future statements, incorporating a broad range of aspirations for the Wimmera Southern Mallee. Both include a short statement pertaining specifically to transport:

- "... the region must and will become better connected through improved transport and telecommunications infrastructure and services. This is essential for the region to continue to be competitive as a place to live and do business." – *Wimmera Southern Mallee Regional Plan* (2010)
- "Good transport connections are provided within and beyond the region to facilities and markets to improve the competitive advantage of living and working in the Wimmera Southern Mallee." - *Wimmera Southern Mallee Regional Growth Plan* (2013)

It would not be beneficial to prepare a new competing vision statement, as the regional transport strategy will in effect be assisting in furthering the vision, directions and actions of the other regional plans.

Accordingly, the Technical Working Group and Project Steering Committee should consider either:

- Not including a vision statement in the strategy
- Using the Regional Strategic Plan's region-in-future statement, in full or in part
- Using the Regional Growth Plan's vision statement, in full or in part

#### **Recommendation**

It is recommended that a vision statement not be included in the regional transport strategy. Rather the strategy should simply identify that it is helping give effect to the vision and directions of the Regional Strategic Plan and Regional Growth Plan.

## PART B – EVIDENCE AND DATA

### 7 Population

Some of the key attributes of the region's population and demographic profile are:

- shifting populations from rural areas and smaller towns to Horsham
- decreasing population in most parts of the region, with Horsham being a notable exception experiencing solid population growth
- an ageing population
- loss of youth to Ballarat and Melbourne for education

#### 7.1 Current population

The 2011 estimated residential population of the region was 55,368. The areas of greatest population are concentrated in Horsham and Stawell and then a series of smaller district towns across the region. Figure 3 shows that areas around Horsham and Stawell are the only parts of the region experiencing growth whilst most of the region lost population in the 2006-2011 period.

**Figure 3: Estimated Residential Population - population change 2006-2011**

Statistical Local Area	2006	2011	Population change	Percentage change
Horsham (RC) - Central	13,675	14,463	788	5.8%
Horsham (RC) Bal	5095	5060	-35	-0.7%
N. Grampians (S) - St Arnaud	3456	3352	-104	-3.0%
N. Grampians (S) - Stawell	8639	8702	63	0.7%
West Wimmera (S)	4539	4287	-252	-5.6%
Hindmarsh (S)	6119	5856	-263	-4.3%
Yarriambiack (S) - North	2013	1874	-139	-6.9%
Yarriambiack (S) - South	5596	5309	-287	-5.1%
Buloke (S) - North	3394	3178	-216	-6.4%
Buloke (S) - South	3563	3287	-276	-7.7%

Source: Australian Bureau of Statistics

Between 2006 and 2011 there was a net loss of population to other Victorian regions (966 persons), particularly Central Highlands (638 persons). There were however some net gains of population from Melbourne (253 persons) and the Hume and Gippsland regions.<sup>1</sup>

<sup>1</sup> This data does not include Buloke Shire in the region.

## 7.2 Changes in town populations over time

In terms of the region's urban centres, Horsham is the dominant settlement, with almost ten thousand more people than any other town. Stawell is by some margin the next largest centre, whilst Dimboola, Nhill, Warracknabeal, Donald and St Arnaud then make up a band of towns of between 1000 and 2500 persons.

Figure 4 illustrates the population changes of the region's settlements over a 30 year timeframe and then also the most recent 10 year census period. In general terms, over the last 30 years most settlements in the Wimmera Southern Mallee have seen a decrease in population, with the exception of Horsham. In Horsham the average rate of annual growth increased to a 1.6% between 2001-11.

Across the rest of the region it is difficult to identify a consistent pattern of change in recent years. Between 2001 and 2011 some towns saw a noticeable stabilisation in the population losses they had been experiencing since 1981; for example Jeparit, Rainbow, Kaniva, Donald and Sea Lake. Indeed Apsely and Murtoa's populations began to see modest increases. However in other settlements the annual average rate of population decrease actually rose in the 2001-2011 period, including many of the mid-size sub-regional centres such as Stawell, Edenhope, Warracknabeal, Hopetoun and Nhill.

## 7.3 Projected trends

It is estimated that the Wimmera Southern Mallee, as a whole, will experience modest growth of 1920 persons (or 3.5%) over the next 20 years. This however does not paint an accurate picture of the projected change as growth will be highly uneven across the region (refer to Figure 5). Future population change is expected to continue to be focused on Horsham, and to a more limited extent Northern Grampians, while other parts of the region, where there are smaller towns, are projected to see a decrease in population. The *Victoria in Future 2014* projections suggest most decreases will occur in the next 10 years when after that municipal populations will increase or stabilise.

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**Figure 4: Change in town populations**

Town	1981	2001	2011	Change 1981-2011	% Change 1981-2011	Change 2001-2011	% Change 2001-2011
Horsham	12,034	12,925	15,129	3,095	25.7%	2,204	17.1%
Natimuk	482	418	392	-90	-18.7%	-26	-6.2%
Dimboola	1,735	1,496	1,367	-368	-21.2%	-129	-8.6%
Jeparit	551	380	372	-179	-32.5%	-8	-2.2%
Nhill	2,067	1,980	1,849	-218	-10.5%	-131	-6.6%
Rainbow	700	529	510	-190	-27.1%	-19	-3.6%
Beulah	290	203	177	-113	-39.0%	-26	-12.8%
Hopetoun	832	625	528	-304	-36.5%	-97	-15.5%
Minyip	567	436	419	-148	-26.1%	-17	-3.9%
Murtoa	946	773	783	-163	-17.2%	10	1.3%
Rapanyup	406	399	344	-62	-15.3%	-55	-13.8%
Warracknabeal	2,735	2,490	2,302	-433	-15.8%	-188	-7.6%
Apsley	187	161	184	-3	-1.6%	23	14.3%
Edenhope	827	776	690	-137	-16.6%	-86	-11.1%
Goroke	370	263	215	-155	-41.9%	-48	-18.3%
Kaniva	956	731	714	-242	-25.3%	-17	-2.3%
Berriwillock	187	116	122	-65	-34.8%	6	5.2%
Birchip	895	698	641	-254	-28.4%	-57	-8.2%
Charlton	1,377	1,026	943	-434	-31.5%	-83	-8.1%
Culgoa	164	113	106	-58	-35.4%	-7	-6.2%
Donald	1,609	1,327	1,310	-299	-18.6%	-17	-1.3%
Sea Lake	943	638	616	-327	-34.7%	-22	-3.4%
Wycheproof	938	695	635	-303	-32.3%	-60	-8.6%
Great Western	188	193	177	-11	-5.9%	-16	-8.3%
Stawell	6129	6109	5655	-474	-7.7%	-454	-7.4%
St Arnaud	2662	2400	2146	-516	-19.4%	-254	-10.6%
Halls Gap	388	565	505	117	30.2%	-60	-10.6%

Source: ABS censuses and Department of Transport, Planning and Local Infrastructure - Towns in Time<sup>2</sup>

Growth greater than 500 persons total or greater than 1% per annum	Decrease greater than 500 persons total or greater than 1% per annum
Growth between 0-500 persons in total or between 0-1% per annum	Decrease between 0-500 persons in total or between 0-1% per annum

<sup>2</sup> It should be noted that town boundaries were modified between the 2006 and 2011 censuses and this may account for some of the increase or loss of population recorded over this period.

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**Figure 5: Projected change in population**

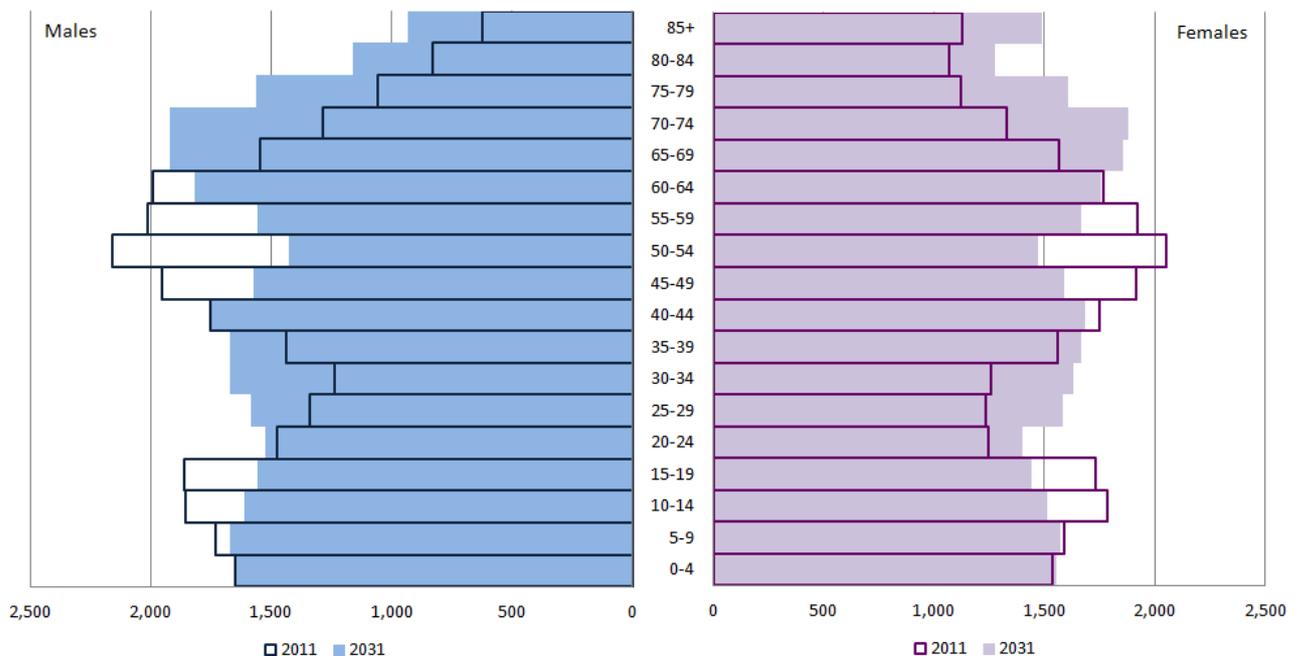
Local government area	Estimated residential pop 2011	Estimated residential pop 2021	Estimated residential pop 2031	Change 2011-2031	Change percent
Horsham	19,523	20,946	22,780	3,257	16.7%
Northern Grampians	12,054	11,813	12,176	122	1.0%
West Wimmera	4,287	3,910	3,911	-376	-8.8%
Hindmarsh	5,856	5,413	5,435	-421	-7.2%
Yarriambiack	7,183	6,768	6,945	-238	-3.3%
Buloke	6,465	5,977	6,041	-424	-6.6%

Source: Victoria in Future 2014, Department of Transport, Planning and Local Infrastructure

## 7.4 Age profile

A key to understanding the projected population changes across the region are the projected changes to the region's demographics. As shown in Figure 6, older age groups (65+) are expected to grow at disproportionate levels up to 2031, with substantial decreases in teenage and older middle aged (45-60) sectors of population. Interestingly there is projected to be stable population numbers or even some growth in young adults and middle aged people (20-45); these are the age groups who are likely to be establishing families and who will form the basis for ongoing employment and economic activity in the region.

**Figure 6: Change in age structure for the Wimmera Southern Mallee between 2011 and 2031**



Source: Victoria in Future 2014, Department of Transport, Planning and Local Infrastructure

## 8 Regional economic profile

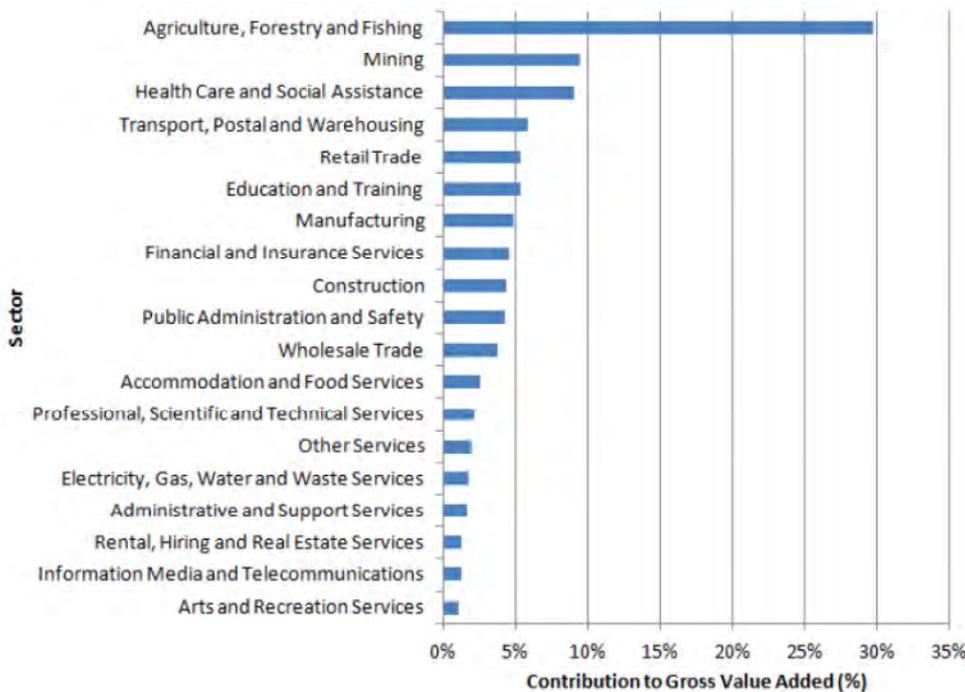
### 8.1 Regional overview

Regional Development Victoria prepared a series of regional economic profiles in 2013 which provide an overview of regional economies and future opportunities and trends. The Wimmera Southern Mallee's profile<sup>3</sup> states that the key features of the region's economy are:

- Agriculture is the biggest sector in the regional economy – in 2012, the sector had a 30% share of regional industry Gross Value Added (GVA)
- Mining is the second biggest sector in the regional economy, contributing 9% to regional industry GVA
- The importance of the transport, freight and logistics sector in the region is reflected in the transport, postal and warehousing's 6% share of the regional industry GVA
- The manufacturing industry in the region has a strong link to the agriculture sector – in 2012, 33% of the region's manufacturing value added was from the food product manufacturing sub-sector, the highest among all manufacturing sub-sectors
- Population driven sectors such as health care, construction, and retail trade are also significant sectors of the regional economy.

The Wimmera Southern Mallee's economy is highly dependent on agriculture. The figure below shows the relative contribution of different sectors of the Wimmera Southern Mallee economy

**Figure 7: Gross value added by industry (2012)**



Source: Regional Development Victoria

<sup>3</sup> The Wimmera Southern Mallee Regional Economic Profile does not include Buloke. Unless otherwise stated, all data in this chapter excludes this municipality.

## 8.2 Sub-regional variations

Over past 15 years Horsham has performed at or above regional Victoria averages across key growth indicators. The economies of the smaller rural municipalities of Hindmarsh, West Wimmera and Yarriambiack have experienced minimal growth or declining economies over this period. The growth performance of the smaller rural municipalities may be attributed to their smaller size and dependence on agriculture. Increasing efficiencies in broadhectare farming coupled with the effects of the prolonged drought in the 2000s has limited employment creation in these economies.

Nevertheless, each municipality has different economic strengths which can influence specific transport needs. These are illustrated in the table below.

**Figure 8: Sub-regional specialisation 2012<sup>4</sup>**

Municipality	Specialisation (by Gross Value Add)	
Yarriambiack	Agriculture (45%) Transport (10%)	Education and training (6%) Mining (2%)
West Wimmera	Agriculture (70%)	
Hindmarsh	Agriculture (42%) Transport (12%)	Health care (10%)
Horsham	Agriculture (17%) Health care (11%) Retail (8%)	Education and training (6%) Wholesale Trade (6%) Mining (4%)
Northern Grampians	Mining (29%) Agriculture (19%) Health care (9%)	Manufacturing (8%) Accommodation and food services (4%)
Buloke	Agriculture (46%)	

Source: Regional Development Victoria

## 8.3 Future trends

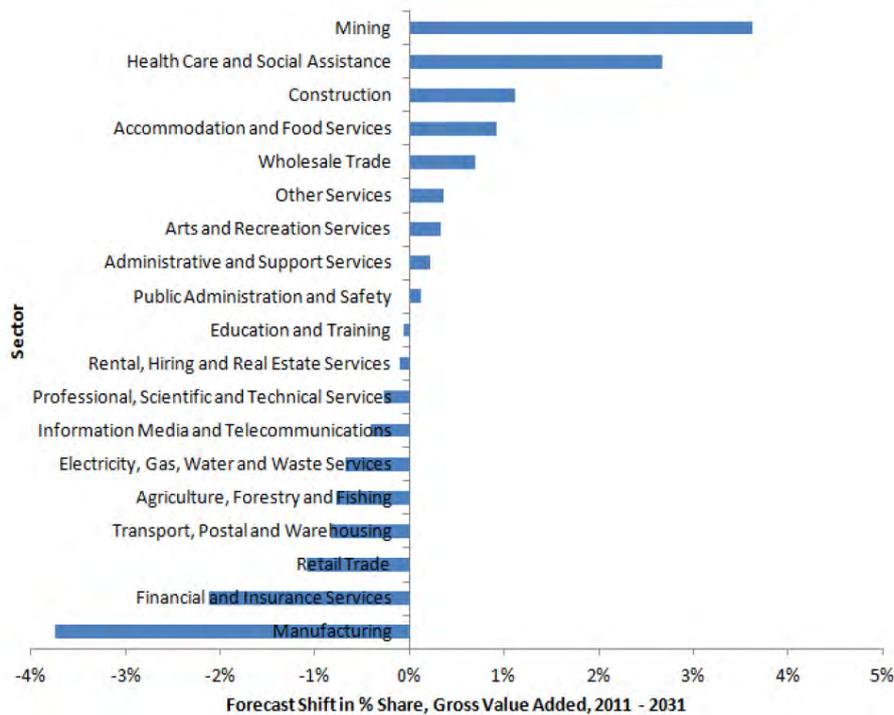
Agriculture is projected to continue being the biggest economic sector in the region. The largest industry sectors in terms of GVA (by 2031) are projected to be Agriculture, Health care and social assistance, Mining, Construction and Manufacturing. These sectors are projected to account for 58% of the regional GRP by 2031, up from 49% in 2011.

Figure 9 illustrates the projected changes in the share of the regional economy for key sectors of the Wimmera Southern Mallee economy over the next 20 years. Mining, health care, construction, accommodation and wholesale trade are the sectors projected to have the greatest growth in share of the region's economic output between 2011 to 2031.

<sup>4</sup> This table presents the percentage share of each industry to total GVA and employment in each local government area within the region. These industry and employment shares have been compared with State averages to reveal where different local governments have a specialisation.

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**Figure 9: Industry GVA performance projection, change in percentage share for Wimmera Southern Mallee, 2011 to 2031**



Source: Regional Development Victoria

Regional Development Victoria identifies that the growth enablers for the region<sup>5</sup> include:

- The Wimmera Mallee pipeline that provides stronger water security and opportunities for agricultural diversification
- Existing energy infrastructure (Horsham and Northern Grampians) and potential for renewable and bio-energy investment
- Growth and future potential of mining (heavy mineral sands and gypsum)
- Innovation capabilities including agricultural R&D institutions, industry networks, and the Wimmera Development Association
- Industry diversification within Horsham including growth of business services, construction, transport and manufacturing
- Strategic transport linkages between Melbourne and Adelaide, and between the north-west of the state and Portland
- Natural environment, tourism-related activities and biodiversity within the Grampians, Mount Arapiles, Little Desert and Wyperfield National Parks.

The region's growth constraints include:

- A relatively less diverse economy (concentrated mainly on agriculture) leaving the region vulnerable to changing market conditions for key commodities and a variable climate
- Lower educational attainment coupled with loss of working age population
- Skills gaps within key sectors such as transport, health, construction and agriculture
- Bottlenecks and logistics constraints for key export sectors (mining and agriculture), such as rail gauges which do not connect to external markets
- Access and use of internet for households, public service providers, and business.

<sup>5</sup> These lists include items compiled from Loddon Mallee North economic profile relevant to Buloke.



### 9.1 Roads

The Western Highway is the major road link through the region and provides access to Melbourne and Adelaide, as well as Ballarat. It is currently a single lane road in each direction at A class standard, although duplication is planned to the east of Stawell. The main north-south route through the region is the Henty Highway which provides a link to Portland. On the eastern side of the region the Sunraysia Highway and Calder Highway provide the main north-south routes between Mildura and Ballarat and Bendigo respectively. The Calder Highway and Henty Highway south of Horsham are also designated as A Class roads. The other highways in the region are the Wimmera Highway and Borung Highway which provide east-west links.

The dispersed settlement and industry pattern of the region also means there are many other C Class and local roads outside the highway network which play an important role in the transport network.

### 9.2 Railways

The region's railway infrastructure is complicated by lines being constructed at different gauges, which constrains connectivity. As such the railway network can presently be considered in two parts.

Operational standard gauge lines are the interstate Melbourne – Adelaide line and the branches to Rainbow and Hopetoun. The line beyond Rainbow to Yaapect is not currently operational. These lines have good access to the ports of Portland, Geelong and Melbourne. Broad gauge lines are those stemming from the Geelong to Mildura corridor which runs via Ballarat and Maryborough. This includes a branch line to Sea Lake.

The current issues around railway gauges for freight transport will in part be resolved by the recent announcements of the Victorian Government. This involves finalising the business case for the standardisation of the Mildura line which will allow network access from Mildura to Portland. It will also provide for upgrades which will support heavier train loads. In the short term there will be maintenance to the Mildura and Hopetoun lines to ensure they are fit for purpose.

The different railway gauges in the west of the state is also a key challenge which limits the ability to provide passenger railway services to Horsham. At present regular broad gauge V/Line passenger trains terminate just outside the region at Ararat. The Overland train provides a limited passenger service to the region on its route between Melbourne and Adelaide two days a week in each direction. It stops at Dimboola, Nhill, Horsham and Stawell.

### 9.3 Regional coaches and intertown bus services

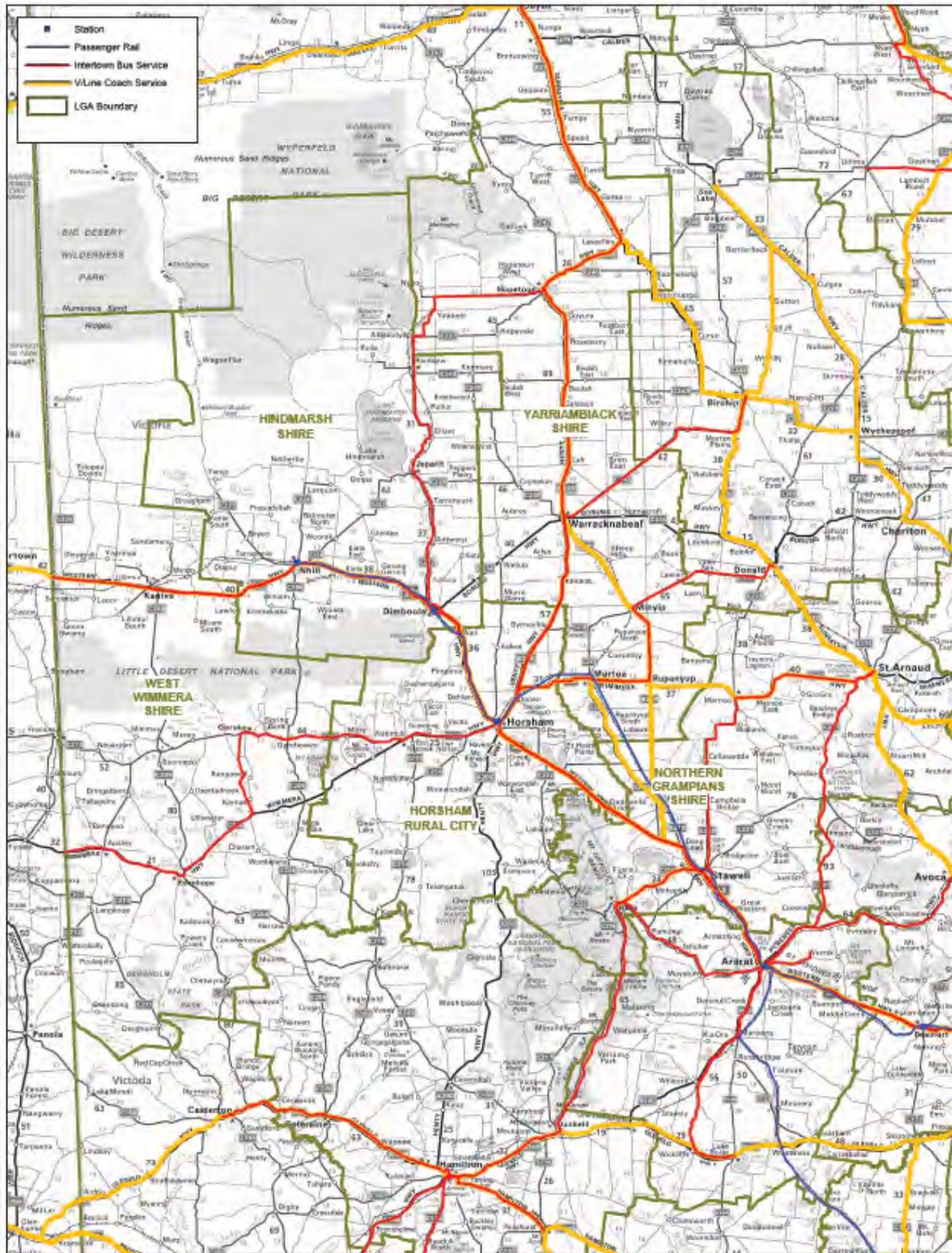
Figure 11 shows V/Line coach services and intertown bus operating throughout the region. V/Line coaches connect many of the larger towns in the Wimmera Southern Mallee to the large external regional cities of Ballarat and Bendigo and services can include train connections at Ararat, Bendigo and Ballarat for journeys to Melbourne.

Service levels are highly variable across the region. Some busier routes are serviced relatively frequently, for example there are five services on weekdays between Horsham – Stawell – Ararat – Ballarat. However many routes are serviced far less frequently (eg Sea Lake – Charlton - Bendigo) and may only have one service a day.

V/Line coaches are supplemented by intertown buses which provide connections between the region's main urban centres. In general inter-town buses provide opportunities for residents of towns throughout the region to undertake day trips to access shops and services in the largest towns, particularly Horsham. Services tend to provide for a morning trip into the main centre with a return journey in the afternoon. On many routes buses only run once a week, although some are more frequent.

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Figure 11: Regional public transport network



Source: Department of Transport, Planning and Local Infrastructure

### 9.4 Local buses

Local buses provide public transport around the region's largest centres of Horsham and Stawell. Although coverage of urban areas is reasonably comprehensive, routes are circuitous and frequencies can be variable, particularly outside normal business hours and on weekends. For example in Stawell all three bus routes only operate between 9:00am and 5:00pm Monday-Friday. In Horsham buses operate until around 6:00pm weekdays and there are some limited Saturday services. The maps at Appendix 1 illustrate some of these matters, showing the coverage and number of daily services.

### 9.5 Airports

Airports are located throughout the region, as illustrated by Figure 10, and are generally operated by local councils. The dispersed nature of settlement and remote nature of some parts of the region mean that they have an important role to play in terms of servicing the agricultural sector, providing access for emergency services, freight and mail. For example Hopetoun is regularly used for air ambulances, whilst Sea Lake is an important base during the fire season. Horsham Airport also includes some aircraft-related industry.

A number of issues have been identified in relation to the Wimmera Southern Mallee's airport infrastructure. These include:

- No regular commercial air passenger services to the region at present, which is a contrast with neighbouring regions in the far west of the state.
- Some airports, such as Warracknabeal and Patchewollock, have been identified as in need of upgrades to meet CASA design standards for licensed airports.
- Upgrades to cater for all-weather traffic.
- Runway lengths do not allow larger aircraft.

A number of the region's airports have been upgraded over the last five years including:

- Stawell – various enhancements to improve safety, runway improvements and expansion of capacity.
- Horsham – runway sealing and extension
- Edenhope – runway widening to allow for night operations
- Nhill – improved facilities and resealing the runway.

## 10 Use of the network

### 10.1 Roads

Traffic volumes on the region's arterial roads are shown in Figure 13. Most arterial roads carry relatively low volumes of traffic. The Western Highway stands out as the most significant road in the region, with a relatively high traffic volume along its entire length. There are however sections of a number of other highways and arterial roads which are well used. The highest volume roads include:

- the Henty Highway, particularly between Dooen and Horsham
- the Wimmera Highway, particularly Natimuk to Horsham and to a lesser extent Dooen to Murtoa
- the Calder Highway, particularly south of Dumosa
- Arterial roads around the larger centres.

In terms of heavy vehicles, Figure 14 shows that the Western Highway is a quantum ahead of other arterial roads. Outside of these roads, the Calder Highway around Wycheproof and Henty Highway (Horsham to Dooen) are the most significant truck routes in terms of number of vehicles.

C class roads are a particular concern for councils in the region due to the important role they play in terms of freight movement and concerns around their construction or condition which, it is believed, leads to heavy vehicles using local roads instead. The various concerns with C class roads are further outlined in the Wimmera Regional Transport Group's *Arterial Road (C Route) Strategy* (see section 4.4). Given the significant length of the C class road network in the Wimmera Southern Mallee it is important to prioritise the roads to ensure that the most strategic routes provide an adequate level of service. A starting point for this approach, based on available traffic and safety data, is set out in Appendix 2 – C class roads prioritisation tool.

The *Murray Basin Freight Demand & Infrastructure Study* has made some indicative growth projections for freight volumes on key roads. This suggests increases of 21% on the Calder Highway, 10% on the Sunraysia Highway and 21% on the Henty Highway.

### 10.2 Road safety

Figure 15 illustrates the casualty crashes recorded on the Wimmera Southern Mallee's arterial roads between 2008 and 2012 per 100 million vehicle kilometres travelled<sup>6</sup>. It has rated these figures against the country Victorian average for each class of arterial road within each municipality.

A majority of roads in the region have casualty crash rates below the country Victorian average. Whilst roads with above average crash rates are located throughout the region, the major highways generally having relatively safe records, although the Western Highway in Horsham Rural City is an exception to this.

The map illustrates that:

- There is a concentration of arterial roads with casualty crash rates well above the relevant country Victorian average in the south of the region around the Grampians and Stawell and around the greater Horsham area.

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<sup>6</sup> Data used to calculate these rates was from the 2008-2012 Crashtraff Link Dataset which contains crash rates for homogeneous sections of arterial roads and freeways (i.e. links). Please note that Crashtraff link data only includes crashes on mid block sections of road and at minor intersections. Crashes at major intersections (i.e. arterial/arterial intersections, arterial/freeway intersections and freeway/freeway intersections) are not included.

## Wimmera Southern Mallee Regional Transport Strategy Background Report

- The Nhill-Harrow Road has a crash rate much higher than the country Victorian average in West Wimmera Shire.
- There are a number of sections of rural C class roads scattered throughout the region with crash rates of 2-3 times the country Victorian average.

### 10.3 Rail crossings

The safety of at-grade rail crossings is a concern for the region. VicTrack has ranked all rural and regional rail crossings on the V/Line and ARTC networks using the Australian Level Crossing Assessment Model (ALCAM<sup>7</sup>). This can be used to help prioritise interventions to improve safety. Upgrades may include the installation of boom gates to those crossings with only flashing lights and boom gates and flashing lights to those with passive controls. In some instances it may be more appropriate to close the rail crossing.

Within the Wimmera Southern Mallee ALCAM has identified the highest ranked crossings without boom gates as: Lakes Road, Stawell; Stawell-Warracknabeal Road, Glenorchy; Donald-Murtoa Road, Donald; Griffith Street, Stawell; David Avenue, Nhill; and Nhill-Jeparit Road, Nhill.

### 10.4 V/Line coaches

Current V/Line data makes it difficult to track trends in patronage over time due to changes in collection methods. Nevertheless Figure 12 shows the patronage for a number of the routes which traverse the Wimmera Southern Mallee. It is unclear from the available data which sections of different routes attract the most patronage or the boardings at individual stops and as such this data should be treated as a general guide only. The Horsham – Ballarat route, which as discussed above is relatively frequently serviced, is clearly the most well used service by some measure. The busiest services on this route are carrying around 800-1200 persons a month.

**Figure 12: Patronage for selected V/Line coach services**

Route	2012/13	2013/14
Ballarat – Dimboola/Horsham	75,848	73,105
Bendigo - Adelaide	24,842	24,328
Ballarat - Donald	18,095	15,791
Ballarat - Hopetoun	17,591	16,063
Dimboola - Horsham	5,091	5,067
Bendigo – Sea Lake	9,276	9,178
Melbourne – Mildura (via Donald and Ballarat)	20,582	21,147

Source: V/Line

<sup>7</sup> ALCAM is a complex scoring algorithm which considers each level crossing's physical properties (characteristics and controls) including consideration of the related common human behaviours, to provide each level crossing with a "Likelihood Factor" score. This score is then multiplied by the level crossings "Exposure" score (a factor taking into account the volumes of Vehicles / Pedestrians & Trains) & finally multiplied by the Consequence score to give the ALCAM Risk Score. The ALCAM Risk Score, enables the comparison of the relative scores across level crossings within a given jurisdiction. This provides an overall risk rating for the level crossing however each individual hazard needs to be considered in its own right. ALCAM Risk Score = Likelihood Factor x Exposure x Consequence. It is important to note that ALCAM is only one of the tools used in the safety assessment of level crossings. Consideration also needs to be made to address other elements such as full social and economic impact as well as level crossing specific safety factors.



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Figure 14: Heavy vehicle volumes on arterial roads



Source: VicRoads

# Wimmera Southern Mallee Regional Transport Strategy Background Report

Figure 15: Casualty crashes per 100 million vehicle kilometres travelled on arterial roads



Source: VicRoads

### 10.5 Rail freight

The key rail corridor through the region is the interstate Melbourne-Adelaide main line. According to a report prepared for the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government (GHD, 2010), based on the freight demand forecasts (including ARTC's estimates and in light of the committed works on the corridor, capacity is not likely to be a constraining factor until between 2025 and 2030. The current alignment can handle 10.7 million tonnes of freight per year, which is more than double the 4.8 million tonnes per year that is currently carried on the rail line. However productivity of rail freight could be improved through the upgrade of the current 47kg rail with heavier rail and new or extended passing loops to provide for longer and heavier trains. ARTC has a program of works to continuously improve these features of the network through new and/or extended passing loops, replacement of current 47kg rail with new heavier rail and upgrade of signalling systems.

The Adelaide Hills represent a major constraint for future capacity. The *Murray Basin Region Freight Demand & Infrastructure Study* indicates that a new transcontinental link incorporating the Mildura line could provide capacity relief for interstate traffic in future.

The Murray Basin study identifies that there is significant capacity in the rail network and various opportunities for improvement. Some of the key issues with the region's rail network include:

- Maintenance of rail infrastructure based on cost affordability rather than business needs. This affects load limitations and track speed restrictions which leads to a loss of mode share.
- Split broad and standard gauge network which reduces operational flexibility and constrains investment.
- Improved access to Geelong and Portland

The main freight task for rail from and through the region involves grain, mineral sands, regional intermodal containers and interstate freight traffic.

### 10.6 Journey to work

Journey to work data from the 2011 census (Figure 16, Figure 17 and Figure 18) provides a snapshot of some of the key travel movements around the Wimmera Southern Mallee. It shows that work travel is relatively self-contained within most council areas. More than three-quarters of journey to work trips have their origin and destination within the same municipality in all cases, except West Wimmera Shire.

Some of the notable journey to work movements which move outside individual municipalities are:

- Journeys between Stawell and Ararat in both directions, showing the interlinked relationship between the two towns
- Journeys to Horsham from Dimboola and Murtoa.
- In West Wimmera's case there is some travel to and from South Australia, particularly Naracoorte.

For Horsham Rural City, the journey to work self-containment figure is over 90%, even despite its role as a central hub for surrounding towns. Nevertheless, Figure 18 reveals that there is increasing regional movement for work, with a 15% growth in outbound journeys and 18% growth in inbound work journeys between Horsham and its neighbouring municipalities over the last ten years, albeit coming off a low base.

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Trips within Horsham itself have grown by over 700 journeys (or 14%) between 2001-2011 (see Figure 17). This represents a significantly faster rate of growth than the population of the municipality as a whole, although urban Horsham's population has grown by 17% over the same period.

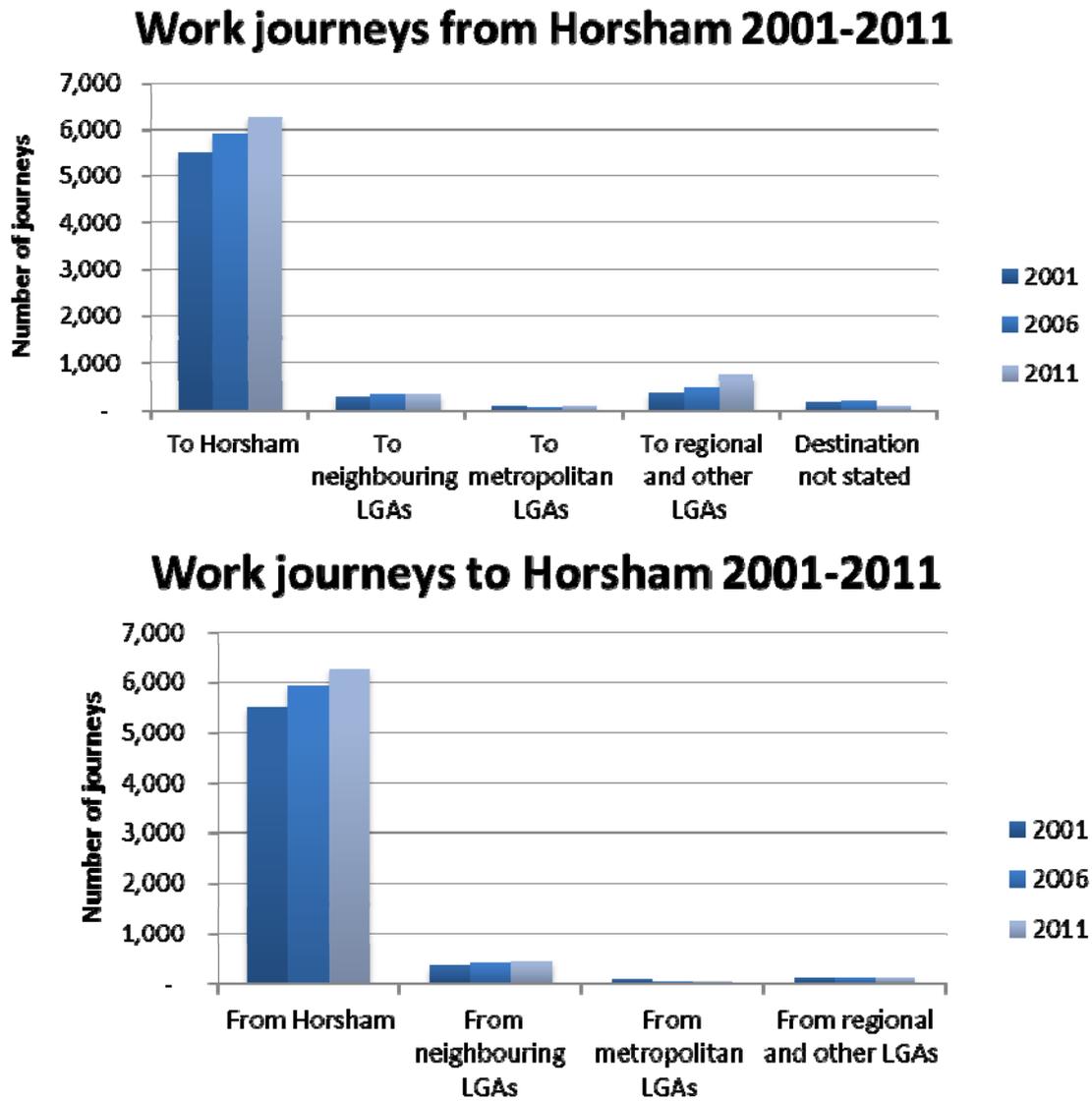
In terms of the mode of travel, this is dominated by the car across the region, with almost negligible penetration by public transport. For example within Horsham there were only 42 public transport trips recorded in journey to work data for the 2011 census. In most other centres there were no public transport trips recorded.

**Figure 16: Journey to work from key centres to regional municipalities by car 2011**

Urban centre/locality	Buloke (S)	Northern Grampians (S)	Horsham (RC)	West Wimmera (S)	Yarriambiack (S)	Hindmarsh (S)	Ararat (RC)
Horsham	6	32	4,425	12	112	65	0
Stawell	0	1381	23	0	4	0	138
St Arnaud	26	495	6	0	0	0	5
Warracknabeal	8	0	36	0	497	11	0
Dimboola	0	0	71	5	12	191	0
Nhill	0	0	20	8	0	476	0
Kaniva (L)	0	0	0	137	0	18	0
Edenhope (L)	0	0	4	140	0	0	0
Murtoa (L)	0	0	64	0	115	5	0
Hopetoun (L) (Vic.)	0	0	0	0	119	4	0
Rainbow (L)	0	0	4	0	11	71	0
Charlton	197	7	0	0	0	0	0
Birchip	142	0	0	0	0	0	0
Donald	294	14	0	0	14	0	0
Wycheproof	89	0	0	0	0	0	0

Source: ABS

Figure 17: Journeys to work to and from Horsham Rural City 2001-2011



Source: ABS

Figure 18: Journeys to work to and from neighbouring LGAs to Horsham Rural City 2001-2011

	2001	2006	2011
<b>To neighbouring LGAs</b>	<b>267</b>	<b>316</b>	<b>309</b>
Hindmarsh (S)	77	90	82
Northern Grampians (S)	30	37	37
Southern Grampians (S)	15	27	19
West Wimmera (S)	33	44	23
Yarriambiack (S)	112	118	148
<b>From neighbouring LGAs</b>	<b>363</b>	<b>423</b>	<b>430</b>
Hindmarsh (S)	117	124	135
Northern Grampians (S)	62	71	62
Southern Grampians (S)	10	18	26
West Wimmera (S)	33	36	39
Yarriambiack (S)	141	174	168

Source: ABS

## 10.7 Emergencies

The Wimmera Southern Mallee is subjected to natural disasters from time to time. Recent events have included major flooding across much of the region in the summer of 2010-11 and bushfires in the Grampians National Park and surrounding rural areas. It is essential that the transport system is resilient enough to cope with such emergencies, both to ensure access can be maintained along key routes and to assist with the delivery of emergency services.

Some of the aspects of the transport system which can help manage emergencies, or be affected by them are:

- Maintaining access along key road routes, or providing suitable alternatives. For example there is only one road crossing of the Wimmera River in Horsham.
- Bridges and road infrastructure which are fit for purpose in areas of higher risk, such as national parks and floodplains.
- The capability of airports to handle emergency service aircraft. This can include the ability to provide for the emergency patient transfers 24 hours a day, or a location for stationing fire fighting aircraft during the bushfire season.

The Wimmera Regional Transport Group has completed a *C Routes Detour Route Improvement Strategy* which outlines that C class arterial roads are used extensively when major natural disasters close more significant national and state arterials. When these detours have been required for significant periods, the document states that this has exposed deficiencies in the network, such as narrow widths, roughness and poor edge seals.

## 11 Freight movements and key commodities

It is a challenge to provide detailed data on freight movements given the multitude of transport providers and dispersed nature of operations. Nevertheless this section seeks to outline some of the key freight transport tasks in the Wimmera Southern Mallee to provide an overall picture of the key transport needs and notable supply chains.

### 11.1 Imports and exports

Trade flows provide an insight into the major economic connections between the Wimmera Southern Mallee and the rest of the state, Australia and overseas. In turn these trade flows influence transport requirements. Regional Development Victoria has provided estimates of the value of regional imports and exports across all sectors of the economy.

For the Wimmera Southern Mallee, this data shows that imports occur across a diverse range of sectors, although manufactured goods, presumably to service the agricultural sector, and white-collar services are significant amongst the top 10 sectors.

**Figure 19: Highest value imports to the Wimmera Southern Mallee (2012)**

Sector	% share (by value)
Machinery and Equipment Manufacturing	13%
Transport Equipment Manufacturing	12%
Professional, Scientific and Technical Services	10%
Wholesale	8%
Finance and Insurance	6%
Chemical Manufacturing	5%
Agriculture and Aquaculture	5%
Mining Services	3%
Food Product Manufacturing	3%
Telecommunications Services	3%

Source: Regional Development Victoria

The exports from the region are significantly less diverse. Primary and secondary industries dominate the exports profile, with agriculture alone comprising two-thirds of the value of export products. Transport, mining, education and tourism/leisure-related sectors of food and beverage services and accommodation and are also in the top ten exports.

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**Figure 20: Highest value exports from the Wimmera Southern Mallee (2012)**

Sector	% share (by value)
Agriculture and Aquaculture	67%
Other Mining	7%
Food Product Manufacturing	4%
Preschool and School Education	2%
Property Services	2%
Other Transport and Storage	2%
Accommodation	1%
Road Transport	1%
Food and Beverage Services	1%
Coal Mining, Oil and Gas Extraction	1%

Source: Regional Development Victoria

Breaking down this data to a municipal level shows that there are similarities in the trade profile across many of the council areas. Figure 21 below shows estimates of some of the highest value trade flows between each municipality in the region and other Victorian municipalities, other Australian states and overseas. These estimates and the location they derive from should be read as indicative only to provide a broad picture of some of the key trade movements into and from the region.

Agriculture is the dominant intrastate, interstate and international export sector. The key trade flows evident for agriculture are to:

- Central Melbourne
- South-eastern Melbourne
- Rural areas to the south of the Wimmera Southern Mallee, such as Corangamite
- Queensland and NSW in terms of interstate destinations.

The major exception to this is the role of mining as an export from Northern Grampians.

Imports are also broadly similar across the different municipalities. These are focused on the service sectors from inner Melbourne and interstate, wholesale goods from south-east Melbourne and inputs to the agricultural sector from overseas.

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**Figure 21: Highest value import and export sectors in relation to other Victorian municipalities, other states and overseas (2011)**

	Imports			Exports		
	Intrastate (LGAs)	Interstate	International	Intrastate (LGAs)	Interstate	International
<b>Buloke</b>	<ul style="list-style-type: none"> <li>• Finance - Melbourne</li> <li>• Professional services - Port Phillip</li> <li>• Retailing - Stonnington, Yarra</li> </ul>	<ul style="list-style-type: none"> <li>• Finance – NSW</li> <li>• Professional services - NSW</li> </ul>	Machinery and Equipment Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture - Melbourne, Kingston, Gr. Dandenong, Bayside</li> </ul>	Agriculture -NSW, Qld	Agriculture
<b>Hindmarsh</b>	<ul style="list-style-type: none"> <li>• Finance - Melbourne</li> <li>• Wholesale – Monash, Gr. Dandenong</li> <li>• Professional services - Port Phillip</li> </ul>	<ul style="list-style-type: none"> <li>• Professional services – NSW</li> <li>• Finance – NSW</li> </ul>	Machinery and Equipment Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture -Melbourne, Kingston, Gr. Dandenong, Golden Plains</li> </ul>	Agriculture -NSW, Qld	Agriculture
<b>Horsham</b>	<ul style="list-style-type: none"> <li>• Finance – Melbourne</li> <li>• Professional services - Port Phillip, Boroondara, Yarra</li> </ul>	<ul style="list-style-type: none"> <li>• Finance – NSW</li> <li>• Professional services - NSW</li> </ul>	Transport Equipment Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture -Melbourne, Corangamite, Gr. Dandenong, Hume</li> </ul>	Agriculture -NSW, Qld	Agriculture
<b>Northern Grampians</b>	<ul style="list-style-type: none"> <li>• Finance – Melbourne</li> <li>• Professional services - Port Phillip</li> <li>• Wholesale – Monash, Gr. Dandenong</li> </ul>	<ul style="list-style-type: none"> <li>• Professional services – NSW</li> <li>• Finance – NSW</li> </ul>	Machinery and Equipment Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture -Melbourne, Kingston, Gr. Dandenong</li> <li>• Mining - Gr. Dandenong</li> </ul>	<ul style="list-style-type: none"> <li>• Mining - NSW</li> <li>• Agriculture - NSW</li> </ul>	Agriculture
<b>West Wimmera</b>	<ul style="list-style-type: none"> <li>• Finance – Melbourne</li> <li>• Wholesale – Monash, Gr. Dandenong</li> <li>• Professional services - Port Phillip</li> </ul>	<ul style="list-style-type: none"> <li>• Finance – NSW</li> <li>• Agriculture – SA</li> </ul>	Transport Equipment Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture -Melbourne, Kingston, Gr. Dandenong, Hobsons Bay</li> </ul>	Agriculture -NSW, Qld	Agriculture
<b>Yarriambiack</b>	<ul style="list-style-type: none"> <li>• Finance – Melbourne</li> <li>• Professional services - Port Phillip, Boroondara</li> <li>• Retailing - Stonnington</li> </ul>	<ul style="list-style-type: none"> <li>• Finance – NSW</li> <li>• Professional services - NSW</li> </ul>	Chemical Manufacturing	<ul style="list-style-type: none"> <li>• Agriculture -Melbourne, Kingston, Gr. Dandenong, Hume</li> </ul>	Agriculture -NSW, Qld	Agriculture

Source: Regional Development Victoria

## 11.2 Regional freight task for key commodities

The region relies on both its road and rail systems to provide for its freight task. The need to transport goods over long distances to markets, particularly bulk goods, provides rail with a competitive advantage compared with those regions closer to Melbourne. The Mildura and Hopetoun line upgrades will further enhance the role of rail by providing for 21 tonne axle loading, leading to a 15% productivity improvement that will increase train loads by 300 to 400 tonnes.

There are two intermodal freight terminals in the region. The recent development of the Wimmera Intermodal Freight Terminal at Doon has provided for significant enhancement of the freight capacity for the region, promoting movement of containers on the interstate Melbourne-Adelaide line. There is also an intermodal facility at Donald which supports PeaCo's pulse export business.

Nevertheless the region relies heavily on road transport for many of its freight needs. Outside of the Western Highway, other arterial roads in the Wimmera Southern Mallee can be of variable quality and as such heavy vehicles at times utilise parallel local roads. In addition farms and other freight distribution or storage facilities are often accessed by local roads. This situation has been exacerbated by factors such as:

- Increasing decentralisation of grain distribution and marketing
- Use of larger heavy vehicles
- A reduction in railway services (eg the Rainbow-Yaaapeet line).

Research conducted for the development of the Victorian Freight and Logistics Plan identified some of the key commodities that travel through the region. One of the important issues for the Wimmera Southern Mallee is that due to its inland location, freight from the region must travel through neighbouring regions on its way to markets. As such transport networks within the Wimmera must align with those in other parts of Victoria, particularly the Central Highlands and Great South Coast regions, as well as South Australia. Figure 22 sets out the most significant commodities travelling from the Grampians Region (which includes both the Wimmera and Central Highlands sub-regions).

The Victorian Freight and Logistics Plan estimates that regional Victoria's freight task will increase by 4.5% per annum up to 2046. The *Murray Basin Region Freight Demand & Infrastructure Study* specifically identifies significant forecast growth in grain and mineral sand from the Murray Basin region which will have significant implications for the Wimmera Southern Mallee's transport network (see Figure 23).

The indicative location and movement patterns of some key commodities from the Grampians and Murray Basin region are shown in Figure 24 and Figure 25. Notable freight generators associated with commodity movements are discussed below.

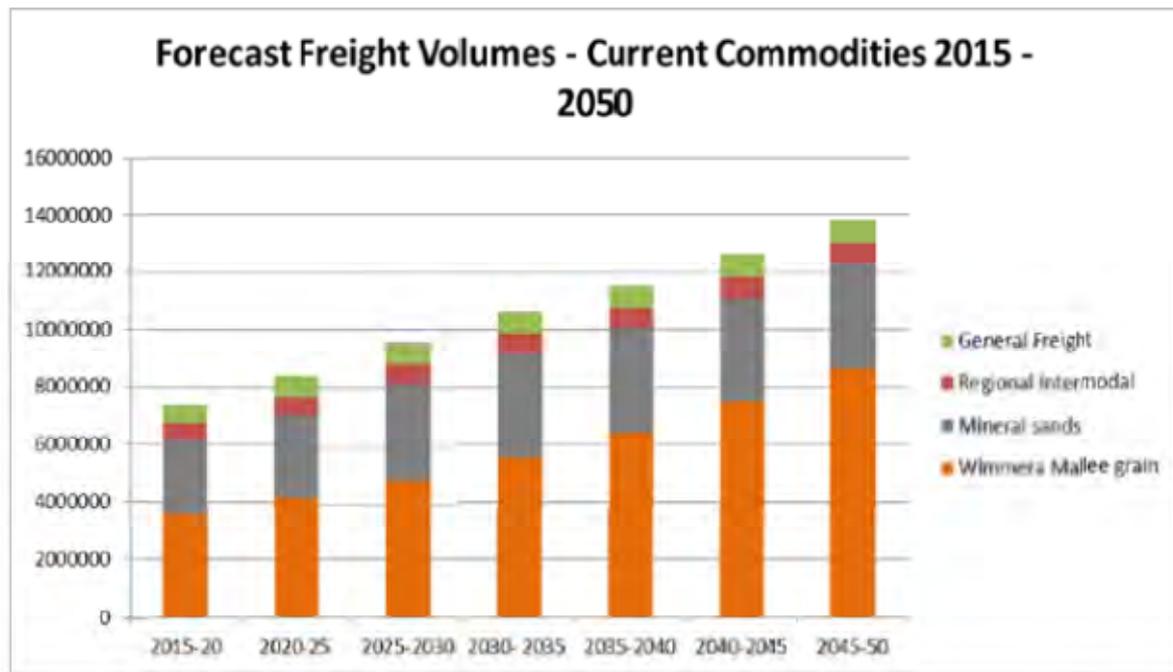
## Wimmera Southern Mallee Regional Transport Strategy Background Report

Figure 22: Largest commodities in the Grampians Region<sup>8</sup>

Commodity	Sub Total (tonnes pa)	Total (tonnes pa)
Grain		1,831,438
Forestry (logs)		1,017,720
Meat		653,237
Mineral Sands - Inbound		651,737
Livestock		160,915
Horticulture:		
Fruit	37,629	
Vegetables	<u>112,000</u>	
Total horticulture	149,629	149,629
Other		397,238
<b>Total</b>		<b>4,861,913</b>

Source: Deloitte, 2012

Figure 23: Forecast commodity growth for existing commodities from the Murray Basin

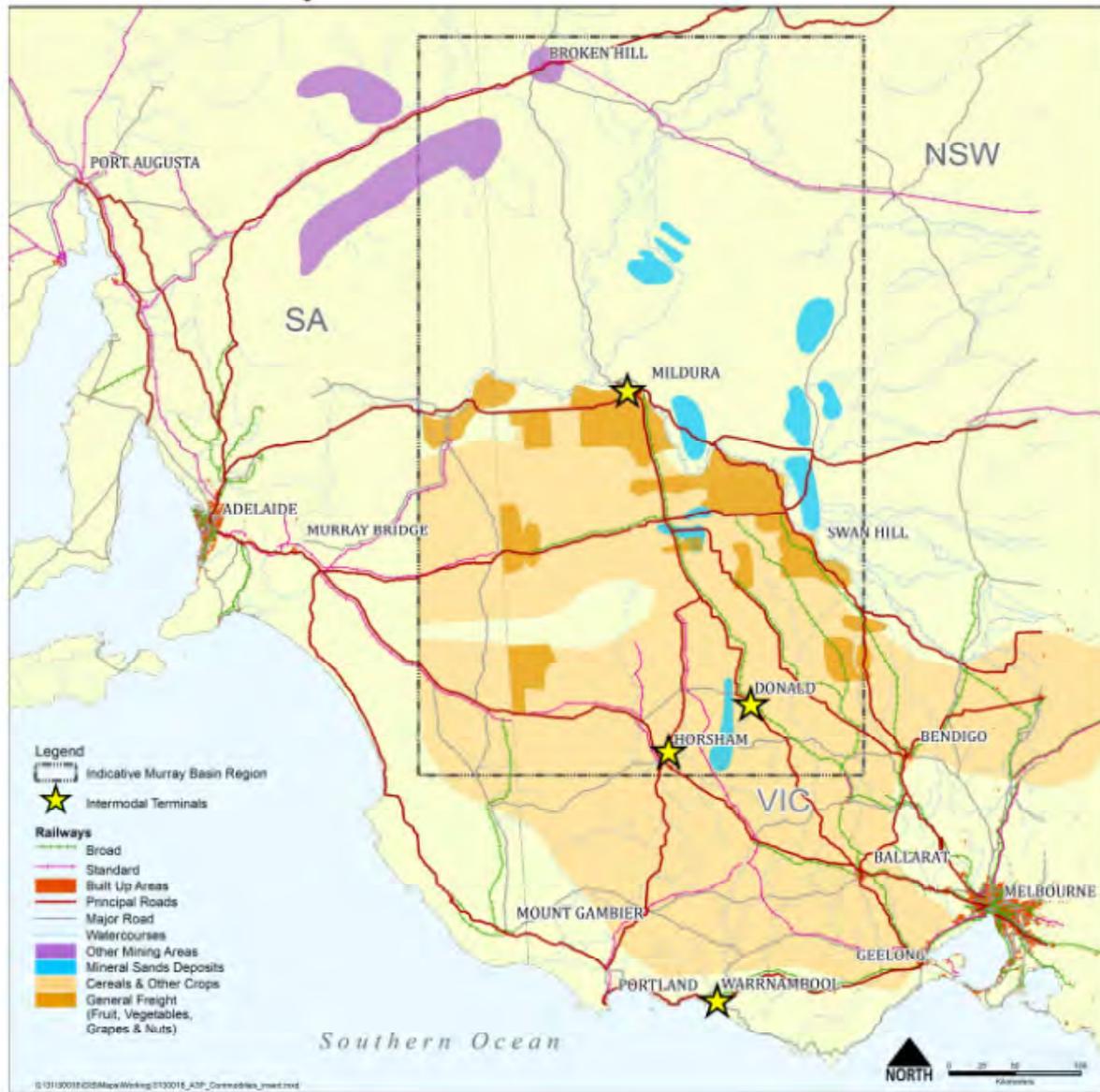


Source: Murray Basin Region Freight Demand and Infrastructure Study, 2014

<sup>8</sup> Includes six Central Highlands councils. It should be noted that many commodity movements from the Wimmera will move through the Central Highlands. Data does not include Buloke.

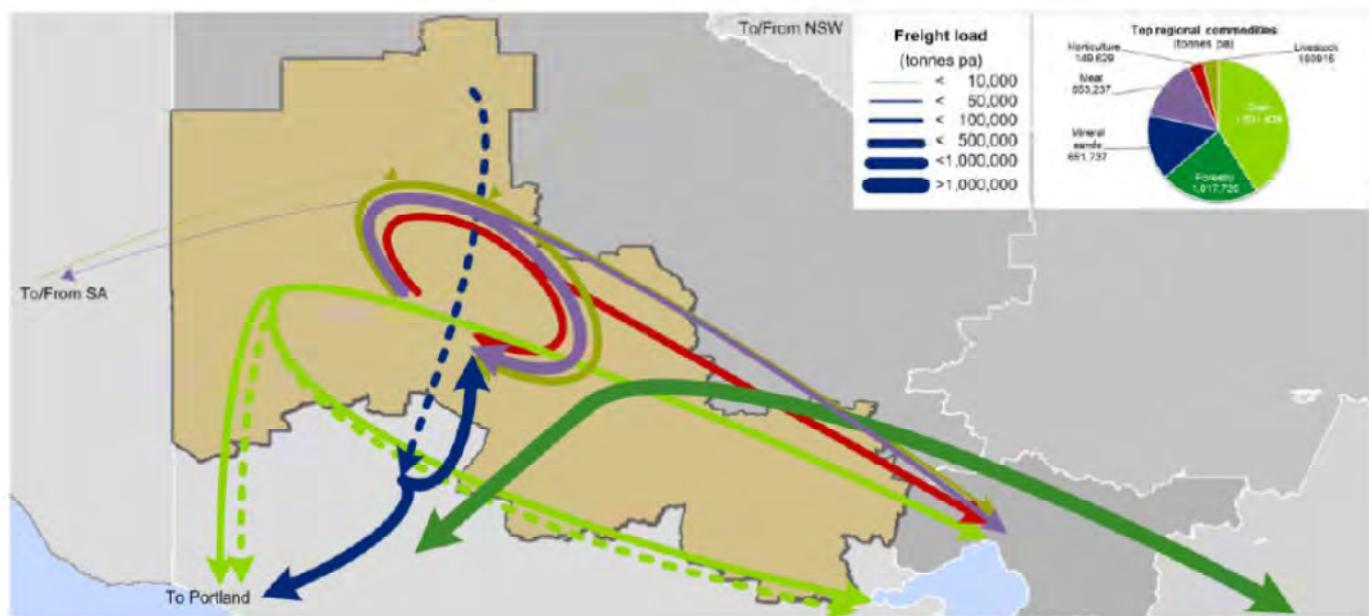
# Wimmera Southern Mallee Regional Transport Strategy Background Report

Figure 24: Indicative location of commodities (for the Murray Basin)



Source: Murray Basin Region Freight Demand and Infrastructure Study, 2014

Figure 25: Indicative movement patterns (based on top Grampians commodities<sup>9</sup>)



Source: Deloitte, 2012

### Grain

Grain is transported both through and from the region. The Rainbow, Hopetoun, Mildura, Sea Lake and Melbourne-Adelaide railway lines are important links for grain exports through the ports of Portland, Geelong and Melbourne. Figure 26 illustrates the traditional distribution of grain storage facilities in the Wimmera Southern Mallee, primarily along the rail network.

Due to changes in the way grain is marketed and distributed, traditional forms of grain storage and transport (that is, silos on railway lines) have become less important. The deregulated grain industry means that private storages have established away from railways (for example the Wilken Grain facility seven kilometres from Warracknabeal). This increases reliance on road transport and the resultant impact on local and C class roads.

There are a number of constraints on the rail network which create inefficiencies for grain transport. These include maintenance of lines, inability to handle fully-laden wagons on some lines and loading facilities at silos. For example there is double handling at silos such as Nhill and Rainbow to transfer grain onto trains.

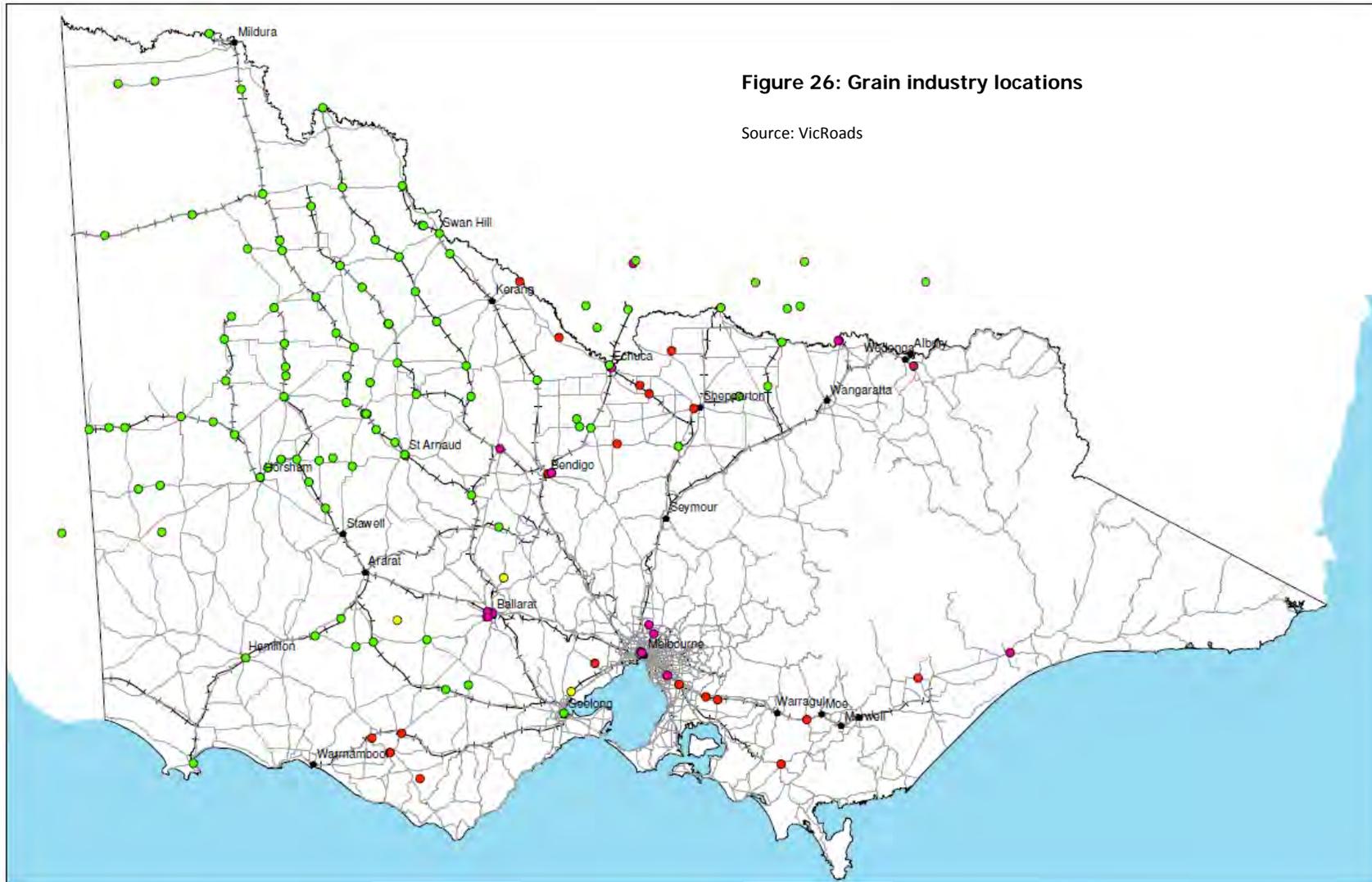
The Wimmera Intermodal Freight Terminal provides for containerised exports of grain and complements the Viterria storage facility at the site. This facility presents a new opportunity to utilise the rail system for bulk grain transport, including trips to South Australian ports.

GrainCorp is the most significant grain marketing and distribution operator in the Wimmera Southern Mallee, operating receipt and storage sites across the region, which are for the most part, linked to the rail network. The company has recently announced a major regeneration program for its assets which include a rationalisation to key sites and a greater focus on rail transport. This entails upgrading rail loading capacity to handle faster cycling point-to-point trains from 'Primary sites' (see Figure 27). Within the Wimmera Southern Mallee this will mean the closure of a number of existing grain facilities. Those identified to be non-operational from 2015-16 are Brim, Dooen, Goroce, Horsham, Kaniva, Lah, Lubeck, Marnoo, Serviceton, Patchewollock, Tempy, Birchip, Cope Cope, Kinnabulla, Litchfield, Watchem and St Arnaud. Note that most of these locations are also currently non-operational in 2014-15.

<sup>9</sup> Includes six additional Central Highlands councils. It should be noted that many commodity movements from the Wimmera will move through the Central Highlands. Mapping and data does not include Buloke Shire.

Figure 26: Grain industry locations

Source: VicRoads



Legend

- Feedmill
- Processing Plant
- Arterial Roads
- Grain Storage
- Storage and Packaging Facility
- ++ Railways

Grain Industry Locations

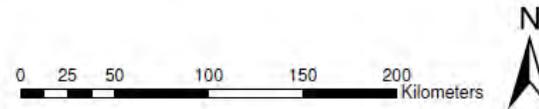


Figure 27: Proposed GrainCorp Victorian network 2015-16



Source: GrainCorp

## Forestry

The southern part of West Wimmera Shire is included in the Green Triangle region and is home to timber plantations which service industry and export gateways to the south.

Two woodchip milling operations in the Green Triangle are the main nodes of log and woodchip haulage freight within the region. One plant is operated at Myamyn, 45 km north of Portland, by South-West Fibre Pty Ltd. Its resulting woodchip product is trucked continuously to stockpiles at the Port of Portland for export. The other woodchip operation is managed via mobile chippers in forest plantations and aggregated via stockpiles at the port. This means that the origin of woodchip freight haulage tasks moves from point to point as different plantations in the region are harvested.

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The Port of Portland exports both logs and woodchips. Various bridges and roads (such as Dorodong Road) have been upgraded in West Wimmera to cater for timber traffic. The Casterton-Naracoorte Road is one of the one of the key haulage routes within the Shire.

### Meat and livestock

Livestock has traditionally been an important industry, particularly broadhectare grazing of lambs, sheep and cattle in the southern part of the region. There is an abattoir located at Stawell which is an increasingly important part of that town's local economy, as well as other facilities which service the region at Naracoorte (South Australia) and Ararat (Central Highlands).

The Horsham Regional Livestock Exchange is Victoria's 4th largest sheep and lamb market and is the major livestock selling centre in the Wimmera region, attracting vendors from as far afield as the South Australian border and southern New South Wales. Last financial year's sheep and lamb throughput was 627,000.

Some intensive poultry farming also occurs around St Arnaud. The region has identified the potential for additional intensive farming operations on the basis of a more secure water supply since the construction of the Wimmera Mallee pipeline.

### Minerals and quarrying

There is a challenge in planning for future mining projects due to the uncertainties associated with potential projects being viable and proceeding. Nevertheless, mining operations in the region include the gold mine at Stawell and gypsum extraction near Hopetoun. Quarrying occurs at Harrow, Mt Drummond and Charlton.

The Wimmera Southern Mallee is an important part of the supply chain for mineral sands between linking the mines in the Wimmera Southern Mallee and Murray Basin, with the port of Portland and processing facility in Hamilton. These are transported by road to the railhead at Hopetoun and then on the standard gauge network to Hamilton. A number of existing mines are projected to close in the next two years, but post-2015 additional production is expected to commence in the Murray Basin NSW, utilising the Hamilton plant for processing.

Mineral sand supply chains are closely linked to the location of processing plants. As mines move further away from processing this increases transport task. According to the *Murray Basin Region Freight Demand & Infrastructure Study*, the relocation of mine sites and increased outputs in the next 3-5 years may see freight movements by road for current operators to Victorian ports increase from 39 million net tonne kilometres (ntk) to 120 million ntk. Better access to the standard gauge network, as proposed by the Murray Basin rail project, could reduce the impact on regional roads.

It is noted additional longer term mines are proposed near Horsham and Donald which may increase this traffic through the region in future. It is not clear at this stage how the outputs of these mines would be transported, but could involve the Wimmera Intermodal Freight Terminal or road options. One estimate outlined in the aforementioned Murray Basin freight study suggests the new entrants anticipate production generating a potential 6 million ntk on roads and 129 million ntk on rail to port. This will however require further planning and quantification if the mining operations proceed.

Other mining activities in the Murray Basin could also affect the region's transport infrastructure over the medium term. The Murray Basin freight study indicates that new mining activities in south-west NSW and eastern South Australia could lead to significant volumes of freight movement. The ability for ports, particularly those in South Australia to handle the potential volumes will determine future supply chains and infrastructure needs.

### Hay

The 2012 *Regional Freight Transport Issues* paper identified the increasing importance of hay as an export commodity from the Wimmera Southern Mallee. It noted that a number of industries exist in the north and west of the region, as well as Horsham, involved in the distribution of hay. Some of this

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product is exported via containers which can occur on rail through the Wimmera Intermodal Freight Terminal. However the diverse nature of potential destination north in the south of Victoria and interstate mean that transport movements by road can be quite diverse.

### **Horticulture**

Whilst the region is dominated by broadhectare cropping, there is also some limited horticultural production. This includes:

- a large carrot farm near Kaniva from which carrots are transported to Robinvale for processing.
- grape and wine production south of Horsham and in the Great Western/Halls Gap area.
- Telopea Downs potatoes, nuts and grapes.

## 12 Tourism

Tourism has been identified by councils in the region as a strategically important component of their economic development. Figure 28 shows the contribution of tourism to local economies. Notably in Northern Grampians Shire tourism is around twice as important to that municipality's local economy compared to other municipalities. Tourism Victoria data for the Grampians tourism region identifies that the sector employs 2300 people with a direct economic impact of \$135 million.

Nature-based tourism represents a significant feature of the region's tourism profile. The Grampians tourism region's top seven activities including restaurant, visiting friends/relatives, general sightseeing, bushwalking, visiting national parks, pubs and shopping. The majority of visitor consumption in the region was contributed by intrastate overnight visitors (\$257 million).

**Figure 28: Contribution of tourism to each municipality's economy**

Municipality	Proportion of total Value Added for municipality	Rank of importance to local economy out of all sectors (based on Value Added)
Buloke	2.9%	12 <sup>th</sup>
Hindmarsh	2.7%	12 <sup>th</sup>
Horsham	3.4%	12 <sup>th</sup>
Northern Grampians	5.9%	6 <sup>th</sup>
West Wimmera	2.9%	10 <sup>th</sup>
Yarriambiack	2.4%	12 <sup>th</sup>

Source: Loddon Mallee and Grampians RDA Economic Profiles, Remplan

The *Wimmera Southern Mallee Regional Growth Plan* has recognised the importance of the Grampians National Park as they tourism drawcard for the region, with Halls Gap identified as the key tourism hub. It also notes that other key attractions with great tourism potential include the Great Western winery district and natural attractions like the Little Desert National Park, Wyperfeld National Park, Lake Hindmarsh, Lake Albacutya and cultural heritage sites.

One of the key issues for tourism in the Wimmera Southern Mallee is access due to the relatively dispersed and remote nature of much of the region, particularly the national parks in the west and north.

Transport has a role to play in supporting the development of the tourism sector by providing access through car and public transport, enhancing the amenity of towns, and providing appropriate travel information and amenity to visitors. In some cases transport is itself part of the tourist attraction, for example regional cycling and walking trails.

Some of the known issues and proposals for these areas include:

- Improving access to the Grampians National Park, including connections between trains and Halls Gap and proposals for a Grampians Ring Road.
- Proposals to develop long distance cycling and walking trails, including the Grampians Peak Trail, and a trail connecting the Little Desert National Park with Lake Hindmarsh.

## 13 Around the region

This section sets out some of the local transport issues that will help inform a regional plan.

### 13.1 Buloke

<b>Notable freight and trip generators</b>	<ul style="list-style-type: none"> <li>• Grain – key terminals at the main towns as well as Sea Lake, Berriwilllock and Culgoa</li> <li>• PeaCo Intermodal Terminal at Donald</li> <li>• Potential future mineral sands near Donald and at Balranald could affect the Shire's transport networks.</li> </ul>
<b>Current initiatives</b>	<ul style="list-style-type: none"> <li>• Mildura line upgrade</li> </ul>
<b>Other transport issues</b>	<ul style="list-style-type: none"> <li>• Calder Highway and Sunraysia Highway are the key north-south transport links.</li> <li>• Public transport is very limited. Given the distances involved it is a challenging doing day return trips to major surrounding service centres. The Shire supports the return of passenger trains to the Mildura line.</li> <li>• A challenge servicing an ageing and dispersed population</li> <li>• The Shire has five aerodromes to maintain. Sea Lake Aerodrome is a central point for fire fighting aircraft but only has a gravel runway.</li> </ul>

### 13.2 Hindmarsh

<b>Notable freight and trip generators</b>	<ul style="list-style-type: none"> <li>• Western Highway is the key road route</li> <li>• Grain – major receival points at Nhill, Dimboola and Rainbow.</li> <li>• Luv-a-duck, Nhill exports and local inputs</li> <li>• Aherns silo manufacturing, Nhill</li> </ul>
<b>Current initiatives</b>	<ul style="list-style-type: none"> <li>• Recent development of the trailer exchange</li> <li>• New overtaking lanes on Western Highway</li> <li>• Upgrades to Nhill aerodrome</li> </ul>
<b>Other transport issues</b>	<ul style="list-style-type: none"> <li>• Improvements to the Western Highway</li> <li>• Additional public transport options</li> <li>• Inefficiency associated with movement of grain by rail, including double handling at Nhill and Rainbow and limited axel loads on the Rainbow line.</li> <li>• Walking links to national parks</li> <li>• Nhill Aerodrome services the local hospital</li> </ul>

### 13.3 Horsham

<b>Notable freight and trip generators</b>	<ul style="list-style-type: none"> <li>• Grain</li> <li>• Wimmera Intermodal Freight Terminal</li> <li>• Horsham Regional Livestock Exchange</li> <li>• Horsham CBD as the key activity centre for the region</li> </ul>
<b>Current initiatives</b>	<ul style="list-style-type: none"> <li>• New pedestrian bridge over the Wimmera River</li> <li>• Investigating enhancements to passenger rail services</li> <li>• Development of the Wimmera Intermodal Freight Terminal precinct</li> <li>• Planning for a Western Highway bypass of Horsham</li> <li>• Grampians Way tourist ring road proposal</li> <li>• Grampians Peaks Trail proposal</li> </ul>
<b>Other transport issues</b>	<ul style="list-style-type: none"> <li>• Ongoing improvements to the Western highway</li> <li>• Current rail corridor separates Horsham CBD from North Horsham</li> <li>• Links between different highways entering Horsham</li> <li>• Need for new gravel sources for road maintenance</li> <li>• Need for enhancements to aerodrome</li> <li>• No daily air or rail service to Melbourne</li> <li>• Only one road crossing of the Wimmera River</li> <li>• Future mineral sands – transport supply chain unclear</li> </ul>

### 13.4 Northern Grampians

<b>Notable freight and trip generators</b>	<ul style="list-style-type: none"> <li>• Grain</li> <li>• Abattoir at Stawell</li> <li>• Grampians tourism</li> </ul>
<b>Current initiatives</b>	<ul style="list-style-type: none"> <li>• Western Highway duplication being planned to Stawell</li> <li>• Grampians Way tourist ring road proposal</li> <li>• Grampians Peaks Trail proposal</li> </ul>
<b>Other transport issues</b>	<ul style="list-style-type: none"> <li>• Use of local roads for freight movement</li> <li>• Public transport access to the Grampians</li> <li>• Lack of regular passenger trains to Stawell</li> </ul>

### 13.5 West Wimmera

<b>Notable freight and trip generators</b>	<ul style="list-style-type: none"> <li>• Livestock to abattoir at Naracoorte (SA) on the Wimmera Hwy</li> <li>• Trips south to Portland (timber, grain)</li> <li>• Trips to Keith (SA) where there is an industrial park and agronomists</li> <li>• Trips to My Gambier (SA) for wood chipping</li> <li>• Grain distributor on Charam-Wombelano Road</li> </ul>
<b>Current initiatives</b>	<ul style="list-style-type: none"> <li>• Council Plan identifies desire to improve walking tracks/paths in parks and towns</li> </ul>
<b>Other transport issues</b>	<ul style="list-style-type: none"> <li>• Potential mineral sands to the south</li> <li>• Issues around industry changing supply chains after road upgrades (Serviceton)</li> </ul>

### 13.7 Yarriambiack

<p><b>Notable freight and trip generators</b></p>	<ul style="list-style-type: none"> <li>• Grain. Key distribution points include Murtoa, Hopetoun, Speed, Beulah, Woomelang and Warracknabeal (includes private and GrainCorp facilities at Warracknabeal).</li> <li>• Hay from Northern Wimmera – exported by road</li> <li>• Mineral sands rail head at Hopetoun</li> <li>• Gypsum extracted between Rainbow and Hopetoun – exported by local and arterial roads</li> </ul>
<p><b>Current initiatives</b></p>	<ul style="list-style-type: none"> <li>• Murray Basin Rail Freight project – upgrades to Hopetoun and Mildura lines and possible new link between the two lines.</li> <li>• Possible new private grain distribution facility proposed east of Rupanyup.</li> </ul>
<p><b>Other transport issues</b></p>	<ul style="list-style-type: none"> <li>• Private grain distributors rely entirely on road transport, although GrainCorp has been utilising rail more in recent times.</li> <li>• Rainbow-Yaaapeet railway line is not active.</li> <li>• Dimboola-Minyip-St Arnaud local road is used in preference to the Borung Hwy which is considered too rough</li> <li>• Aerodromes are costly to rehabilitate – three municipal facilities at Hopetoun, Patchewollock and Warracknabeal. Air ambulance access at Hopetoun is important.</li> </ul>

## PART C – PROJECT SELECTION AND PRIORITISATION

One of the purposes of the Wimmera Southern Mallee Regional Transport Strategy is to set out projects of regional significance which will help deliver state, regional and local transport and land use objectives. In particular, the strategy identifies those projects which are a priority for the Wimmera Southern Mallee

To ensure the strategy is robust, a methodology was developed to provide a consistent basis for selection and prioritisation of projects and to ensure that projects linked back to the evidence base around issues and opportunities for the region. The details of this methodology are set out below.

### 14 Project selection

Potential projects for inclusion in the strategy were identified by the strategy's Technical Working Group.

A project selection tool was developed to ensure that projects were strategically robust and could potentially be justified having regard to the State's approach to funding transport infrastructure. As such a simplified version of the Department of Treasury and Finance's investment framework was prepared to guide proponents.

Problems and opportunities	<ol style="list-style-type: none"> <li>1. What is problem or opportunity trying to be addressed?</li> <li>2. Is there evidence to support this issue?</li> </ol>
Regional benefit	<ol style="list-style-type: none"> <li>3. What are the benefits to or impacts on the region?</li> <li>4. Will the proposal help implement state or regional plans?</li> <li>5. Will the proposal deliver on the relevant strategy's Vision and objectives?</li> </ol>
Strategic response	<ol style="list-style-type: none"> <li>6. Will the project be an effective way to respond to the identified problem? Can it be modified to increase the benefits?</li> <li>7. Are there are other ways to deal with this problem?</li> </ol>
Solution	<ol style="list-style-type: none"> <li>8. Is the proposed project clearly described in its location, extent and nature?</li> <li>9. Is the proposed project feasible and potentially suitable for government support?</li> </ol>

Projects nominated included infrastructure, service improvements, maintenance and strategic planning.

## 15 Project prioritisation

A number of existing project prioritisation tools were examined to determine an appropriate methodology for the Wimmera Southern Mallee Regional Transport Strategy. These included tools used by RDA Gippsland, VicRoads, G21 Regional Growth Plan Implementation Plan and the great South Coast Regional Transport Strategy.

It was found that most of these methods assess and prioritise regional projects in three dimensions via an aggregated weighting system comprising:

- Strategic Impact
- Regional Impact
- Implementation.

The Technical Working Group and Project Steering Committee agreed to use a modified version of G21 region's Regional Growth Plan Implementation Plan prioritisation methodology. This methodology is also consistent with that used for the Central Highlands Regional Transport Strategy and features:

- A multi-criteria analysis to allow for a range of considerations relevant to the broad scope of the region.
- Criteria with clear links back to an overall strategic framework (e.g. the principles set out in the Regional Strategic Plan, Regional Growth Plans, State policy documents, and the objectives of the Transport Integration Act)
- Criteria which considers social, economic and environmental impacts and potentially some other specific transport outcomes as well.
- Detailed scoring guidelines
- An approach that is relatively simple and transparent.

Scenario testing was undertaken to determine appropriate weighting for each category.

It was noted during testing that most infrastructure projects have some economic, social, environmental and regional impacts, while most investigations, studies, strategy developments and possibly service delivery have small or negligible direct impacts. Therefore, projects that provide infrastructure were being overly advantaged in the prioritisation of projects. To overcome this issue infrastructure/service delivery projects are assessed for their final outcome rather than being assessed at planning phase. Future strategies are dealt with as a separate category.

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The final methodology used for prioritisation of projects is as follows:

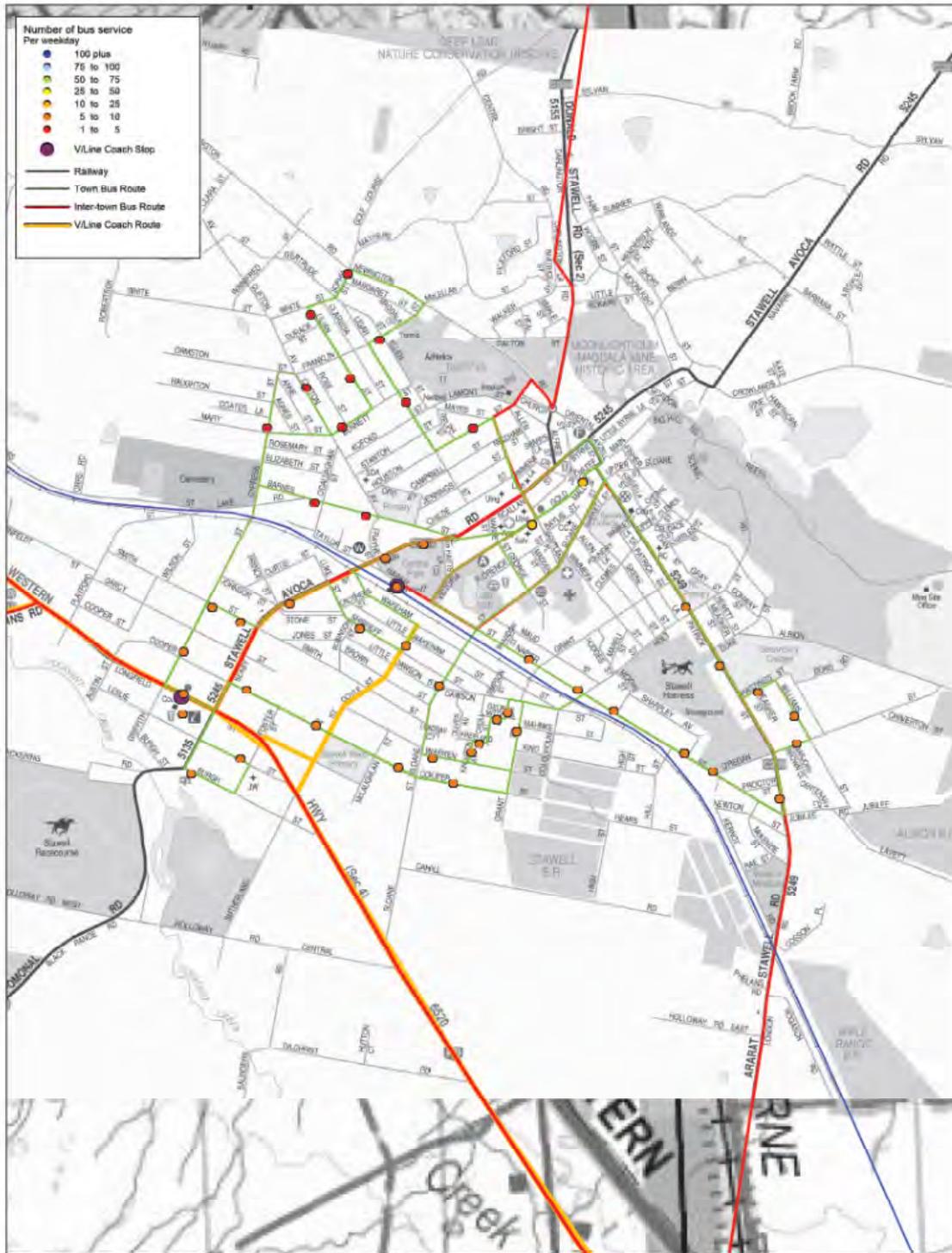
PROJECT ASSESSMENT FRAMEWORK			
Strategic objective criteria	Weightings	Score (0-10)	Result (W x S)
Economic impact	35		
Social impact	25		
Environmental impact	20		
Transport Network impact	20		
<b>Total</b>	<b>100</b>	<i>Sub-total</i>	
Regional impact criteria	Weightings	Score (0-10)	Result (W x S)
Regional impact	<b>25</b>		
Strategic objective + Regional impact		<i>Total</i>	
Strategic implementation criteria	Weightings	Score (0-10)	Result (W x S)
Link to Wimmera Southern Mallee Strategies and Plans	9		
Level of support/funds committed	9		
Level of planning	7		
<b>Totals</b>	<b>25</b>	<i>Sub-total</i>	

The scoring guidelines for each category are set out below:

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SCORING GUIDELINES			
Assessment criteria	Description		
<b>Economic impact</b>	<b>Contribution to job growth, increased investment, productivity and innovation; building on competitive strengths</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
No or little impact	Enables and/or facilitates	Generates new or increased activity	Creates significant new or increased activity
<b>Social impact</b>	<b>Contribution to building skills, health and wellbeing, safety, addressing disadvantage and community building</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
No or little impact	Enables and/or facilitates	Delivers an improvement	Delivers a significant improvement
<b>Environmental impact</b>	<b>Contribution to the protection, restoration and enhancement of the environment; supports sustainable outcomes</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
No or little impact; potentially negative	Enables and/or facilitates	Delivers an improvement	Delivers a significant improvement
<b>Transport network importance</b>	<b>Critical nature of network proposal and ability to build on existing services, plans, investigations and infrastructure and offer additional capacity/flexibility</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
Not critical and unable to build on existing	Not critical but able to build on existing Moderate by unable to build on existing	Critical but unable to build on existing; offers extra capacity and flexibility Moderate and able to build on existing	Critical and able to build on existing; offers additional capacity and flexibility
<b>Regional impact</b>	<b>Breadth of impact (local/subregional/regional)</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
Local impact with limited benefits outside of the immediate area	Moderate impact. E.g. benefits a regional centre or strategic regional asset but not the broader region	Subregional impact which will benefit two or more municipalities, regional centres or strategic regional assets	Significant regional project with a notable impact across multiple municipalities
<b>Link to WSM Regional strategies and plans</b>	<b>Status of project delivering on WSM Strategy and Plan outcomes</b> <i>(Noting that the WSM Strategy and Plan do not list projects per se.)</i>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
No or negligible link to strategies and plans	Has some links to and/or complements strategies and plans	Strongly linked to and/or complements strategies and plans	Priority project
<b>Level of support / funds committed</b>	<b>Level to which project has received either support and/or committed funding from government(s) / private sector</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
In-principle support only, no funding committed	Government support but no funding committed	Government support and some funds /next cycle	>50% funding committed.
<b>Extent of planning ('Project Readiness')</b>	<b>Extent to which project has been planned, designed and/or undergone business case assessment</b>		
Low 0 – 1	Low to medium 2 – 4	Medium to high 5 - 8	Very high 9- 10
Desktop study/concept only, preliminary planning	Business case or detailed planning in progress	Business case in place, in detailed planning phase	Sound business case, 'ready to go'

# Appendix 1 – Local bus route examples – coverage and frequency of services

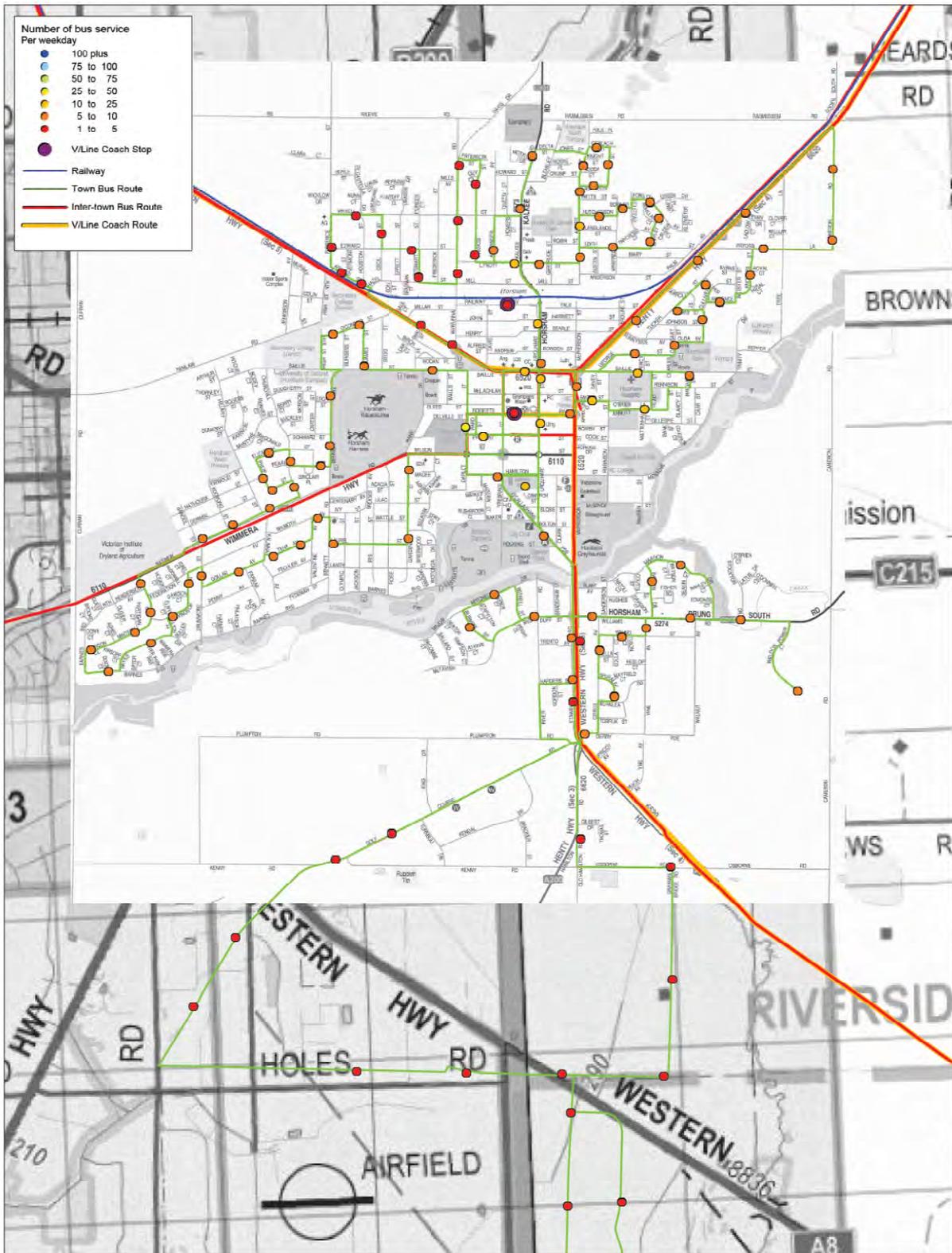


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**Stawell**  
**Weekday PT Service Frequency**

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Department of Transport, Planning and Local Infrastructure  
 Mapping and Design Map: 858-4-1 12/02/2014

**Horsham**  
**Weekday PT Service Frequency**

## Appendix 2 – C class roads prioritisation tool

The following tool uses traffic volumes and proportion of heavy vehicles to help provide a basis for prioritising C class roads. It also identifies routes with crash rates higher than the State average. Note that this only provides a starting point for prioritising routes and must be considered in conjunction with other factors such as road conditions, supply chains, tourist routes and other local knowledge. The final list of prioritised C class roads is set out in the *Wimmera Regional Transport Strategy*. Traffic data should be read as indicative only.

Priority	
Traffic volumes greater than 1000 per day	H
Traffic volumes equal to or greater than 200 per day and percentage of trucks equal to or greater than 20	H
Traffic volumes between 100 and 200 per day and percentage of trucks equal to or greater than 20	M
Traffic volumes less than 100 per day and percentage of trucks less than 20	L

### Priority routes for widening from the 'C' Routes Strategy 2009

Traffic Volumes over 500 and crashes per 100 million kilometre - greater than State average

Traffic Volumes over 200 and crashes per 100 million kilometre - greater than State average

Road	All vehicles	Trucks	% of trucks	Council name	Priority
DIMBOOLA-RAINBOW ROAD	1760	180	10	HINDMARSH	H
ARARAT-STAWELL ROAD	1700	190	11	NORTHERN GRAMPIANS	H
GRAMPIANS ROAD	1380	150	11	NORTHERN GRAMPIANS	H
HORSHAM ROAD	1250	180	14	HINDMARSH	H
SILVERBAND ROAD	1180	150	13	NORTHERN GRAMPIANS	H
SEA LAKE SWAN HILL ROAD	850	170	20	BULOKE	H
BORUNG HIGHWAY	820	210	26	YARRIAMBIACK	H
ST ARNAUD-WYCHEPROOF ROAD	700	180	26	NORTHERN GRAMPIANS	H
MURTOA-MINYIP ROAD	570	140	25	YARRIAMBIACK	H
DONALD-STAWELL ROAD	500	100	20	NORTHERN GRAMPIANS	H
DONALD-MURTOA ROAD	480	150	31	YARRIAMBIACK	H
WARRACKNABEAL-BIRCHIP ROAD	450	100	22	YARRIAMBIACK	H
WARRACKNABEAL BIRCHIP ROAD	450	100	22	BULOKE	H
NATIMUK-FRANCIS ROAD	430	100	23	HORSHAM	H
BIRCHIP WYCHEPROOF ROAD	420	150	36	BULOKE	H
DONALD SWAN HILL ROAD	420	170	40	BULOKE	H
BOORT CHARLTON ROAD	420	130	31	BULOKE	H
HORSHAM KALKEE ROAD	410	80	20	HORSHAM	H
DONALD MURTOA ROAD	400	140	35	BULOKE	H
MURTOA GLENORCHY ROAD	390	80	21	YARRIAMBIACK	H
NHILL-JEPARIT ROAD	390	90	23	HINDMARSH	H
EDENHOPE COLERAINE ROAD	370	120	32	WEST WIMMERA	H
CHARLTON-ST ARNAUD ROAD	360	90	25	NORTHERN GRAMPIANS	H
CHARLTON ST ARNAUD ROAD	360	90	25	BULOKE	H

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Road	All vehicles	Trucks	% of trucks	Council name	Priority
BORUNG HIGHWAY	350	100	29	BULOKE	H
STAWELL AVOCA ROAD	320	90	28	NORTHERN GRAMPIANS	H
BORUNG HIGHWAY	310	80	26	HINDMARSH	H
NATIMUK-FRANCIS ROAD	300	90	30	WEST WIMMERA	H
NHILL-HARROW ROAD	250	60	24	HINDMARSH	H
NATIMUK-HAMILTON ROAD	240	50	21	HORSHAM	H
HOPETOUN-RAINBOW ROAD	230	50	22	YARRIAMBIACK	H
HORSHAM-DRUNG SOUTH ROAD	230	100	43	HORSHAM	H
BOORT WYCHEPROOF ROAD	230	70	30	BULOKE	H
ST ARNAUD WYCHEPROOF ROAD	230	90	39	BULOKE	H
NHILL-NETHERBY ROAD	210	60	29	HINDMARSH	H
EDENHOPE-PENOLA ROAD	200	90	45	WEST WIMMERA	H
JEPARIT-WARRACKNABEAL ROAD	200	60	30	YARRIAMBIACK	H
CASTERTON-NARACOORTE ROAD	190	60	32	WEST WIMMERA	M
LANDSBOROUGH ROAD	190	50	26	NORTHERN GRAMPIANS	M
DONALD STAWELL ROAD	190	80	42	BULOKE	M
HOPETOUN-SEA LAKE ROAD	170	40	24	YARRIAMBIACK	M
KANIVA-EDENHOPE ROAD	170	60	35	WEST WIMMERA	M
HOPETOUN SEA LAKE ROAD	170	40	24	BULOKE	M
HOPETOUN-WALPEUP ROAD	160	40	25	YARRIAMBIACK	M
SEA LAKE ROBINVALE ROAD	160	80	50	BULOKE	M
BIRCHIP SEA LAKE ROAD	140	40	29	BULOKE	M
BIRCHIP-RAINBOW ROAD	120	30	25	HINDMARSH	M
JEPARIT-WARRACKNABEAL ROAD	100	30	30	HINDMARSH	M
PATCHEWOLLOCK-SEA LAKE ROAD	100	40	40	YARRIAMBIACK	M
HORSHAM-NORADJUHA ROAD	590	110	19	HORSHAM	L
ARARAT-HALLS GAP ROAD	570	100	18	NORTHERN GRAMPIANS	L
MARYBOROUGH-NATTE YALLOCK ROAD	470	60	13	NORTHERN GRAMPIANS	L
STAWELL-POMONAL ROAD	380	60	16	NORTHERN GRAMPIANS	L
NORTHERN GRAMPIANS ROAD	340	40	12	NORTHERN GRAMPIANS	L
NHILL-YANAC ROAD	240	40	17	HINDMARSH	L
BIRCHIP-RAINBOW ROAD	90	30	33	YARRIAMBIACK	L
NORTHERN GRAMPIANS ROAD	90	20	22	HORSHAM	L
WARRACKNABEAL-RAINBOW ROAD	90	20	22	YARRIAMBIACK	L
BIRCHIP-RAINBOW ROAD	90	40	44	BULOKE	L
NHILL-HARROW ROAD	80	20	25	WEST WIMMERA	L
PATCHEWOLLOCK-SEA LAKE ROAD	80	30	38	BULOKE	L
CASTERTON-EDENHOPE ROAD	70	20	29	WEST WIMMERA	L
WOMBELANO ROAD	70	20	29	WEST WIMMERA	L
SERVICETON NORTH-TELOPEA DOWNS	60	20	33	WEST WIMMERA	L
LAKE WARTOOK ROAD	50	0	0	NORTHERN GRAMPIANS	L