



CENTRAL HIGHLANDS REGIONAL TRANSPORT STRATEGY 2014

Background Report
Final v4
July 2014



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1 Introduction

The purposes of this document are to:

- highlight the key strategic policies and directions which will influence the development of the Central Highlands Regional Transport Strategy
- consider whether the objectives and directions of the previous Central Highlands Regional Transport Strategy remain appropriate in light of this policy framework.
- set out the evidence base for the Central Highlands Regional Transport Strategy by establishing a regional context for future transport planning.
- identify the methodology used to select and prioritise projects included in the Central Highlands Regional Transport Strategy.

The report identifies some of the key drivers affecting the Central Highlands' population and economy which will need to be planned for over coming years. It also sets out the region's transport network and highlights its key attributes and how it is used from the perspective of both public transport and roads users. The report also outlines the key freight tasks that must be managed by the transport network.

The primary focus of the policy review is on existing state and regional transport and land use strategies, although some existing local transport strategies are also highlighted to provide a more complete picture.

1.1 What area comprises the Central Highlands?

For the purposes of this project the Central Highlands comprises the municipalities of Ararat, Pyrenees, Ballarat, Moorabool, Hepburn, Northern Grampians, Central Goldfields and the northern portion of the Golden Plains Shire (the southern portion being more closely associated with Geelong and the G21 region). 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.

Figure 1: Central Highlands location map



PART A – POLICY REVIEW

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 Central Highlands region the National Network comprises the Western 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 Central Highlands. 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, Midland Highway and Melbourne – Adelaide and Maryborough – Ballarat – Geelong 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 Central Highlands. 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** – Identify and progressively declare, subject to necessary road upgrades, a 'Mass Freight Network' for access by HPFVs operating at higher mass limits, which may include the Western Highway from Ballarat to the Port of Melbourne.
- **Cross-regional routes** – The plan outlines the importance of upgrading regional Victoria's cross-regional freight links, such as the Midland Highway.
- **Intermodal terminal network** – A metropolitan intermodal system is proposed for Melbourne to help relieve pressure on road connections to the port (see below). The government will also work to develop the regional intermodal terminal network, such as at the Ballarat Freight Hub.
- **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:

Figure 2: Long term regional freight network vision



Source: Victoria the Freight State

Key projects under consideration that would affect the Central Highlands are:

- Western Interstate Freight Terminal – a new freight precinct and terminal in Melbourne’s west with connections to the national highway and road network. The relocation of the state’s freight terminal facilities from central Melbourne to the west of the city will enhance accessibility for the Central Highlands to warehousing and distribution servicing regional and interstate markets.
- Completion of the Western Highway duplication to Stawell
- Outer Metropolitan Ring Transport Corridor to provide orbital capacity to the west of Melbourne, linking to the aforementioned freight terminal
- Western Highway upgrade from Rockbank to Melton
- Development of a proposal to standardise the Mildura railway line
- A future freight terminal at Ballarat.

3.2 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 the future of the Central Highlands region. This is because either:

- the strategy directly refers to proposals in the region; or
- initiatives in Melbourne, particularly in the west of the city, will impact upon accessibility to jobs and services for Central Highlands' residents and access to markets for freight.

Some of the key directions and proposals of *Plan Melbourne* of greatest relevance are as follows.

- **Infrastructure proposals** – A proposed Outer Metropolitan Ring Road and railway would have a significant impact on the accessibility of land on the western side of Melbourne to key transport corridors and the Central Highlands.
- **State of cities** – 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.
- **Peri-urban areas** – The strategy supports identifying land within peri-urban areas which are strategically important for Melbourne. It also identifies towns where additional housing may be provided to attract population growth out of Melbourne, including Ballan and Bacchus Marsh.
- **Land use** – Some key proposed land uses for western Melbourne which could influence travel patterns from the Central Highlands are:
 - The establishment of a state significant Western industrial Precinct
 - A proposed Metropolitan Activity Centre at Toolern
- **Freight access** – Includes the Western interstate Freight Terminal, as described above.

3.3 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:

- 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.

3.4 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.

3.5 Network Development Plan – Metropolitan Rail (2012)

The Network Development Plan is a detailed examination by Public Transport Victoria of how Melbourne's train system needs to 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.

The plan is designed to:

- expand the capacity of the existing network to meet the growing needs of the city;
- redesign train services to maximise opportunities for seamless coordination with buses and trams; and
- extend the network to areas currently not served by metropolitan rail.

Its central direction is to develop a metro-style rail system for Melbourne including simple, frequent service patterns and stand-alone lines which minimise intersection and merging.

It contains a number of initiatives that will benefit Central Highlands rail travellers through changes to the Melton line and other linked lines. Key enhancements suggested are:

Key enhancements suggested are:

- Completion of Regional Rail Link (under construction), allowing segregation of Ballarat services from metropolitan services, thus providing potential for an additional two peak services and protecting travel times (Stage 1 of the plan to be completed by 2016).
- The need for duplication of the rail line to Melton and quadruplication between Deer Park and Sunshine (Stage 2 of the plan, ie within 10 years).
- The need for an additional two passing loops between Bacchus Marsh and Ballarat to provide additional capacity, include counter-peak capacity (Stage 2 of the plan).
- Electrification of the line to Melton (Stage 3 of the plan, ie within 15 years).

3.6 Future Network Development Plans

Public Transport Victoria intends to develop additional Network Development Plans for on-road public transport and regional public transport in 2014-15.

3.7 Victoria's 2020 Tourism Strategy (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 Central Highlands 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 Central Highlands 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.

3.8 Victoria's Regional Tourism Strategy 2013-2016 (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 well represented in the Central Highlands region. Strategic responses identified in the Strategy that are relevant for the Central Highlands Regional Transport Strategy include:

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

3.9 Victorian Trails Strategy 2014-24 (2014)

There are a wide variety of trails across Victoria that provide opportunities for health, wellbeing and economic development. The 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
- Provide high quality information on trails
- Create better trail experiences
- Market trails

Trails of international, national or state significance within the Central Highlands are:

- The Grampians Peak Trail (in planning and stage 1 construction) – Connecting various parts of the national park and the towns of Dunkeld and Halls Gap.
- Goldfields Track – Mount Buninyong to Bendigo via Creswick, Daylesford and Castlemaine.

3.10 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 Central Highlands Regional Transport Strategy as it considers cycle tracks and trails, both on- and off-road in the region.

3.11 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

4.1 Central Highlands Regional Transport Strategy (2011) and Funding and policy priorities of the Central Highlands Region (2012)

The strategy provides a whole-of-region strategic approach to identifying transport directions and actions for the Central Highlands. It builds on needs and challenges outlined in the Regional Strategic Plan, which suggested the need for such a strategy.

Key policy challenges identified are:

- Responding to population and employment change
- Addressing the ageing population in rural areas
- Managing the development of freight transport
- Responding to the changing cost of transport; and
- Developing the service economy

The strategy then sets out a number of objectives, directions and actions to enable the transport system to respond to these challenges. These are summarised in the table below.

A list of priority projects was subsequently prepared, setting out immediate priorities for funding and policy support from the state and federal governments. These are highlighted in the table below. Priorities were identified by councils and agreed to by the region.

Objectives	Directions	Summary of actions (priorities shown in bold)
1. Expand transport networks for growing areas	Deliver committed road and rail upgrades	<ul style="list-style-type: none"> • Upgrade Ballarat – Buninyong Rd • Ballarat West Link Road • Woolpack Rd extension • Wendouree rail service enhancements • Ballan Station upgrade • Implement highway strategies
	Provide public transport to support growth	<ul style="list-style-type: none"> • Deliver Regional Rail Link • Extend town bus networks in growth areas • Park and Ride station at Warrenheip • Reopening Gordon Station • Suburban rail services to Bacchus Marsh.
	Identify new trunk arterial roads to support growth	<ul style="list-style-type: none"> • Bacchus Marsh north-south routes • The Parwan – Exford Road and Greigs Road corridor • The Diggers Rest – Coimadai Road corridor • Warrayatkin Road to Ararat prison
	Dedicate a funding stream to urban growth area roads	<ul style="list-style-type: none"> • Establish dedicated fund
2. Manage amenity impacts of freight	Plan for future city/town bypasses	<ul style="list-style-type: none"> • Eastern corridor Ballarat bypass • Bypasses and freight network at Ararat and Beaufort • Western Hwy alignment at Stawell • Small town bypasses • Extension of Woolpack Rd to Gisborne Rd
3. Plan for a 'networked region' in transport and	Develop linkages between major centres	<ul style="list-style-type: none"> • Minimum public service level for public transport between key centres • Inter-regional rail feasibility study • Midland Hwy upgrade Ballarat - Geelong

Objectives	Directions	Summary of actions (priorities shown in bold)
land use	Improve the quality for links between the region and Melbourne	<ul style="list-style-type: none"> A simple and regular V/Line train service Review level crossings for closure Intersection grade separations on the Western Freeway Realign the Castlemaine –Elphinstone section of the Pyrenees Highway
	Improve connectivity to regionally significant tertiary education	<ul style="list-style-type: none"> Review public transport to better meet tertiary education needs Ballarat – Buninyong bus service
	Include smaller communities in the region's network	<ul style="list-style-type: none"> Small-scale public transport initiatives Reopen Talbot Station Improve town footpaths
	Explore land use opportunities on strategic network links	<ul style="list-style-type: none"> Land use capability assessment for Bendigo – Ballarat – Geelong corridor
4. Provide efficient access to markets for the Region's production	Designate and manage routes for established freight movements	<ul style="list-style-type: none"> Designate B-class roads as principal freight routes Maintain the Region's rail network as a principal freight route Upgrade road and rail infrastructure
	Identify preferred routes for emerging demand	<ul style="list-style-type: none"> Identify Lexton – Beaufort – Skipton – Werneth Cressy as a preferred route for timber and grain Freight traffic to Ballarat Western Link Rd
	Improve the financial sustainability of local road management through revenue and asset management strategies	<ul style="list-style-type: none"> Direct revenue stream to local government Direct recovery of costs Asset management strategies
	Maintain quality access to ports and airports	<ul style="list-style-type: none"> Ongoing upgrades to Western Freeway Support for Truck Action Plan, WestLink and Outer Metropolitan Ring Road
	Examine development of an HPFV hub in the region	<ul style="list-style-type: none"> Intermodal terminal for Ballarat West Restrict HPFVs on local roads
5. Support the needs of visitors to the Region	Enhance public transport services for the visitor market	<ul style="list-style-type: none"> Train/bus connections to the Grampians Day travel by rail to Maryborough Market services
	Innovate in tourism navigation	<ul style="list-style-type: none"> Tourism way finding app Review tourism signage and touring routes
	Manage the recreational uses in the region's transport network	<ul style="list-style-type: none"> Identify recreation uses in road management strategies Infrastructure improvements to manage conflicts
6. Increase the resilience of the transport system under changing circumstances	Communicate the region's circumstances in advocacy on carbon and road pricing	<ul style="list-style-type: none"> Develop a regional position on transport pricing
	Plan flexibly for changing vehicle technology	<ul style="list-style-type: none"> Flexible site planning for fuel changes Councils switch to electric/hybrid vehicles
	Bolster the transport network's resilience to physical disruption	<ul style="list-style-type: none"> Develop a network resilience strategy

Other projects identified in the 2012 priority list, but not included in the original 2011 strategy were:

- Map the region's strategic arterial roads under the SmartRoads framework
- Roadside vegetation management program.

4.2 Central Highlands Regional Strategic Plan (2010, updated 2012)

The *Central Highlands Regional Strategic Plan* was first published in 2010 and sets a framework to deliver on the collective aspirations of communities across the region. The regional strategic plan sets the following vision for the region:

To position the Central Highlands region to 2030 and beyond to provide a productive, sustainable and liveable region for its people.

In 2012 the regional strategic plan was refreshed and updated as a shorter summary document. It identifies the following strategic directions for the region:

1. Plan for growth
2. Improve transport infrastructure and services
3. Raise the region's profile as a tourist and heritage destination
4. Utilise the region's strength in ICT to provide better services to business and communities
5. Improve access to health services and tackle health inequality
6. Provide better access to education and training
7. Continue to foster leadership capacity within the region
8. A productive and resilient landscape.

In relation to transport it seeks to capitalise on the region's access to the major east-west highway and railway spine that links directly to Melbourne and increase the capacity for north-south movement, particularly for freight and commodities to enhance the productivity and liveability of the region.

It provides a link to priorities identified in the Regional Transport Strategy and Regional Growth Plan, to be delivered by planning, advocacy and collaboration at a regional level.

4.3 Central Highlands Regional Growth Plan (4)

Taking in the municipalities of Ararat, Pyrenees, Hepburn, Ballarat, Moorabool and the northern part of Golden Plains, the *Central Highlands Regional Growth Plan* (CHRGp) 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:

- **Population growth should be planned in sustainable locations throughout the region** – With the region forecast to grow by around 78,000 persons to 2041, the plan directs this growth to existing towns with access to transport, services and jobs. Of particular note:
 - A settlement framework is established outlining preferred locations and levels of growth (see map below).
 - Ballarat, Bacchus Marsh and Ararat are to be the key regional locations for higher order services and facilities.
- **The region's economy should be strengthened so that it is more diversified and resilient** – Greater economic self-sufficiency for the region is encouraged building on the region's existing and emerging strengths such as agriculture, tourism, natural resources and the knowledge economy. The plan identifies economic resources of regional resources such as significant agricultural areas, tourism drawcards and the Ballarat West Employment Zone as an employment hub.

- **The region should capitalise on its close links with other regions and cities** – The plan supports integrating planning for passenger and freight transport with its land use directions. Links to neighbouring regions are to be enhanced and urban growth is to be located along key transport corridors.
- **The development of sustainable and vibrant communities should be supported by enhancing the level of access to key services** – Planning for services and facilities should be linked to population growth. It is recognised that innovative models of service delivery may be required for the more rural and remote parts of the region.
- **Land use patterns, development and infrastructure should make the region more self-sufficient and sustainable** – The development of sustainable communities which can provide local jobs and services for residents is encouraged by the plan. Sustainable urban forms and infill development are also promoted.
- **Planning for growth should be integrated with the provision of infrastructure** – Whilst the plan encourages the provision of infrastructure to help manage population and economic growth opportunities, it also recognises the need to support the efficient use of existing infrastructure.
- **Long-term agricultural productivity should be supported** – Agriculture is identified as a regionally significant activity. However it is recognised that there is a need for flexibility in rural production areas given changing climatic and economic conditions.

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 CHRGP identifies synergies with the *Central Highlands Regional Transport Strategy*. In particular it seeks to:

- **Improve capacity** – The need to enhance connectivity to growth areas and employment areas is identified. Bacchus Marsh's north-south access issues and the Ballarat West Link Road are used as examples.
- **Ensure access and connectivity between settlements** – The potential to attract reverse commuters to the region's facilities and enhancements on access to tourism destinations are noted.
- **Provide a safe, reliable and resilient transport network** – Examples include managing fire and flood disruptions, upgrading single track railways and ongoing maintenance of the transport network.
- **Consider technological advances** – Opportunities may exist around new technology to improve access and communication.
- **Ensure amenity and useability** – This could include reviewing freight routes through high amenity towns such as Daylesford and enhancing tourist routes and connections to rail trails.
- **Develop freight precincts** – The plan notes the importance of freight hubs to manage increased agricultural and manufacturing outputs. Freight gateways could be established around the Ballarat West Employment Zone, regional airports, or specific activities.
- **Ensure efficient supply chains** – There is further recognition of the importance of north-south freight routes to the region, with the plan outlining the need to enhance key routes such as the Midland Highway and Skipton – Geelong link. Given the role of agriculture, horticulture and timber to the region, the role of local roads is highlighted in relation to maintenance and weight restrictions.

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

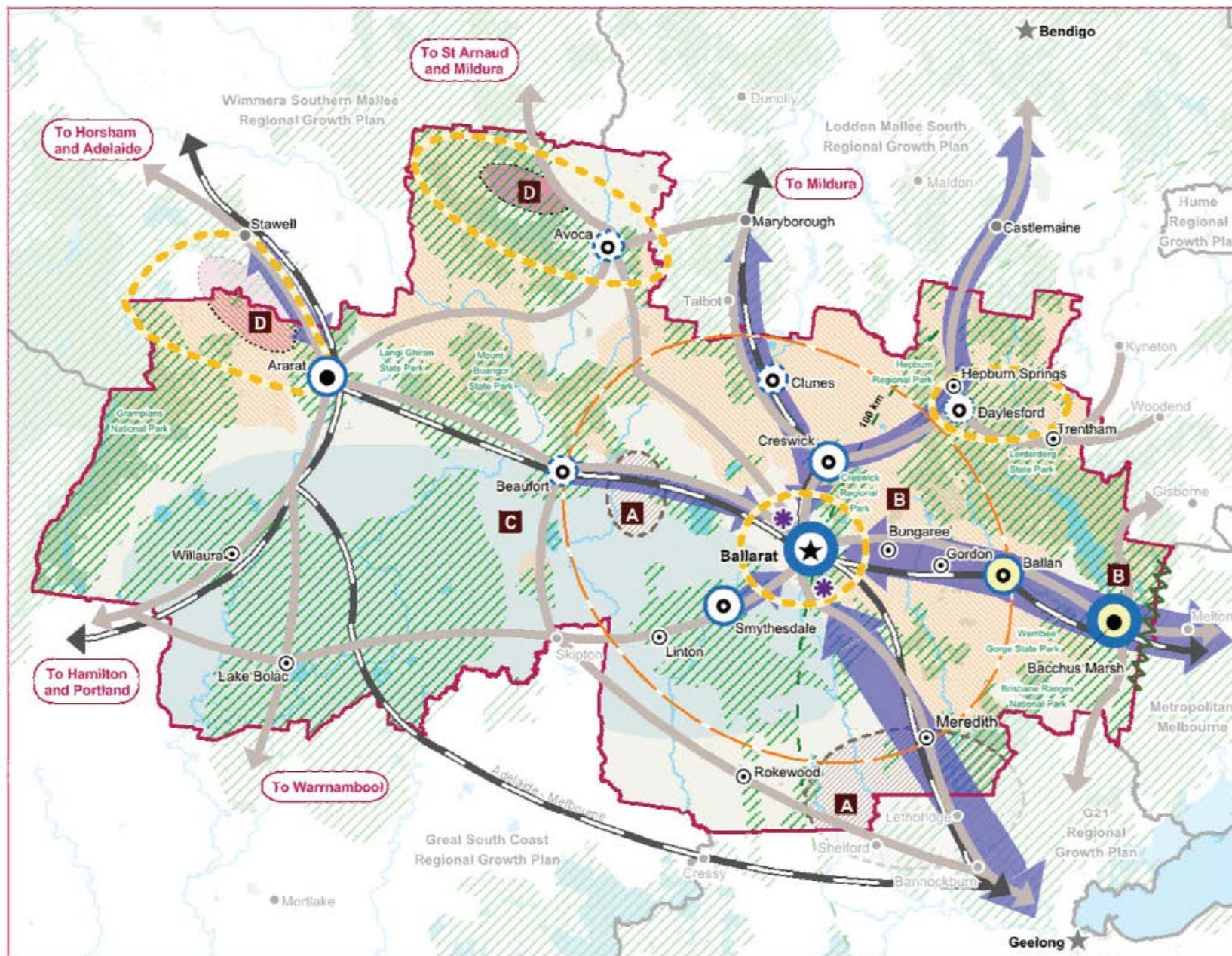


Figure 3: Central Highlands regional growth plan

Source: DTPLI

SETTLEMENT NETWORK



Ballarat - Regional city

Reinforce the role of Ballarat as the main centre for regional growth, services and employment. Focus major growth to the west. Support the development of major regional facilities and encourage development of the Central Business District as a vibrant alternative to Melbourne.

Regional centre

Support the development of Ararat and Bacchus Marsh as the key service centre for each end of the region. Encourage further population growth in Ararat and support anticipated population growth in Bacchus Marsh by providing adequate land and infrastructure in appropriate locations.

Town

Continue to provide local and some sub-regional services. Support ongoing growth, particularly closer to the Melbourne and Ballarat hinterland where towns will provide a key opportunity to target growth pressure. Constrain the outward growth of Daylesford due to environmental assets and natural hazards.

Small town

Plan for ongoing sustainable growth and change. Ensure these communities can access services either within the town or within easy commuting distance.

Settlement break

Maintain a clear distinction between the Melbourne metropolitan area and the rural character of the Central Highlands.

MELBOURNE AND BALLARAT HINTERLANDS



Melbourne and Ballarat hinterlands

Manage growth pressure by directing it to well serviced settlements with good access to Melbourne or Ballarat, particularly Bacchus Marsh, Ballan, Creswick, Clunes, Beaufort and Smythesdale. Ensure appropriate provision of infrastructure in towns experiencing rapid population increases. Consolidate rural residential development to strategically planned locations to manage rural productivity, protect environmental assets, minimise exposure to natural hazards and support established settlements.

Plan Melbourne (Chapter 6 – State of Cities) identifies Bacchus Marsh and Ballan as peri-urban towns with potential to attract housing and population growth out of Melbourne.

CONNECTIVITY



Key relationship

Enhance the connectivity of the region's key centres to each other and key external centres where there are strong housing, employment and service relationships. Capitalise upon these links and relationships to stimulate growth and development in designated centres along these corridors. Support commuting to Ballarat along the Melbourne corridor.

Key transport link (road and rail)

Support ongoing improvements to the road and rail networks to improve access and connectivity. Ensure transport provision facilitates growth in the key locations identified in this plan. Provide access for freight to markets, particularly to ports and markets to the south.

ECONOMIC DEVELOPMENT



Employment

Ensure employment land is supplied in the regional city, regional centres and towns to encourage local employment and reduce the need for long-distance commuting. Grow key regional employment assets including the Ballarat Technology Park, Central Business District and Ballarat West Employment Zone. Recognise the need for new employment opportunities in peri-urban settlements to promote sustainable growth.

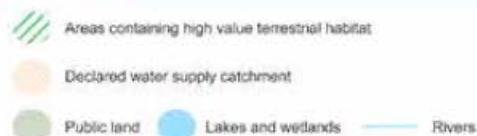
Agricultural asset

Support productive use of and investment in key regional agricultural assets to ensure the rural economy continues to grow and diversify. Protect these assets from incompatible uses.

Key tourism precinct

Support the development of the region's tourism sector and build on these iconic tourism precincts as regional drawcards.

ENVIRONMENT



Areas containing high value terrestrial habitat

Protect the region's environmental assets and recognise their role in supporting a range of environmental, economic and social benefits.

Declared water supply catchment

Ensure development is located to minimise impacts on water catchments. Support infrastructure improvements to help enhance these assets.

4.4 Loddon Mallee South Regional Growth Plan (2014)

Central Goldfields Shire is included in the *Loddon Mallee South Regional Growth Plan*. Maryborough is identified as a regional centre and employment and service hub where growth is to be supported. From an economic perspective, the plan states that:

- Maryborough should be further investigated for freight-related activities
- Dryland farming is important to Central Goldfields Shire
- There is potential to develop the Shire's equine industry.

The key road and rail corridor linking Ballarat and Maryborough and the potential for growth along this corridor are recognised. The plan also seeks to improve the Ballarat – Maryborough – Bendigo connections.

4.5 Wimmera Southern Mallee Regional Growth Plan (2014)

Northern Grampians Shire is included in the *Wimmera Southern Mallee South Regional Growth Plan*. The plan identifies Stawell and St Arnaud as district towns. 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. The plan promotes district towns as hubs for employment, services and residential growth, servicing surrounding smaller settlements to ensure they remain liveable and viable. As such transport systems need to provide access to these key hubs. Communities of interest also extend into neighbouring regions and include Stawell-Ararat-Halls Gap and St Arnaud-Donald-Charlton.

Given the dominance of broad hectare cropping as the mainstay of the Wimmera Southern Mallee's economy, the plan seeks diversification of the economy. To this end:

- Intensive agriculture is encouraged, including piggeries and broiler farms around St Arnaud.
- Halls Gap is identified as the region's tourism focal point with other tourism opportunities around the national parks.
- Viticulture is encouraged around the Great Western area.

The plan directs that infrastructure deficiencies should be addressed where they constrain industry expansion or establishment.

There are similar overarching transport directions to the CHRGP. Of note is the potential for improved tourism access, such as walking and cycling around the Grampians National Park. Good supply chain connections to ports, Melbourne and interstate destinations are also promoted.

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 crosses four municipalities and is the busiest and most important transport corridor for the Central Highlands.

Sections 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 final part of the project, Ararat to Stawell, 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.

The Government has also announced funding in its 2014/15 budget for the planning of bypasses around Ararat and Beaufort.

5.2 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

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 the ongoing improvements to the highway between Stawell and the border.

5.3 Rail Revival: Geelong-Ballarat-Bendigo (2013)

The Rail Revival study undertaken by Public Transport Victoria investigated the potential to provide passenger train services between Geelong and Bendigo via Ballarat and Maryborough. The study identified a range of opportunities and constraints associated with upgrading the line. Benefits include enhanced accessibility for residents, tourists and businesses and the potential for this to positively influence the development of regional towns. Constraints include capacity issues along some parts of the line (particularly Castlemaine – Bendigo and North Geelong – Geringhap) and the disused line between Maryborough and Castlemaine which is in disrepair.

It was estimated that the cost of reinstating the service would be in the order of \$760 - \$935 million, including track work, stations, signalling and rolling stock. Potential patronage was estimated to be in the order of 1700 – 2000 passengers a day rising to 2300 – 2800 passengers per day by 2031. The study suggested that the high upfront cost of infrastructure significantly outweighs the predicted

benefits. As such it recommends that interim opportunities to upgrade public transport services should be explored.

The study proposes a staged approach:

1. Enhance existing bus services.
2. Enhance passenger rail services between Ballarat and Maryborough.
3. Provide rail services between Geelong, Ballarat and Maryborough.
4. Provide rail services between Maryborough and Castlemaine.
5. Enhance rail services between Castlemaine and Bendigo.

The report has been submitted to the government for its consideration.

5.4 Midland Arc Issues Identification Paper

The paper sets out to describe the key demographic settings and economic trends in the Midland Arc Region. The Midland Arc region referred to in this paper is the geographical area of Victoria that generally follows the alignment of the Midland Highway between Geelong, Ballarat, (Maryborough), Castlemaine, Bendigo, Shepparton, Benalla and Mansfield, however the paper concentrates on the Geelong – Ballarat – Bendigo region of the Midland Arc, so as to align with the Public Transport Victoria's *Rail Revival Study*, discussed above. The information and evidence from this paper was used to inform the Department's response to the *Rail Revival Study, Victoria – The Freight State*, Regional Growth Plans and RDV's Regional Cities work. DTPLI is in the process of updating this paper to ensure its currency.

5.5 Crossing Borders Tracks and Trails

The Crossing Borders Tracks and Trails project is a joint initiative of Hepburn Shire Council, Ballarat City Council, Macedon Ranges Shire Council, Central Goldfields Shire Council and the State Government. The project takes an integrated approach to master planning for tracks and trails across the council areas. The project has developed a strategic plan for four identified projects to guide their implementation and management.

The four individual projects are:

- The Ballarat - Maryborough Heritage Trail¹ which aims to provide an on-road cycling connection utilising back-country roads between Maryborough to Ballarat (via Creswick and other small towns)
- The Daylesford to Macedon Ranges Rail Trail, linking Daylesford to Woodend utilising a combination of rail corridor and (where required) alternative routes
- The Black Hill Mountain Bike (MTB) Park (e.g. municipal MTB Park)
- Creswick Trails initiative which includes a combination of mountain bike trails, shared trails and walking paths throughout the Creswick forest.

The strategic planning for the four initiatives has further developed and strengthened social, recreational and active transport linkages for people living in and visiting Grampians and Loddon Mallee Region. The project has delivered four action plans, evidence base and community engagement to identify next steps. Implementation actions have commenced for some of the trails identified.

5.6 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 4):

- 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 Central Highlands depending on the preferred line or lines selected for standardisation. For example this could reduce or increase the conflict between passenger and freight trains, or see a currently disused line between Maryborough and Ararat reactivated.

6 Existing local strategies

Although the Central Highlands Regional Transport Strategy has a regional focus, local plans provide a bottom-up evidence base to help inform the regional plan. Some of the existing local transport strategies are set out below. All councils also have a road management plan as required by legislation.

- **Hepburn Freight Strategy (2012)** – The strategy sets out data and evidence around freight movements in the shire. It identifies a municipal freight route plan and priority actions to implement the plan. A secondary focus is around a truck bypass of Daylesford.
- **Hepburn Walking and Cycling Strategy (2011)** – The strategy encourages walking and cycling in the shire. It focuses on three strategic areas: community health and safety (such as improving cycle lanes); economic prosperity (such as upgrading iconic trails) and environmental sustainability. It includes a list of detailed priority projects.
- **Golden Plains Shire Road Strategy (2010, updated 2013)** – The strategy provides a framework to guide the Shire in making best use of available road funding by establishing priority local roads for improvement and maintenance works. The strategy examines 12 key components of local road network (e.g. bridges, truck routes) and identifies actions to be undertaken over the next 10 years to ensure the road assets are maintained.
- **Golden Plains Paths and Trails Strategy (2013)** – Council's strategy offers a vision, objectives, principles and priorities for paths and trails in the municipality. There are detailed recommendations for specific improvements across the all the towns in the Shire.
- **Ballarat Road Transport Strategy (2007)** – The strategy outlines issues with the operation of Ballarat's road network and identifies locations where traffic congestion may increase. It assesses potential infrastructure upgrades and outlines a number of priority projects such as the Ballarat Western Link Road, and improvements to the CBD's road network.
- **Draft Ballarat Bicycle Strategy (2014)** – Covering the period 2014-19, the draft strategy analyses key influences on cycling in Ballarat and identifies a series of recommendations around both cycling routes and other programs and partnerships. It includes a series of recommended projects.
- **Ballarat Airport Master Plan 2013-2033** – The master plan seeks the development of Ballarat Airport as a significant aviation facility servicing Western Victoria. It notes the ongoing growth of activity at the airport and recommends various strategic approaches to managing future growth including new facilities, planning protection and other management initiatives.
- **Moorabool Hike and Bike Strategy (2014)** – The strategy provides strategic direction for the planning and development of the recreation and commuter hike and bike network throughout the Shire. It promotes active transport from both a modal share and recreational perspective and seeks network improvements to encourage these outcomes. In addition to overall guiding principles for new infrastructure, it includes an action plan, proposed works and hike and bike networks in towns across the Shire.
- **Ararat Rural City Freight Action Plan (2011)** – Due to the likely growth in the use of High Performance Freight Vehicles over coming years, the plan sets out some of the implications of these vehicles for Council's road network. It identifies key freight generators, regulatory considerations and issues with existing roads and bridge structures.

7 Cross-Regional Issues

An important issue for the Central Highlands is that due to its location within the State, it is not the start or end point for many movements, but rather a region that has strong transport links with its neighbouring regions for movement of both people and goods.

Neighbouring regions of G21, Barwon South-West, Wimmera Southern Mallee and Loddon Mallee South have all developed various local and regional transport plans and studies. These plans and studies will need to be considered in the development of this transport strategy, along with engagement with neighbouring regions, to ensure consistency of approach to cross-boundary issues.

8 Setting a vision and objectives for the strategy

8.1 Compatibility of strategic objectives

One of the objectives of the project is to revisit the 2011 *Central Highlands Regional Transport Strategy* and update the strategic context for the strategy.

Since the preparation of the 2011 document, 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. 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.

The *Central Highlands Regional Growth Plan* contains seven transport "Future Directions". To ascertain whether the agreed directions of the growth plan should form the strategic framework for the new regional transport strategy, these future directions and the plan's overall vision have been evaluated in the two tables below. The tables assess whether the growth plan's vision and transport future directions complement the visions and objectives of the 2011 *Central Highlands Regional Transport Strategy* and *Victorian Freight and Logistics Plan*.

The analysis shows:

- There is a high degree of consistency between the strategic frameworks in the *Central Highlands Regional Growth Plan* and those of the other two plans.
- Most of the 2011 strategy's objectives have one very close match to a future direction in the growth plan.
- The vision in the 2011 *Central Highlands Regional Transport Strategy* is strongly consistent with the visions of the *Central Highlands Regional Strategic Plan* and *Regional Growth Plan*.
- There are no direct conflicts between the plans' strategic objectives/directions.
- There are however a number of instances where the future directions of the *Regional Growth Plan* could conflict with an objective of the 2011 strategy or the Victoria Freight and Logistics Plan. These primarily relate to strategies about protecting amenity versus strategies seeking to enhance the productivity and efficiency of the freight network. Ultimately the degree to which these conflict would depend on implementation. Indeed enhancements to the freight network could equally lead to amenity improvements for a town (such as through development of a bypass).

8.2 Recommendation

It is recommended that the *Central Highlands Regional Transport Strategy* adopts the vision and transport future directions from the *Central Highlands Regional Growth Plan* as its overarching strategic framework.

Comparison of Central Highlands Regional Growth Plan's vision and future directions for transport with the Central Highlands Regional Transport Strategy 2011's vision and objectives

- ✓ Complementary strategies
 ✗ Conflicting strategies
 ~ Strategies could support each other, or conflict with each other (outcome may depend on implementation)
- ✓ ✓ Strategies are very closely aligned / matching
 NA Strategies are not relevant to each other

		Central Highlands Regional Growth Plan 2013							
		Vision: Provide a productive, sustainable and liveable region for its people	FD: Improve the capacity and functioning of the region's transport networks	FD: Ensure access and connectivity between settlements within and external to the region	FD: Provide for a safe, reliable and resilient transport network	FD: Consider technological advances in the transport provision mix	FD: Ensure amenity and useability	FD: Develop freight precincts as places to collect and distribute goods	FD: Understand and ensure efficient ways to transport products between producers and markets
CHRTS 20-11	CHRTS vision ¹	✓ ✓	✓	✓	✓	✓	✓	✓	✓
	Objective: Expand transport networks for growing areas	✓	✓	✓	✓	✓	✓	✓	✓
	Objective: Manage amenity impacts of freight	✓	~	~	~	✓	✓ ✓	~	~
	Objective: Plan for a 'networked region' in transport and land use	✓	✓	✓ ✓	✓	✓	✓	✓	✓
	Objective: Provide efficient access to markets for the Region's production	✓	✓	✓	✓	✓	~	✓	✓ ✓
	Objective: Support the needs of visitors to the Region	✓	✓	✓	✓	✓	✓	NA	NA
	Objective: Increase the resilience of the transport system under changing circumstances	✓	✓	✓	✓ ✓	✓	✓	✓	✓

¹ To demonstrate to government and stakeholders the Region's aspirations for strategic development of an effective, sustainable and efficient transport system, servicing businesses and service providers, employees, residents and visitors travelling to, from, within, and through the Region.

Comparison of Central Highlands Regional Growth Plan's vision and future directions for transport with the Victorian Freight and Logistics Plan's goal and objectives

- ✓ Complementary strategies
 ✗ Conflicting strategies
 ~ Strategies could support each other, or conflict with each other (outcome may depend on implementation)
- ✓ ✓ Strategies are very closely aligned / matching
 NA Strategies are not relevant to each other

		Central Highlands Regional Growth Plan 2013							
		Vision: Provide a productive, sustainable and liveable region for its people	FD: Improve the capacity and functioning of the region's transport networks	FD: Ensure access and connectivity between settlements within and external to the region	FD: Provide for a safe, reliable and resilient transport network	FD: Consider technological advances in the transport provision mix	FD: Ensure amenity and useability	FD: Develop freight precincts as places to collect and distribute goods	FD: Understand and ensure efficient ways to transport products between producers and markets
V F L P 20-13	Goal: To maximise the contribution of the freight and logistics sector to Victoria's productivity and liveability	✓	✓	✓	✓	✓	✓	✓	✓
	Objective: Plan for, and deliver capacity at key freight gateways in a timely manner	✓	✓	NA	✓	✓	~	✓ ✓	✓
	Objective: Improve the efficiency and productivity of key freight network links	✓	✓	✓	✓	✓	~	✓	✓
	Objective: Ensure future options are secured for key freight network developments	✓	✓	✓	✓	NA	~	✓	✓
	Objective: Progressively decentralise freight activities from central Melbourne to selected outer industrial areas	NA	NA	NA	NA	NA	NA	NA	NA
	Objective: Protect and enhance access to markets for regional Victoria and adjoining catchments	✓	✓	✓	✓	✓	~	✓	✓ ✓

PART B – EVIDENCE BASE

9 Population

The Central Highlands Regional Strategic Plan Discussion Paper (PB, 2010a) identified some of the key attributes of the region's population and demographic profile, including:

- shifting populations from rural areas to Ballarat and Melbourne and to a lesser extent from rural areas to regional centres and community service hubs such as Ararat, Bannockburn, Stawell and Beaufort
- strong population growth in Ballarat and the peri-urban municipalities of Golden Plains and Moorabool associated with affordable living or lifestyle considerations in close proximity to Melbourne
- an ageing population in rural areas and in Ballarat
- loss of youth from rural areas to Ballarat and Melbourne for education, and often when tertiary study is complete, from Ballarat to Melbourne
- limited in-migration concentrating on urban areas, notably Ballarat.

9.1 Current population

The 2011 population of the region was 194,433. The areas of greatest population are concentrated around the major urban centres of Ballarat, Bacchus Marsh, Maryborough and Ararat.

Figure 1 shows that whilst most of the region grew in the 2006-2011 period, this growth is notably concentrated around Ballarat and in Melbourne's peri-urban area.

Between 2006 and 2011 there was a net inflow of persons from all other regions in the state, particularly Melbourne (4,391 persons), Wimmera Southern Mallee (638 persons) and Barwon (518 persons).² The flow of people from Melbourne to the peri-urban is particularly significant with a net gain of 1700 people moving from Melbourne into Moorabool Shire.

² This data does not include Northern Grampians and Central Goldfields Shires in the region, but does include the whole of Golden Plains Shire.

Figure 5: Population change 2006-2011

Statistical Local Area	Estimated residential pop 2006	Estimated residential pop 2011	Change	Change percent
Ararat (RC)	11,660	12,070	410	3.52
Ballarat (C) - Central	34,230	36,036	1806	5.28
Ballarat (C) - Inner North	29,981	34,081	4100	13.68
Ballarat (C) - North	1016	1045	29	2.85
Ballarat (C) - South	23,224	26,648	3424	14.74
Golden Plains (S) - North-West	7697	8213	516	6.70
Hepburn (S) - East	7486	8016	530	7.08
Hepburn (S) - West	6730	7004	274	4.07
Moorabool (S) - Bacchus Marsh	16,628	18,953	2325	13.98
Moorabool (S) - Ballan	6198	6708	510	8.23
Moorabool (S) - West	3628	3748	120	3.31
Pyrenees (S) - North	3401	3477	76	2.23
Pyrenees (S) - South	3385	3446	61	1.80
C. Goldfields (S) - Maryborough	7574	7629	55	0.73
C. Goldfields (S) Bal	5118	5163	45	0.88
N. Grampians (S) - St Arnaud	3528	3478	-50	-1.42
N. Grampians (S) - Stawell	8819	8718	-101	-1.15

Source: Department of Transport, Planning and Local Infrastructure

9.2 Changes in town populations over time

In terms of the region's urban centres, Ballarat is the dominant settlement, with almost six times the population of any other town. Bacchus Marsh is the largest settlement in the peri-urban area, whilst Ararat, Stawell and Maryborough make up the next tier of settlements with populations of 5000-8000 people.

Figure 2 illustrates the population changes of the region's largest settlements over a 30 year timeframe and then also the most recent 10 year census period. In general terms, over the last 30 years the settlements in the west of the region have seen stable or decreasing population numbers, whilst the towns in east have for the most part grown. The table also highlights towns where notable growth has occurred. This includes settlements where there has been a large increase in population numbers, for example Bacchus Marsh and Ballarat, and those where there has been a large proportional increase in population, such as Smythesdale and Clunes. Both situations can put pressure on services and infrastructure. In contrast, many settlements in the western part of the region have had relatively stable or declining populations.

Figure 6: Change in town populations

Town	1981	2001	2011	Change 1981-2011	% change 1981-2011	Change 2001-2011	% change 2001-2011
Ballarat	65,600	72,280	85,314	19,714	30.1	13,034	18.0
Bacchus Marsh	6269	12,152	14,779	8,510	135.7	2,627	21.6
Ballan	689	1766	2008	1,319	191.4	242	13.7
Gordon	242	407	378	136	56.2	-29	-7.1
Blackwood	-	300	295	-	-	-5	-1.7
Ararat	8463	7068	6906	-1,557	-18.4	-162	-2.3
Willaura	377	288	256	-121	-32.1	-32	-11.1
Lake Bolac	244	228	147	-97	-39.8	-81	-35.5
Daylesford	2879	3382	3294	415	14.4	-88	-2.6
Creswick	2036	2448	2582	546	26.8	134	5.5
Clunes	832	1091	1393	561	67.4	302	27.7
Trentham	522	697	682	160	30.7	-15	-2.2
Beaufort	1214	987	983	-231	-19.0	-4	-0.4
Avoca	1032	957	945	-87	-8.4	-12	-1.3
Snake Valley	273	311	292	19	7.0	-19	-6.1
Bannockburn*	455	1527	3429	2,974	653.6	1,902	124.6
Smythesdale	-	312	479	-	-	167	53.5
Linton	292	342	351	59	20.2	9	2.6
Meredith	285	308	369	84	29.5	61	19.8
Lethbridge*	-	443	530	-	-	87	19.6
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
Maryborough	7858	7163	7139	-719	-9.1	-24	-0.3
Carisbrook	379	717	728	349	92.1	11	1.5
Dunolly	621	663	644	23	3.7	-19	-2.9
Talbot	259	329	243	-16	-6.2	-86	-26.1

Source: ABS censuses and Department of Planning and Community Development Towns in Time³

Growth greater than 1000 persons total or greater than 2% per annum	Decrease greater than 1000 persons total or greater than 2% per annum
Growth between 0-1000 persons in total or between 0-2% per annum	Decrease between 0-1000 persons in total or between 0-2% per annum
* Towns are in the portion of Golden Plains Shire not subject to this project	

³ 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.

9.3 Projected trends

It is estimated that the municipalities comprising the Central Highlands will grow by over 79,000 persons over the next 20 years⁴, although population growth will not occur evenly across the region. Population projections show that this trend towards disparity in growth between west and east is likely to continue, with the municipalities of Moorabool and Ballarat growing faster than other parts of the Central Highlands (refer to Figure 3).

Figure 7: Projected change in population

Local government area	Estimated residential pop 2011	Estimated residential pop 2021	Estimated residential pop 2031	Change 2011-2031	Change percent
Ararat	11,326	11,928	12,576	1,250	11.0%
Ballarat	95,185	116,669	142,002	46,817	49.2%
Central Goldfields	12,579	13,006	13,687	1,108	8.8%
Golden Plains	18,958	24,057	28,610	9,652	50.9%
Hepburn	14,629	16,038	17,777	3,148	21.5%
Moorabool	28,670	36,361	44,979	16,309	56.9%
Pyrenees	6,759	7,227	7,681	922	13.6%
Northern Grampians	12,054	11,813	12,176	122	1.0%

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

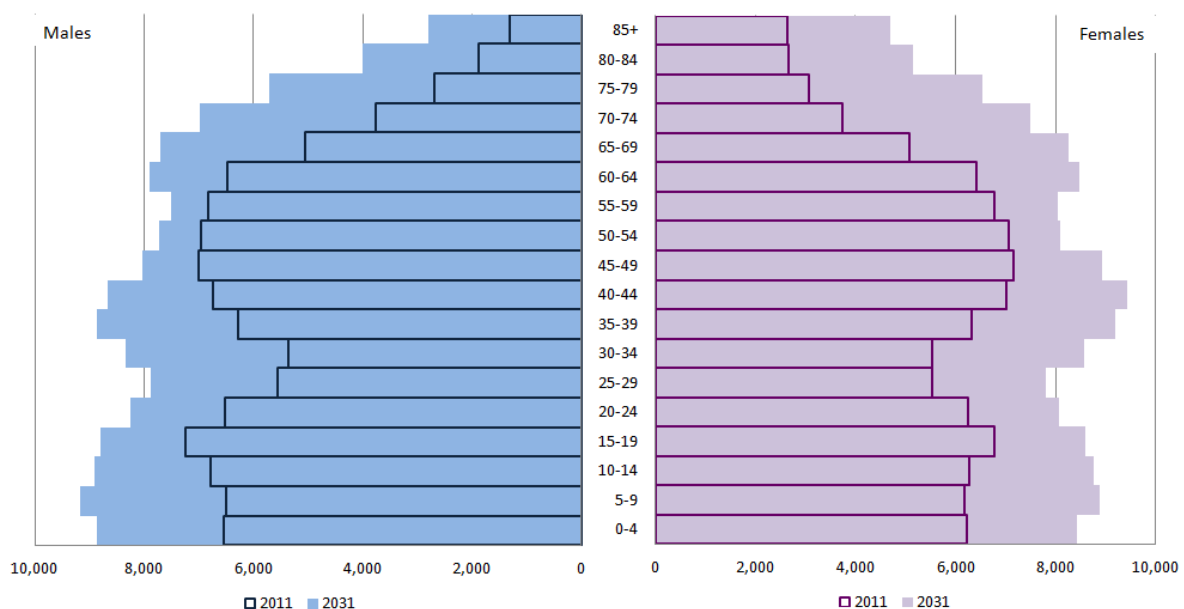
⁴ Growth projection includes all of Golden Plains Shire, including parts of the Shire not subject to this strategy.,

9.5 Age profile

A key to understanding the uneven projected population growth across the region is the projected demographic changes to the population. Across the region as a whole, the population is expected to grow in a relatively similar manner to its present composition as shown in Figure 4. Nevertheless older 65+ age groups are expected to grow more quickly than other age groups, increasing from 16 to 21% of residents by 2031. This increase is chiefly at the expense of the older middle age cohort (declining from 27% to 23% of residents), suggesting that the region will hold its own with regards to children and young adults.

Central Highlands-wide figures do mask notable sub-regional differences though (see Figure 5). Golden Plains, Moorabool and Ballarat are expected to see increases in population across all age groups, with significant increases in young families in peri-urban growth areas. Further to the west other shires are likely to see population growth focused around retirees and some more limited growth in younger middle aged persons, but accompanied by declines in some age groups of children and young adults.

Figure 8: Central Highlands population and age changes 2011-2031⁵



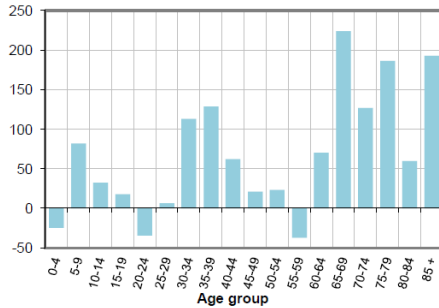
Source: Department of Transport, Planning and Local Infrastructure, Victoria in Future 2014

⁵ Growth projections for Figure 4 and Figure 5 include all of Golden Plains Shire, including parts of the Shire not subject to this strategy

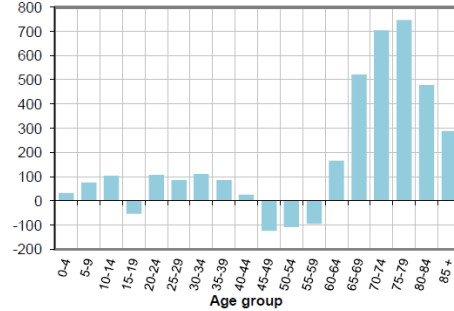
Figure 9: Projected change in age groups by municipality 2011-2031

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

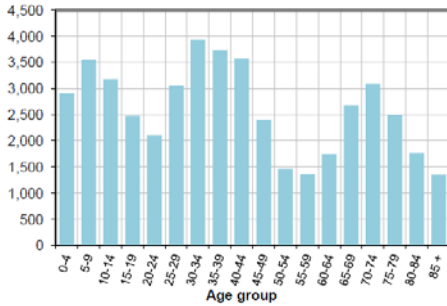
Ararat



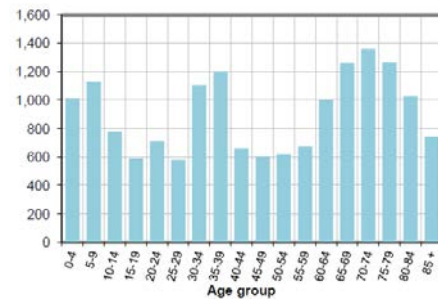
Hepburn



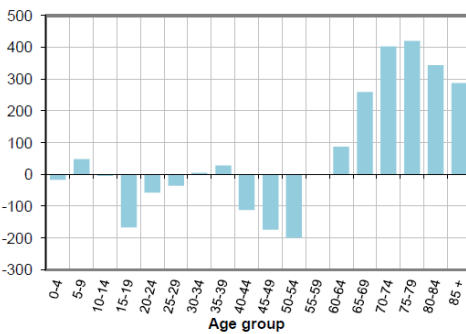
Ballarat



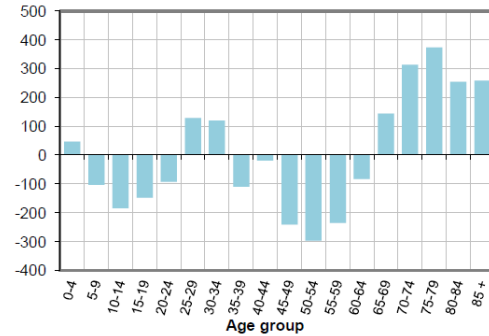
Moorabool



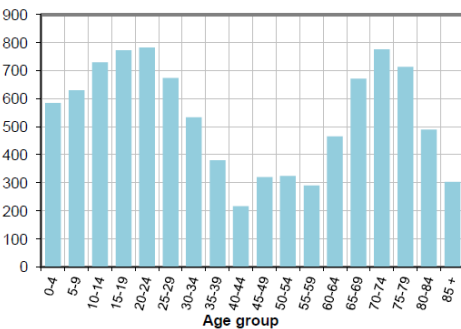
Central Goldfields



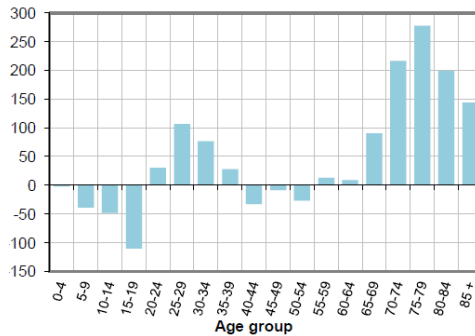
Northern Grampians



Golden Plains



Pyrenees



10 Regional economic profile

10.1 Regional overview

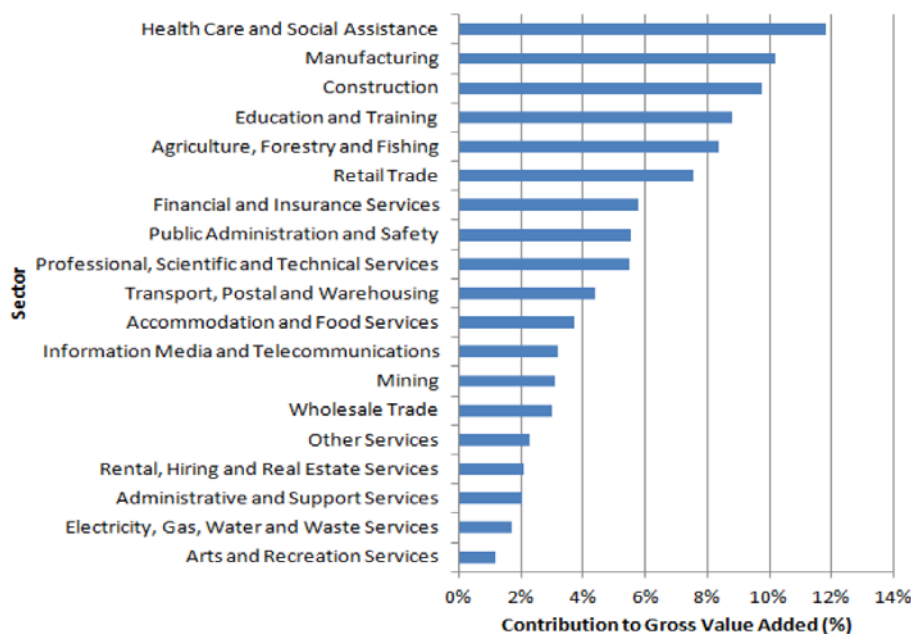
Regional Development Victoria prepared a series of regional economic profiles in 2013 which provide an overview of regional economies and future opportunities and trends. The Central Highlands' profile⁶ states that the key features of the region's economy are:

- Manufacturing, Health care and social assistance and Construction contribute around 32% of Regional Industry Gross Value-added (GVA) in 2012
- The manufacturing industry in the region has a strong link to the agriculture sector – in 2012, 31% of the region's manufacturing sector's value-added was from the food product manufacturing sub-sector, the highest among all manufacturing sub-sectors
- Transport equipment manufacturing was the second-biggest manufacturing sub-sector in the region
- Population driven sectors such as health care, construction, education and retail trade are also significant sectors of the regional economy.
- The region has also developed strengths in information and telecommunication and mining support services.

The Central Highlands benefits from a reasonably diverse economy. The figure below shows the relative contribution of different sectors of the Central Highlands economy

Figure 10: Gross value added by industry (2012)

Source: Regional Development Victoria, 2013



⁶ The Central Highlands Regional Economic Profile does not include Central Goldfields or Northern Grampians. Unless otherwise stated, all data in this section excludes these two municipalities.

Ballarat is a dominant contributor to the regional economy, comprising 67% of Gross Regional Product in 2012. The next highest municipality was Moorabool with 12% of Gross Regional Product.

10.2 Sub-regional variations

The diversity of the Central Highlands means that regional statistics do not capture economic variations and strengths of sub-regions and municipalities which can influence specific transport needs. These are illustrated in the table below.

Figure 11: Sub-regional specialisation 2012⁷

Functional economic area	Specialisation (by Gross Value Add)	
Ballarat and surrounds (Ballarat, Hepburn and Pyrenees)	Health care (16%) Manufacturing (11%) Education (9%)	Construction (8%) Retail trade (8%) Agriculture (5%)
Ararat	Agriculture (27%) Construction (16%)	Health care (10%) Public administration (9%)
Moorabool	Agriculture (15%) Construction (13%) Education (10%) Health care (9%)	Transport (7%) Retail trade (7%) Mining (4%)
Golden Plains – North West	Agriculture (30%) Construction (25%) Education (8%)	Mining (7%) Transport (6%)
Northern Grampians	Mining (29%) Agriculture (19%) Health care (9%)	Manufacturing (8%) Accommodation and food services (4%)
Central Goldfields	Manufacturing (13%) Health care (13%) Education and training (10%)	Agriculture (10%) Retail (10%)

Source: Regional Development Victoria, 2013

10.3 Future trends

It is projected that the shift in the economy toward service sectors⁸ will continue over the next decade. The largest sectors in terms of output (by 2031) will be healthcare, manufacturing, professional services, construction and education. These sectors are projected to account for 51 per cent of the gross regional product by 2031.

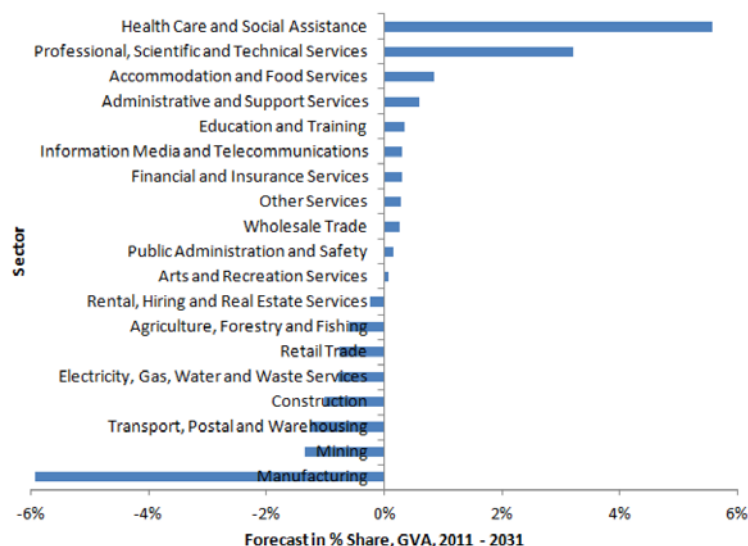
Figure 8 illustrates the projected changes in the share of the regional economy for key Central Highlands industries over the next 20 years. The highest growth is projected to be in the healthcare

⁷ This figure presents the percentage share of each industry to total GVA and employment in each identified sub-area within the region. These industry and employment shares have been compared with State averages to reveal where different local governments have a specialisation.

⁸ Regional Development Victoria analysis derived from Access Economics (2011) Regional Victoria Economic Outlook

and professional services sectors. Other high growth sectors include accommodation, administrative and support services, and other services. Manufacturing is projected to decline at an annual average rate of -0.3 per cent. However, as noted in the preceding paragraph, manufacturing will still remain an important component of the overall regional economy. Agriculture is projected to grow at a relatively faster rate of two per cent over the same 10-year time period.

Figure 12: Industry GVA performance projection, change in percentage share for Central Highlands, 2011 to 2031



Source: Regional Development Victoria, 2013

Regional Development Victoria identifies that the growth enablers for the region⁹ include:

- comparatively high levels of tertiary attainment
- cultural and built heritage
- technology and specialist skills associated with food and transport equipment manufacturing, mining and ICT
- agricultural specialisation in vegetable growing
- transport infrastructure and locational endowments
- the growth of Ballarat as a regional city
- 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

The region's growth constraints include:

- comparatively lower levels of Year 12 attainment and workforce participation in some areas (eg in Ararat and Pyrenees)
- freight capacity including links to Portland and Geelong ports
- public transport options for people in smaller centres to access services in Ballarat (Golden Plains, Pyrenees, Hepburn)

⁹ These lists include items compiled from Loddon Mallee and Wimmera Southern Mallee economic profiles relevant to Central Goldfields and Northern Grampians.

- the lack of innovative intensity and capacity given the regions strengths in higher education and high technology industries
- pockets of socio-economic disadvantage (eg in Central Goldfields)
- ageing of the population and a declining potential workforce in some areas.

11 Transport network

The region's primary transport network is shown at Figure 10.

11.1 Roads

The Western Highway forms the spine of the region and links the most of the Central Highlands' largest centres to Melbourne and Adelaide. This road is a duplicated freeway between Ballarat and Melbourne, with the duplication currently being extended toward Beaufort and Buangor. Other highways provide cross-country links between regional centres, including the Wimmera Highway, Glenelg Highway, Midland Highway, Sunraysia Highway and Pyrenees Highway.

East-west routes are generally more developed than north-south routes, with the Midland Highway being the highest standard north-south link. In a number of locations Class roads form the main north-south links.

11.2 Railways

Most larger towns in the region have access to a railway and passenger trains (Daylesford being a notable exception). However the region's railway infrastructure is complicated by lines being constructed at different gauges, which constrains connectivity. Operational standard gauge lines are the interstate Melbourne – Adelaide line and the branch to Portland. These have high strategic importance for their interstate links as well as their connections to the three key ports of Geelong, Portland and Melbourne.

Broad gauge lines are the Geelong to Mildura corridor which runs via Ballarat and Maryborough as well as the main Ballarat to Melbourne line which then continues through to Ararat.

Some railways are not currently operational, notably the cross-country link from Ararat – Maryborough – Castlemaine.

Passenger services operate between Melbourne and Ballarat and on to Maryborough and Ararat. A limited passenger service also operates between Melbourne and Adelaide, stopping at Ararat and Stawell. There are no passenger trains on the Portland line or the Ballarat – Geelong route.

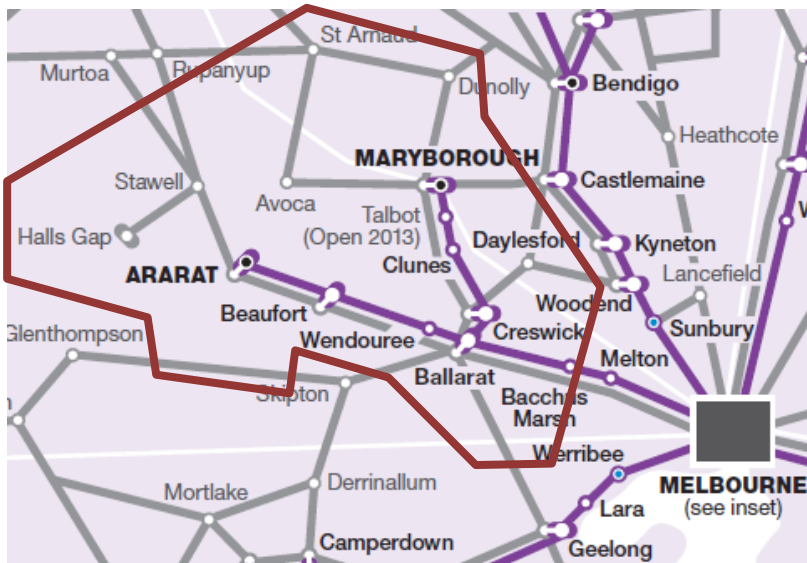
The Melbourne – Ballarat line has been extensively upgraded in the last decade to improve capacity and journey times. Nevertheless all railway lines in the region remain single tracks which rely on passing loops for bi-directional services. However some sections of lines have no passing loops (eg Ballarat – Maryborough) which limits capacity.

The opening of the Regional Rail Link by 2016 will provide additional capacity for services through dedicated tracks for regional trains all the way to Southern Cross. A further recent upgrade to the region's railways has seen the re-opening of the railway station at Talbot on the Maryborough line.

11.3 Regional coaches

The map below shows V Line coach services (the grey lines) and railway services (the purple lines) operating throughout the region (illustrated by the red line). Coaches connect all the key towns in the Central Highlands to regional centres within and external to the region. Some busier routes (eg Horsham – Stawell – Ararat – Ballarat) are serviced relatively frequently whereas others (eg Warrnambool – Ballarat) may only have one service a day.

Figure 13: V/Line coach and rail network



Source: V/Line

11.4 Local buses

Local buses provide public transport around the region's largest centres of Ararat, Ballarat, Maryborough, Bacchus Marsh and Stawell. Although coverage of urban areas is reasonably comprehensive, some routes are circuitous and frequencies can be variable, particularly outside normal business hours and on weekends. Nevertheless Ballarat in particular has a comprehensive service offering 1-2 services per hour on most routes throughout the day and into the early evening. Bacchus Marsh's services are being upgraded from one to three routes in July 2014. The maps at Appendix 1 illustrate some of these matters, showing the coverage and number of daily services for Ballarat, Ararat and Bacchus Marsh. There are also some local bus services between towns (eg Ararat to Lake Bolac) however these are often quite infrequent services.

11.5 Airports

Most of the larger towns in the Central Highlands have an airport operated by the local council including Maryborough, Ararat, Ballarat, Bacchus Marsh, St Arnaud and Stawell. These are of varying sizes and capabilities, but generally have two runways, at least one of which is paved with lighting. Airports in the region are used for a variety of purposes including emergency services, aircraft maintenance, agricultural services and training, although there are no commercial passenger flights.

There are also some smaller airports such as the privately operated Lethbridge facility and CFA aerodrome at Fiskville.

Details of some of the region's airports are as follows:

- Stawell Airport features two sealed runways and a range of commercial and other activities. It is a major DEPI fire base for Western Victoria and is also home to a few aviation services companies which restore and maintain aircraft and provide charter flights and training. Council

seeks a range of ongoing improvements including apron extensions, an upgrade of the fire base and a longer term extension of the main runway.

- Ballarat Airport is located adjacent to the proposed Ballarat West Employment Zone which may increase its strategic importance. The airport has recently undergone an upgrade to expand its capacity. Activities at the airport include training, aircraft charters, maintenance and emergency services and agricultural services. There are also a range of non-commercial activities such as clubs and a museum. Council is proposing an aviation-based emergency services hub be located at the airport, which would require a runway extension and supporting infrastructure. The airport's master plan also proposes a range of other facility and management initiatives.
- St Arnaud has two private hangers and a small DEPI fire base facility. It is also used for district agricultural spraying. Proposed improvements include surface treatments for the main runway and taxiway plus line marking and associated apron upgrade works.
- Lethbridge Airport includes two flying schools, aircraft sales and flying club. It has recently been upgraded including a sealed runway and hard stand area with some support from the Victorian Government.
- Bacchus Marsh Airport includes two sealed runways. It is owned by Council but operated by resident clubs and flying schools.

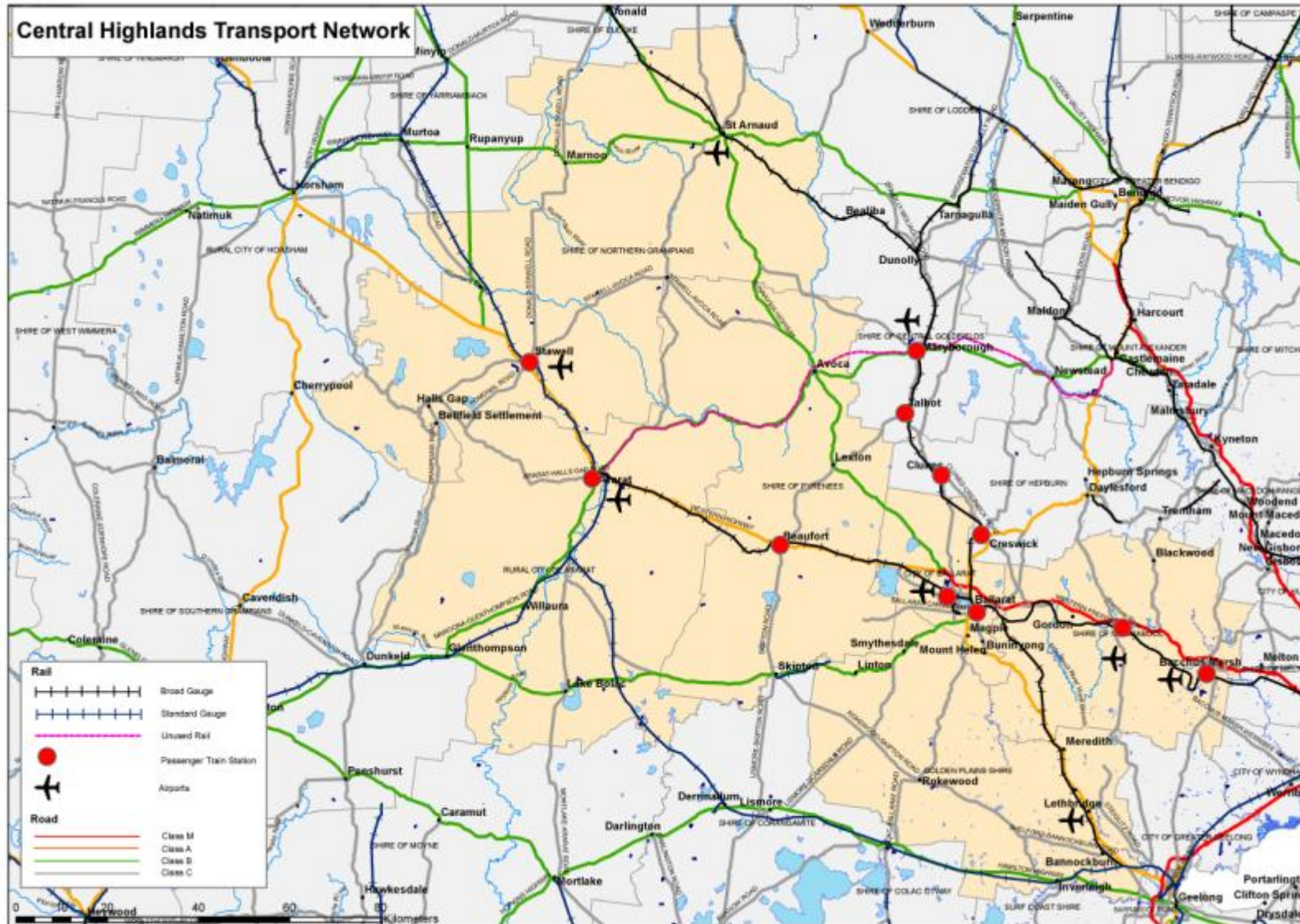


Figure 14:
Central
Highlands
Transport
Network

Source: VicRoads

12 Use of the network

12.1 Roads

Traffic volumes on the region's arterial roads are shown in Figure 11. As an overarching comment roads in the east of the region carry greater volumes than in the west. The highest volume routes include:

- the Western Highway/Freeway (particularly east of Ballarat)
- the Midland Highway (particularly Bannockburn – Geelong and Ballarat – Creswick sections)
- Geelong – Bacchus Marsh Road
- Ballarat – Maryborough Road (particularly the Ballarat – Clunes section)
- Arterial roads around the major towns.

In terms of heavy vehicles, Figure 12 shows that the Western Highway is a quantum ahead of other arterial roads, although some Ballarat arterials (Learmonth Road/Gilles Street) also carry high volumes. Outside of these roads, the Ballarat – Maryborough Road, Midland Highway (Ballarat to Geelong) and Geelong – Bacchus Marsh Road are the most significant truck routes in terms of number of vehicles.

12.2 Road safety

Figure 13 illustrates the casualty crashes recorded on (most of the region's) arterial roads between 2008 and 2012 per 100 million vehicle kilometres travelled¹⁰. It has rated these figures against the country Victorian average for each class of arterial road within each municipality. The map illustrates that:

- There is a concentration of arterial roads with casualty crash rates well above the relevant country Victorian average:
 - in the west of the region around the Grampians and Stawell
 - around the greater Ballarat area.
- The Glenelg Highway has an above average casualty crash rate along its entire length (in the Central Highlands).
- Many arterial roads in Central Goldfields Shire have an above average casualty crash rate.
- Of the region's busiest highways, the Midland Highway (Ballarat-Daylesford) and Western Freeway (Ballarat-Bacchus Marsh) have above average casualty crash rates.

¹⁰ Data used to calculate these rates was from the 2008-2012 Crashtaff Link Dataset which contains crash rates for homogeneous sections of arterial roads and freeways (i.e. links). Please note that Crashtaff 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.

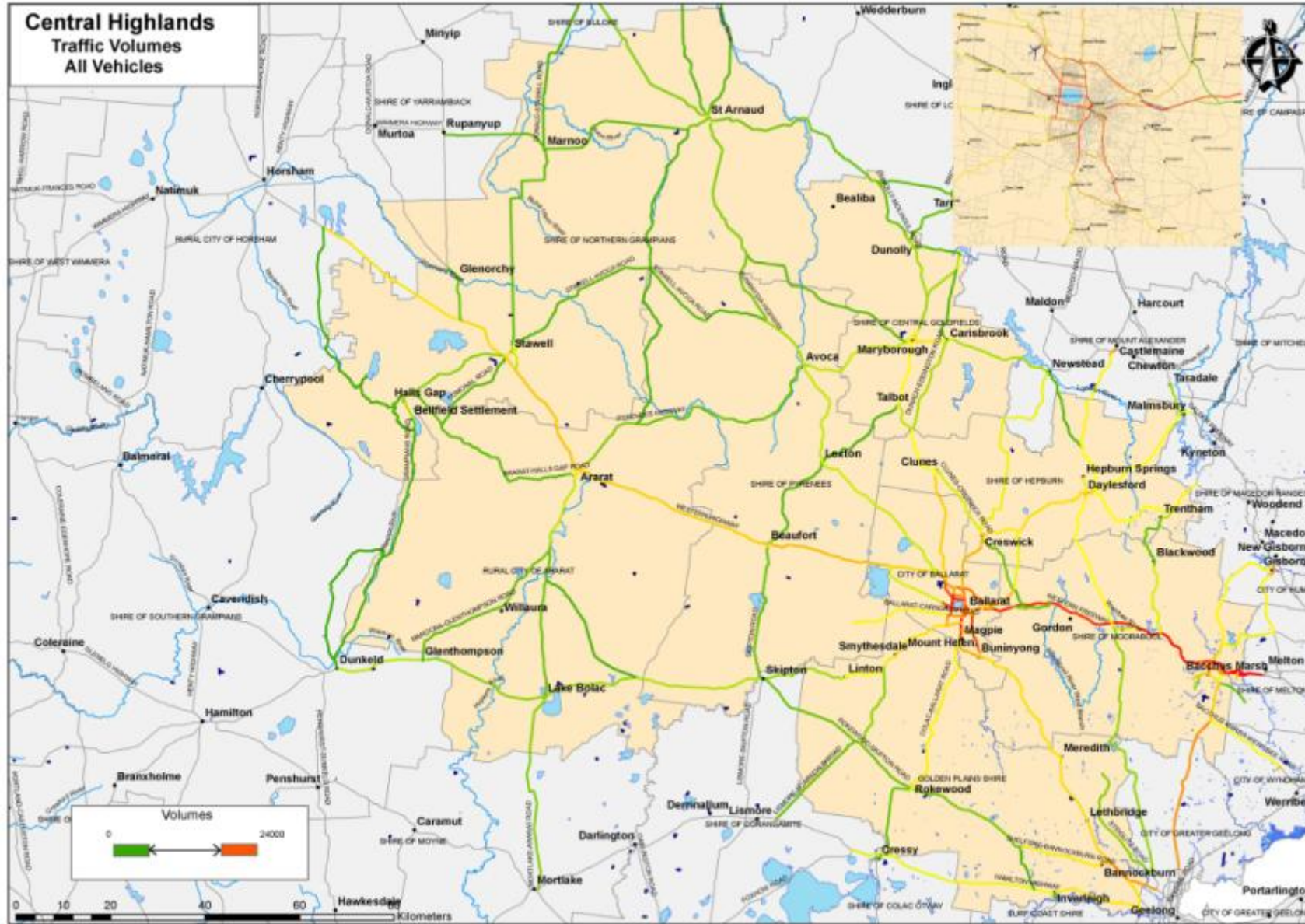


Figure 15:
Traffic volumes
on arterial
roads

Source: VicRoads

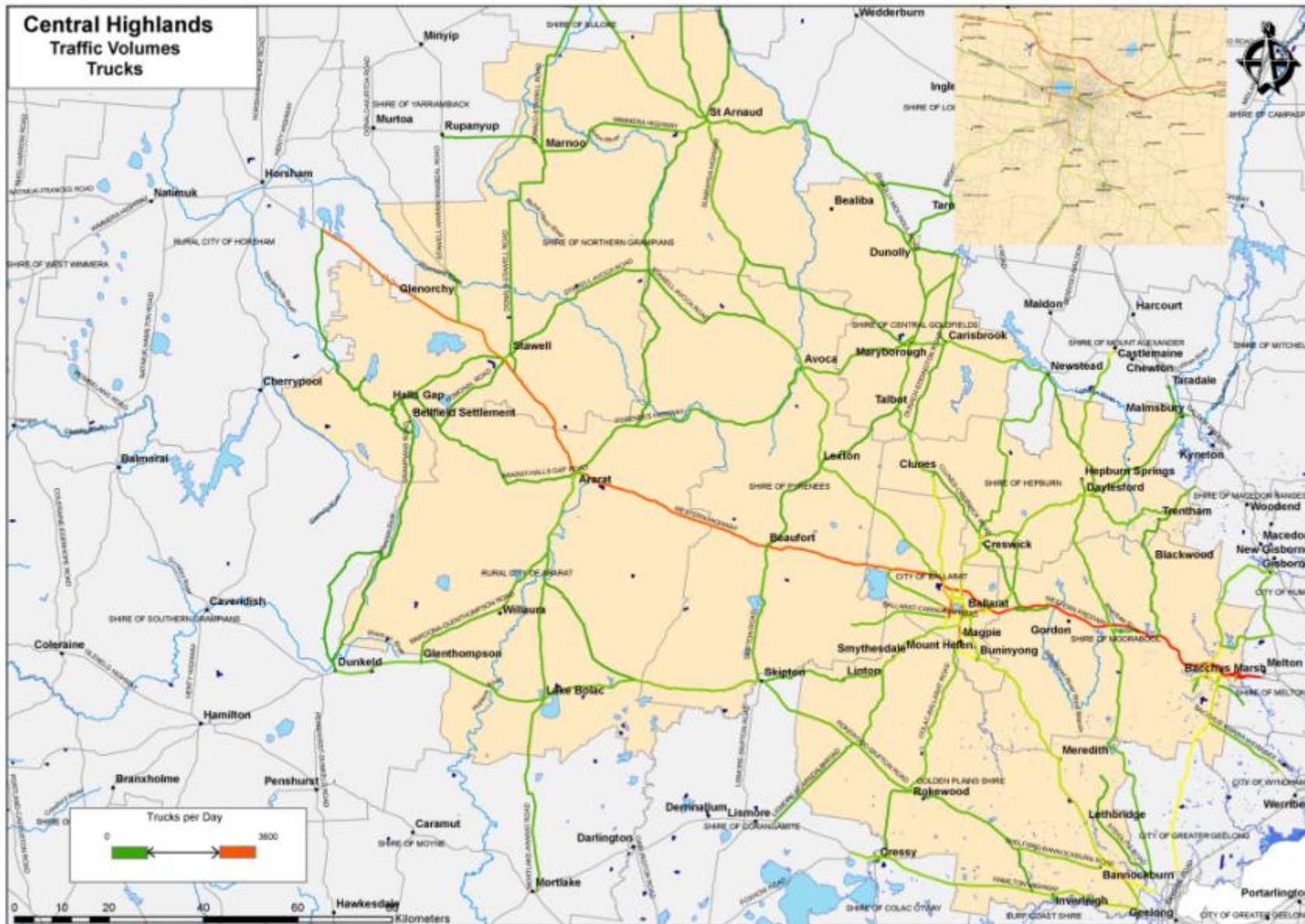


Figure 16:
Heavy vehicle
volumes on
arterial roads

Source: VicRoads

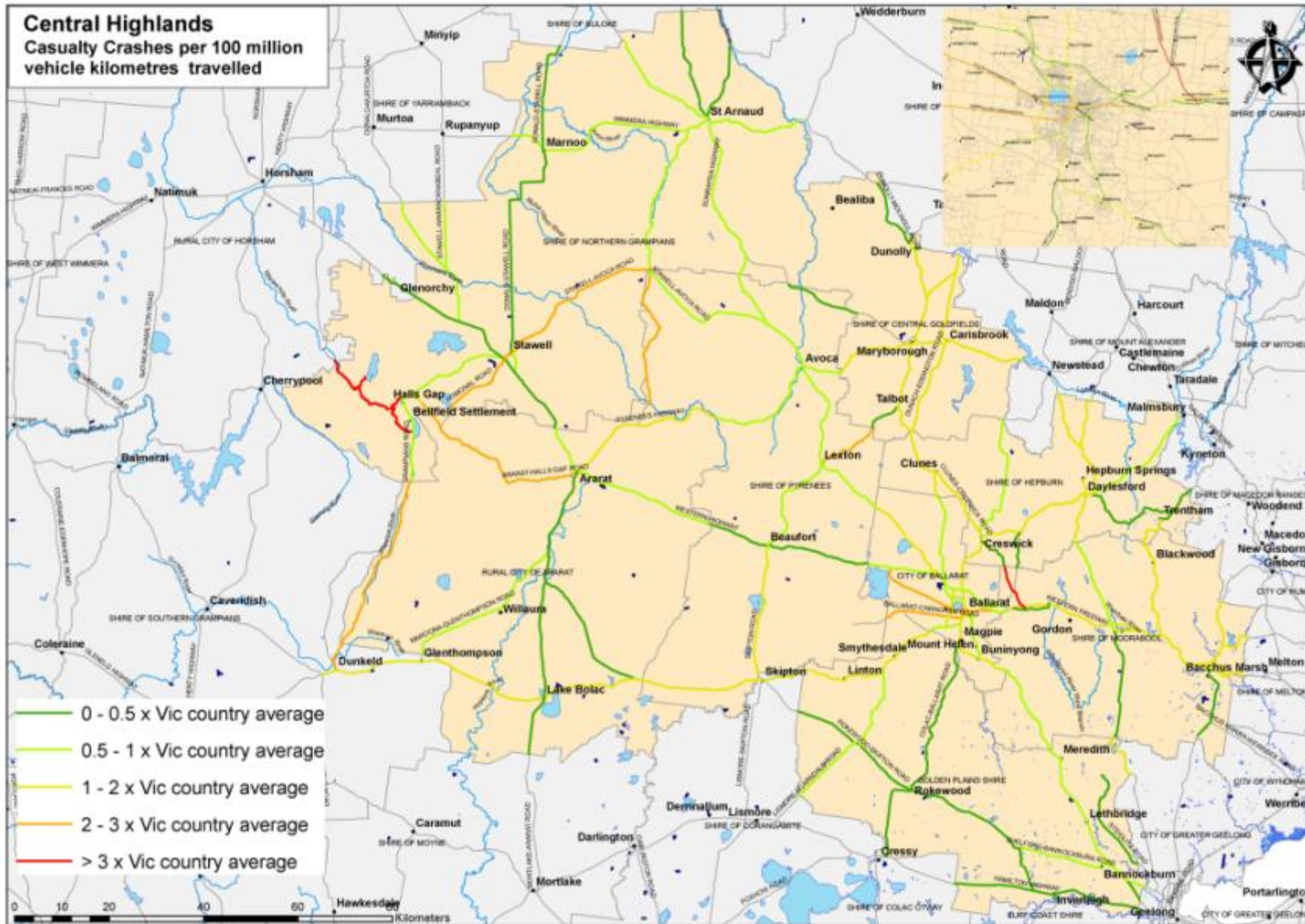


Figure 17:
Casualty crashes
per 100 million
vehicle
kilometres
travelled on
arterial roads

Source: VicRoads

12.3 Passenger rail

Passenger rail services in the Central Highlands are focused around:

- Allowing commuters to travel to and from Melbourne from Bacchus Marsh/Ballan/Ballarat for work in the peak.
- Providing a regular off peak service between Ballarat and Melbourne.
- Providing access to Ballarat and Melbourne for day trips from towns on the Ararat and Maryborough lines.

The service patterns throughout the day are illustrated by Figure 14.

Some shortcomings of the current service arrangements are:

- Limited options for counter-peak travel making it challenging for people to travel to Ballarat from Melbourne/Bacchus Marsh/Ballan for work or education by train.
- No services allowing day trips from Melbourne/Ballarat to towns on the Maryborough line.
- The need for V/Line trains to service Melton, which is a rapidly growing part of metropolitan Melbourne and limits capacity for other services.

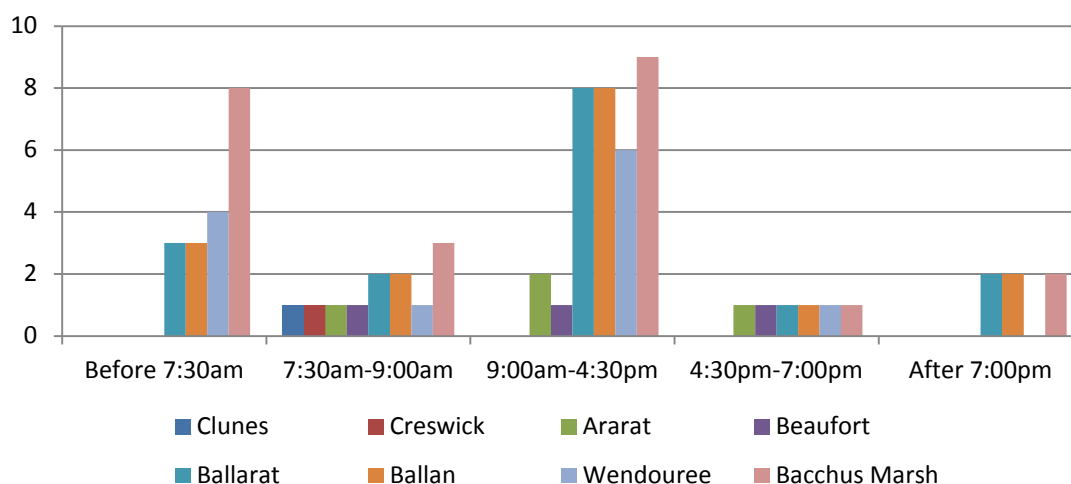
Passenger numbers have grown considerably over the last decade due to upgrades of lines and rolling stock and the addition of services. Between 2010-11 and 2012-13, passenger numbers on V/Line's western corridor grew by an average of around 3% per annum to 3,283,747 journeys. Figure 15 shows the boarding numbers for key stations over the last two years.

Some individual services are seeing high levels of peak occupancy. For example in August 2013, according to V/Line:

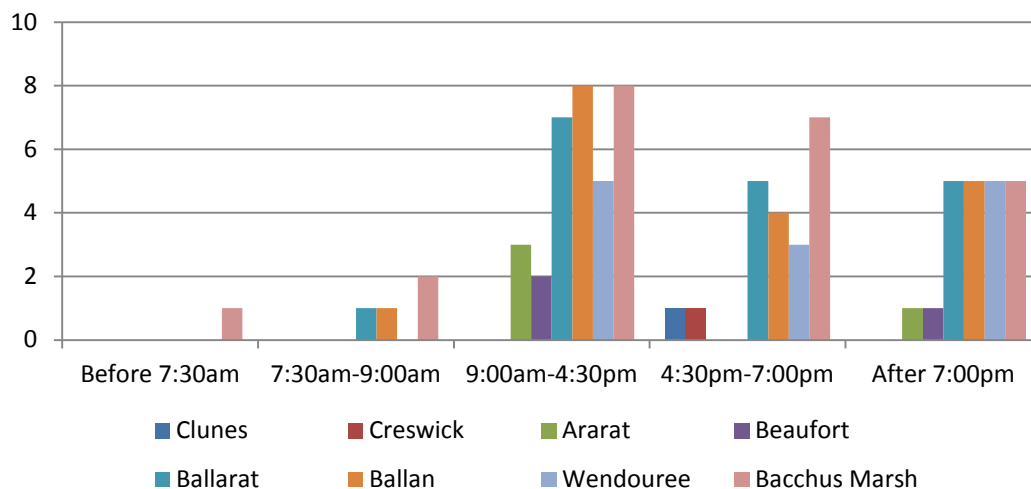
- The 7:28am Wendouree – Melbourne service was up to 95% full at Ballan.
- The 6:50am Bacchus Marsh – Melbourne service was up to 90% full at Ardeer.
- The 4:38pm Melbourne – Wendouree service was up to 99% full at North Melbourne.

Figure 18: Central Highlands Railway Stations Normal Weekday Service Frequency

Departures for Melbourne



Arrivals from Melbourne



Source: V/Line

Figure 19: Station boardings

Station	Passenger boardings 2012-13 FY	Annual % change 2010-11 to 2012-13
Ararat	46,057	3.1%
Ballarat	567,397	-0.3%
Maryborough	9,004	7.6%
Beaufort	8,884	5.8%
Ballan	87,231	9.5%
Bacchus Marsh	239,604	2.2%
Creswick	1,336	1.5%
Clunes	2,331	-
Wendouree	88,312	62.6%

Source: V/Line

V/Line identifies that the main reason for trips to Melbourne are work (43%), education (15%), and then leisure (12%) and visiting family and friends (12%). Trips originating from Melbourne however had slightly different purposes reflecting the location of jobs and education institutions, as well as service patterns. In this case visiting family and friends was the most significant reason for travel (39%), followed by work (28%) and leisure (13%).

12.4 Journey to work

Journey to work data from the 2011 census (Figure 16 and

Figure 17) provides a snapshot of some of the key travel movements around the Central Highlands and into neighbouring regions. It is apparent that different travel patterns emerge in different parts of the Central Highlands:

- Some municipalities have relatively self-contained travel patterns, for example Ballarat
- Municipalities such as Pyrenees and Hepburn have notable minorities who travel to work in neighbouring municipalities (Ballarat and Central Goldfields)
- Moorabool and Golden Plains have significant proportions of residents who commute outside the municipality for work.
- Ballarat is a notable destination for employment from surrounding municipalities.
- There is evidence of commuting between Stawell and Ararat in both directions.

In terms of mode of travel, the car dominates most journeys to work in the Central Highlands with the exception of journeys to Melbourne. Figure 18 shows how this has changed over time. Although the car remains the main form of commuting, the numbers using public transport have been increasing at a faster rate; notably the number of public transport users from Ballarat to Melbourne went up almost seven-fold in 15 years. However the number of commuters to Melbourne from Moorabool by car has in absolute terms increased substantially, by well over a thousand trips, over the last 15 years, illustrating the growing role of Moorabool as an affordable housing alternative for commuters.

Figure 20: Journey to work from key centres to Central Highlands municipalities by mode 2011

A) Car

Locality	Melbourne	Ballarat	Hepburn	Moora-bool	Pyrenees	Ararat	Golden Plains	N. Grampians	C. Goldfields
Ballarat	804	22031	419	270	139	108	198	22	61
Bacchus Marsh	2484	93	10	1594	0	0	0	0	0
Ararat	19	32	0	5	6	1840	0	146	0
Ballan	168	86	13	178	0	0	0	0	0
Creswick	35	357	190	11	4	0	0	0	4
Daylesford – Hep. Springs	70	91	549	15	0	0	0	0	7
Clunes (L)	3	118	82	3	0	0	4	0	20
Beaufort (L)	0	43	0	0	121	21	5	0	0
Avoca (L)	0	12	0	0	119	12	0	0	38
Stawell	10	15	0	0	5	138	0	1381	0
St Arnaud	5	0	0	0	0	5	0	495	10
Maryborough	31	37	12	0	39	0	0	6	1276

B) Public transport

Locality	Melbourne	Ballarat	Hepburn	Moorabool	Pyrenees	Ararat	Golden Plains	N.Grampians	C.Goldfields
Ballarat	626	420	4	8	0	5	0	0	0
Bacchus Marsh	419	6	0	13	0	0	0	0	0
Ararat	5	8	0	0	0	0	0	0	0
Ballan	44	10	0	7	0	0	0	0	0
Creswick	13	12	0	0	0	0	0	0	0
Daylesford – Hep. Springs	30	5	0	0	0	0	0	0	0
Clunes (L)	5	0	0	0	0	0	0	0	0
Beaufort (L)	5	0	0	0	0	0	0	0	0
Avoca (L)	0	0	0	0	0	0	0	0	0
Stawell	0	0	0	0	0	0	0	9	0
St Arnaud	0	0	0	0	0	0	0	0	0
Maryborough	7	0	0	0	0	0	0	0	9

Source: ABS

Figure 21: Journey to work from Central Highlands municipalities to regional cities and Melbourne by mode 2011

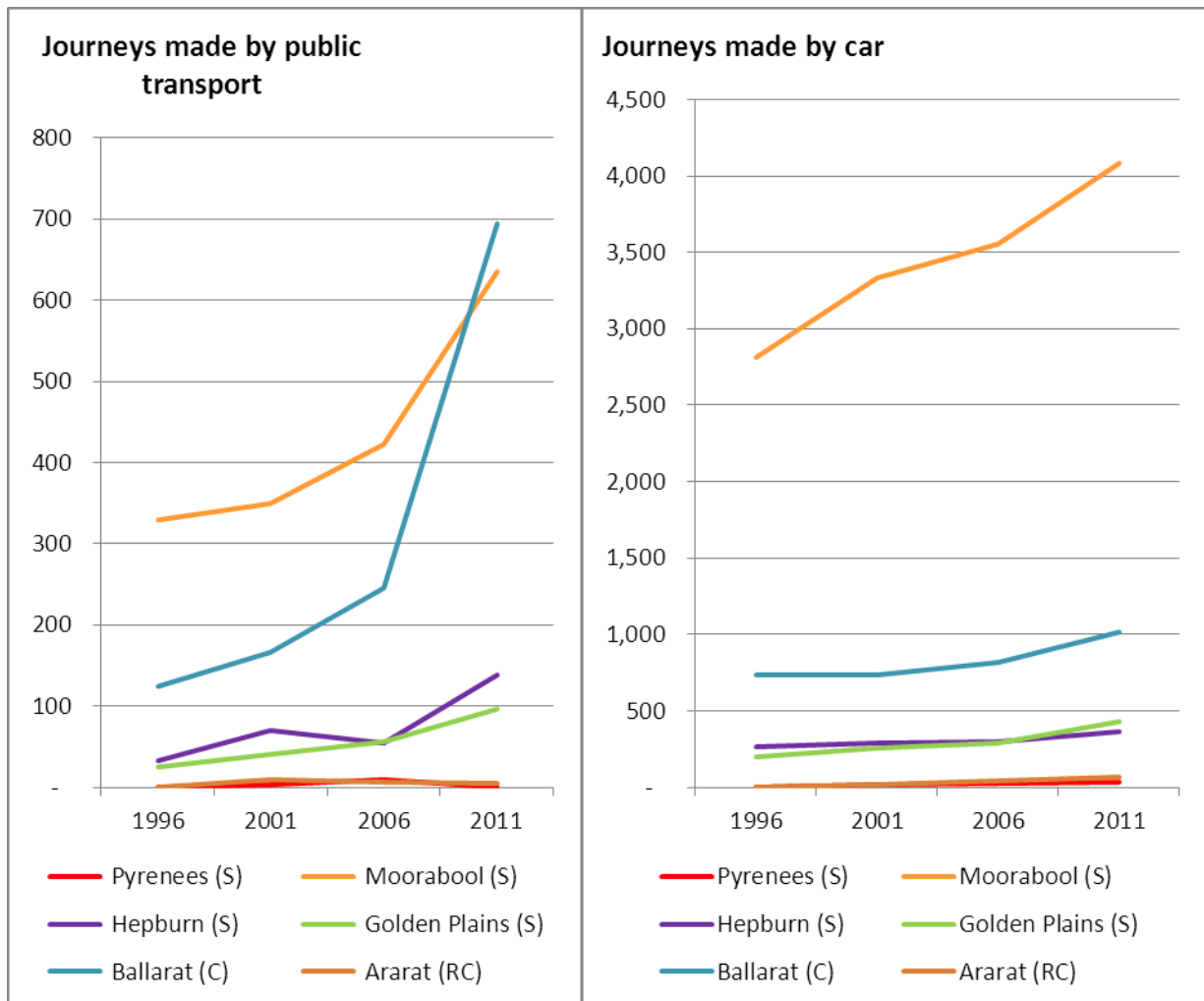
Origin LGA	All journeys to ...			
	Metropolitan Melbourne	Ballarat (C)	Greater Bendigo (C)	Greater Geelong (C)
Ballarat (C)	1,583	26,688	46	178
Ararat (RC)	54	45	4	3
Golden Plains (S)	460	2,061	3	2,022
Hepburn (S)	499	1,056	46	23
Moorabool (S)	4,530	1,079	4	200
Pyrenees (S)	42	425	12	5
Central Goldfields	73	110	60	4
Northern Grampians	53	26	21	0

Central Highlands – People Places Productivity

Origin LGA	Travel by car to...				Travel by public transport to...			
	Metropolitan Melbourne	Ballarat	Greater Bendigo	Greater Geelong	Metropolitan Melbourne	Ballarat	Greater Bendigo	Greater Geelong
Ballarat (C)	873	24159	35	161	658	442	3	3
Ararat (RC)	44	38	6	3	6	6	0	0
Golden Plains (S)	347	2000	3	1965	95	23	0	18
Hepburn (S)	328	1020	34	23	129	17	6	0
Moorabool (S)	3836	1045	4	194	607	15	0	3
Pyrenees (S)	30	413	12	6	8	7	0	0
Central Goldfields	56	106	55	4	9	6	0	0
Northern Grampians	43	25	22	0	5	0	0	0

Source: ABS

Figure 22: Journeys to Melbourne 1996 – 2011 from Central highlands municipalities by mode



Source: ABS

12.5 Emergencies

The Central Highlands is subjected to natural disasters from time to time. Recent events have included major flooding across parts 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.
- 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.

Currently there is limited capacity in the region to handle multi-engine air tankers and no facility able to house the State Government's policy for agency interoperability.

13 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 Central Highlands to provide an overall picture of the key transport needs and notable supply chains.

13.1 Central Highlands imports and exports

Trade flows provide an insight into the major economic connections between Central Highlands 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 Central Highlands, this data shows that imports occur across a diverse range of sectors, although manufactured goods and white-collar services are significant amongst the top 10 sectors.

Figure 23: Highest value imports to the Central Highlands

Sector	% share (by value)
Machinery and Equipment Manufacturing	9%
Transport Equipment Manufacturing	9%
Finance and Insurance	9%
Wholesale	8%
Professional, Scientific and Technical Services	6%
Chemical Manufacturing	5%
Agriculture and Aquaculture	5%
Food Product Manufacturing	4%
Health Services	3%
Other Retailing	3%

Source: Regional Development Victoria

The exports from the region are less diverse. Primary and secondary industries dominate the exports profile, comprising more than 50% of the value of exports. The service and leisure-based sectors are smaller, but still notable export industries.

Figure 24: Highest value exports from the Central Highlands

Sector	% share (by value)
Agriculture and Aquaculture	26%
Food Product Manufacturing	12%
Transport Equipment Manufacturing	9%
Other Mining	6%
Health Services	4%
Property Services	4%
Preschool and School Education	4%
Food and Beverage Services	3%
Other Retailing	3%
Accommodation	3%

Source: Regional Development Victoria

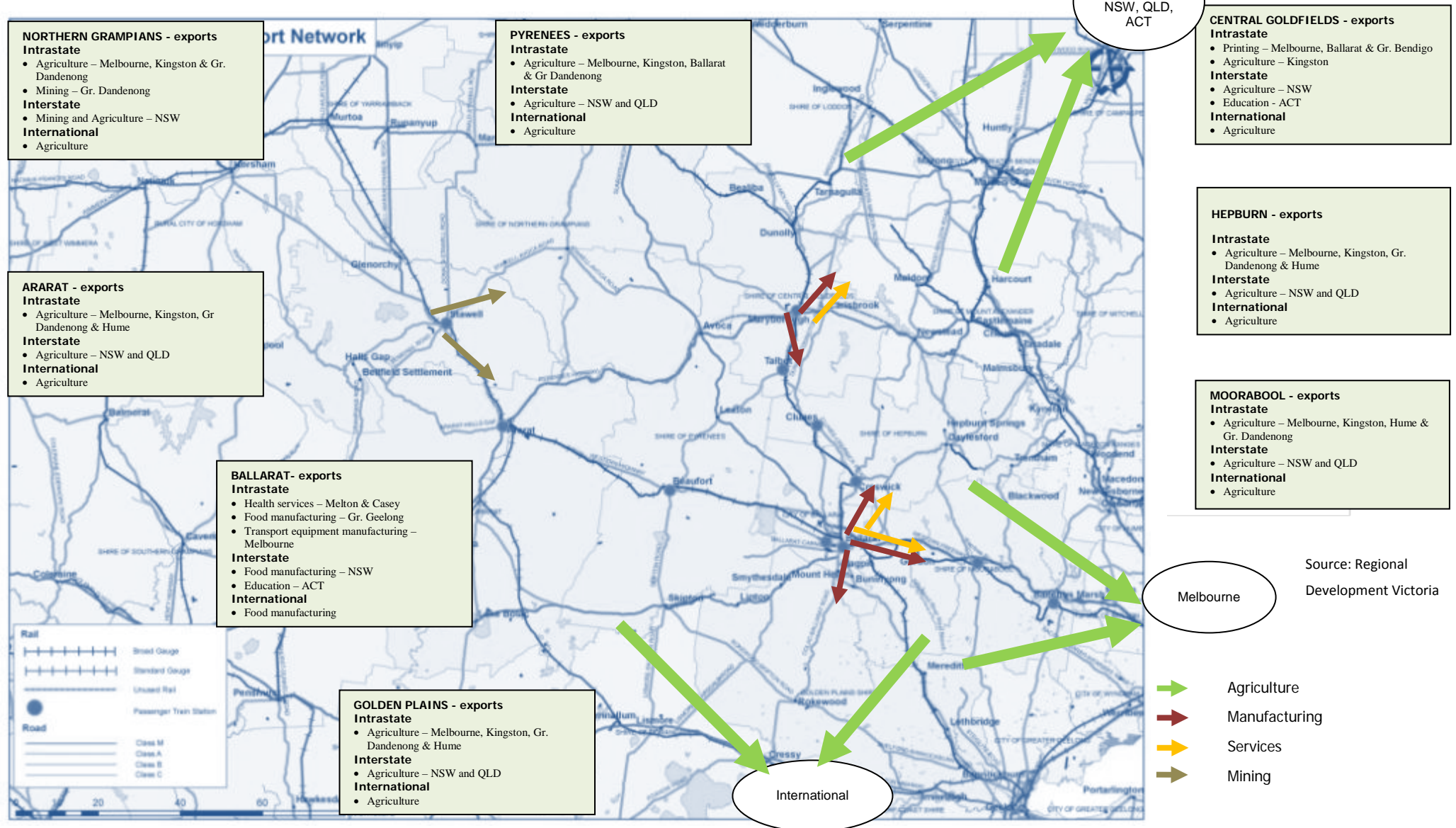
Breaking down this data to a municipal level shows that there are similarities in the trade profile across many of the council areas. The maps below show estimates of some of the highest value trade flows between each municipality in the region and other Victorian municipalities, other Australian states 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.

Particularly amongst the more rural municipalities, agriculture is the dominant export to Melbourne (notably to central and south-east Melbourne), interstate and overseas. Conversely the main Victorian imports into these municipalities tend to be wholesale goods (again from south-east Melbourne), professional and financial services and retailing. Machinery and equipment is estimated to be the largest value overseas import. There are however a number of notable exceptions. These include:

- Mining being a key export from Northern Grampians to Melbourne and other states
- Printing being a key export from Central Goldfields to nearby regional centres
- Golden Plains having close economic ties to Greater Geelong, with a number of key imports from its neighbour.
- Ballarat having a notably different export profile to the more rural municipalities, with the largest value sectors estimated to include services and manufacturing.

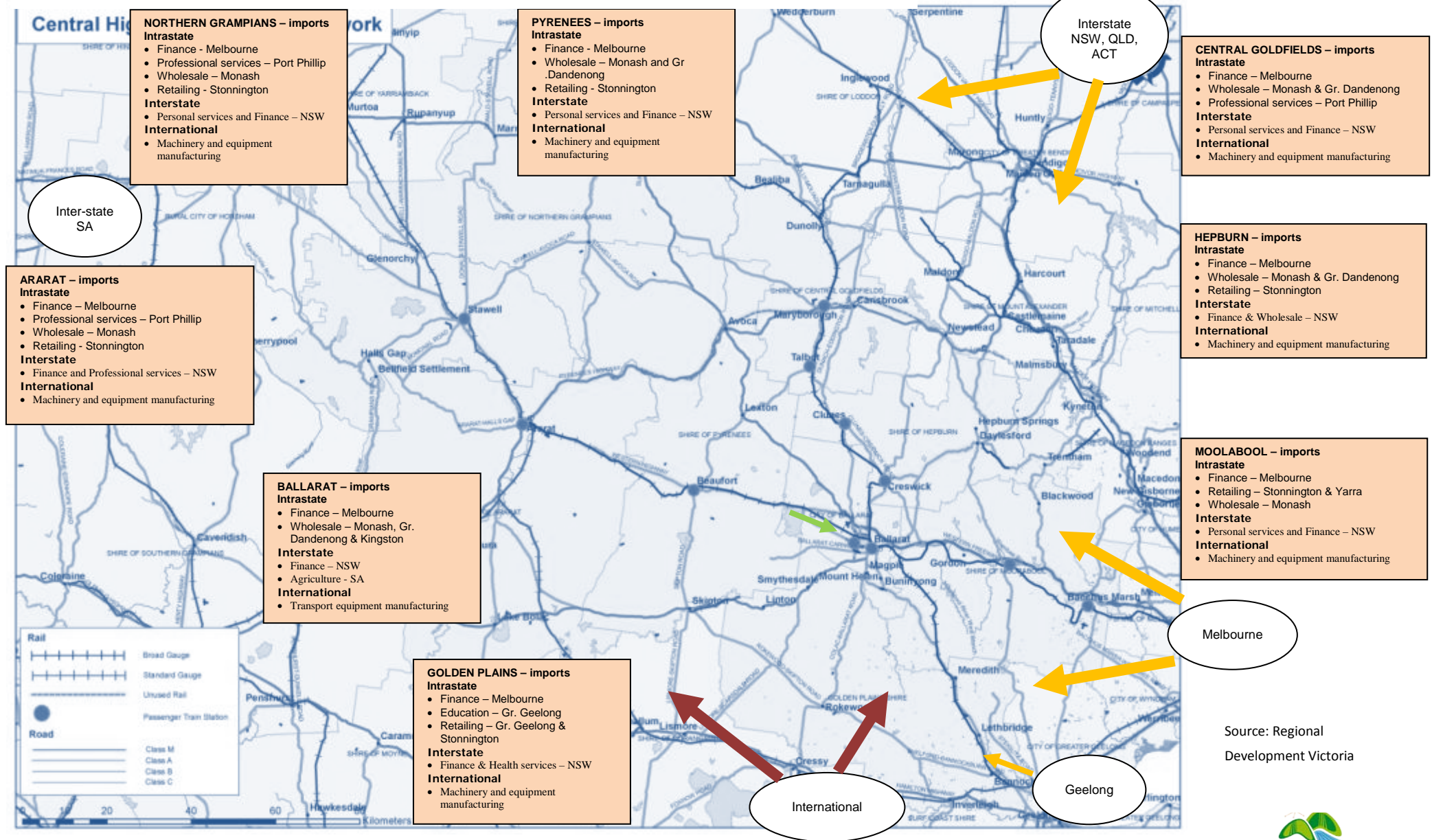
Central Highlands – People Places Productivity

Figure 25: Highest value export sectors to other Victorian municipalities, other states and overseas 2011



Central Highlands – People Places Productivity

Figure 26: Highest value import sectors to other Victorian municipalities, other states and overseas 2011

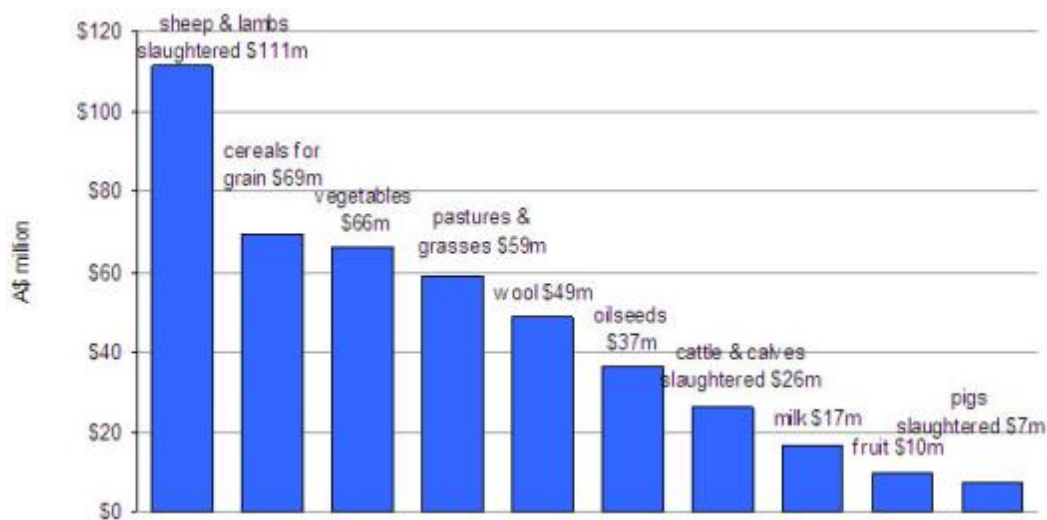


13.2 Regional freight task for key commodities

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 Central Highlands is that due to its location, it is not the start or the end point for many freight movements, but rather a region which freight travels through on its way to markets. This is particularly the case with some commodities originating from the Mallee and Wimmera such as grain, mineral sands and horticultural products. North-south routes through the Central Highlands therefore have some significance for bulk commodity movements (grain, mineral sands and timber) given the need to move these products to ports.

Figure 23 shows some of the Central Highland's most valuable agricultural commodities, while Figure 24 sets out the most significant commodities travelling from the Grampians Region (which includes the Central Highlands).

Figure 27: Selected Agriculture commodities by Gross Value 2009-10¹¹



Source: ABS 7503.0, 2011

The Victorian Freight and Logistics Plan estimates that regional Victoria's freight task will increase by 4.5% per annum up to 2046. It is therefore reasonable to assume that there will be an increase in the freight being moved from and through the Central Highlands, given its position in the state's freight network.

The region relies heavily on road transport for most of its freight needs. Much of the region's proximity to Melbourne and to three south coast ports has limited the potential for rail freight. There is no intermodal freight terminal in the Central Highlands, although one is proposed for Ballarat West which is being designed to cater for High Performance Freight Vehicles.

¹¹ Does not include Golden Plains, Central Goldfields or Northern Grampians

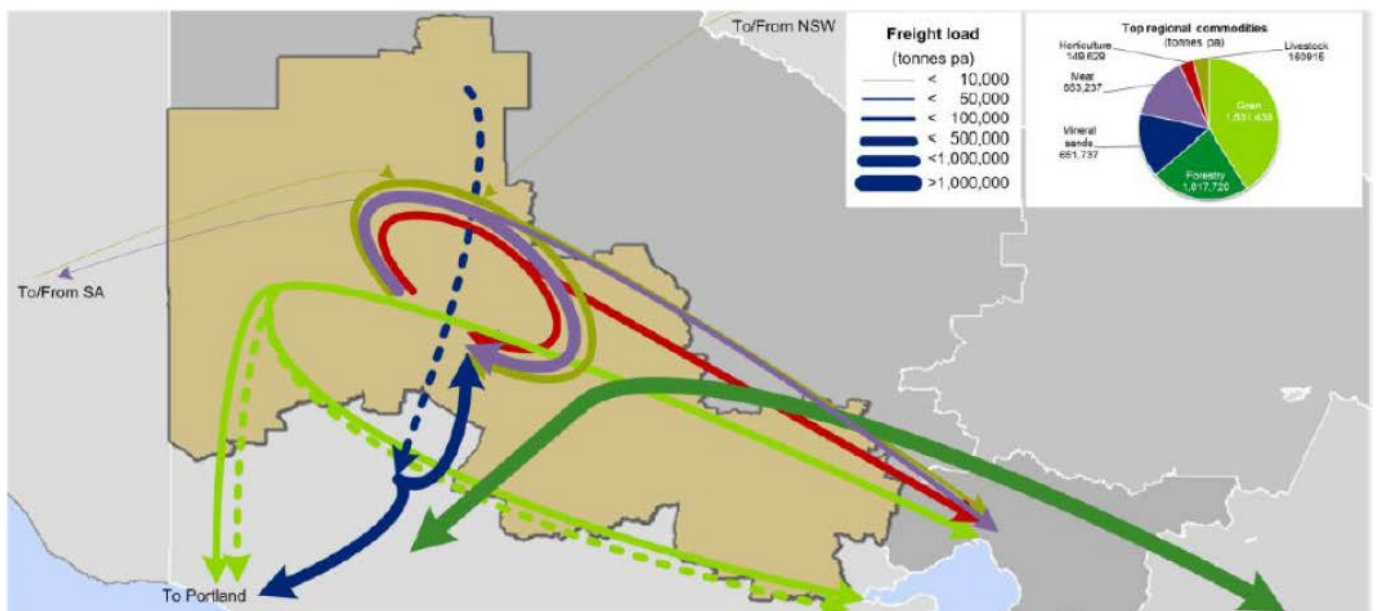
Figure 28: Largest commodities in the Grampians Region¹²

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
Total		4,861,913

Source: Deloitte, 2012

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

Figure 29: Indicative movement patterns for top Grampians commodities¹³



Source: Deloitte, 2012

¹² Includes four additional Wimmera councils. It should be noted that many commodity movements from the Wimmera will move through the Central Highlands. Data does not include Central Goldfields.

¹³ Includes four additional Wimmera councils. It should be noted that many commodity movements from the Wimmera will move through the Central Highlands. Mapping and data does not include Central Goldfields.

Grain

Grain is transported both through and from the region. The rail links to the ports of Geelong, Melbourne and Portland are important links for grain exports. Due to changes in climate and farming practices, grain is now grown further south than previously and so the municipalities of Ararat, Pyrenees and Golden Plains have become increasingly important sources for grain. This has occurred at a time when the market for grain exports has been increasingly deregulated, meaning that traditional forms of grain storage and transport (silos and rail) are less important. In the Central Highlands these factors have manifested themselves into bulk grain storages establishing themselves in these shires away from the key transport corridors (Smeaton, Lakaput and Werneth). Local and C class roads providing links to the south have therefore become increasingly important to handle this freight task.

GrainCorp is the most significant grain marketing and distribution company in Victoria, operating receival and storage sites across the region and the state, 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 26). Within the Central Highlands this will mean a focus on two Primary Sites at Westmere and Dunolly. Given the network of freight lines in north-west Victoria require journeys through the Central Highlands, changes in the amount of grain moved by rail from other regions will also impact on the rail network in the Central Highlands.

Forestry

Parts of Hepburn, Pyrenees and Moorabool are notable sources for timber products including forests around Daylesford, Mt Cole, Trawalla, Creswick, Enfield, Ross Creek, Linton, Lal Lal and Avoca. The Timber Industry Roads Evaluation Study (2011) notes that the wide spread of timber-producing forests in the region means that haulage patterns are complex. Key destinations include Geelong, Colac, Portland and the paper mill at Maryvale in Gippsland. Key transport routes tend to be north-south roads linking the forests to the ports and sawmills. The aforementioned study refers to Geelong-Bacchus Marsh Road, Geelong-Ballan Road, Midland Highway, Rokewood-Shelford Road and the Colac-Ballarat Road as some key routes.

Meat and livestock

Livestock has traditionally been an important industry for the region, particularly broadhectare grazing of lamb, sheep and cattle. There are abattoirs at Stawell, Ararat and Bacchus Marsh which provide an export industry in addition to domestic consumption and thus are key freight generators. The Central Victorian Livestock Exchange (Ballarat saleyards) manages the exchange of stock from within and outside the region and has a 10-year throughput average in excess of 1.3 million sheep and 56,000 cattle (Central Victorian Livestock Exchange, 2013).

Intensive animal husbandry, particularly poultry and pigs, is also increasingly important for those parts of the region in proximity to the major markets of Geelong and Melbourne. This includes parts of Golden Plains Shire (near Meredith and Lethbridge) and Pyrenees Shire. Some intensive animal farms are also located in the St Arnaud area. Poultry processing occurs in Maryborough.

Horticulture

Horticulture is an important agricultural commodity in the east of the region. Potatoes are the dominant crop around Ballarat. Other vegetables widely grown in the region include broccoli, lettuce, cauliflowers, pumpkins, tomatoes, onions, field peas and mushrooms. Orchard fruit (mainly apples) and grape production are also important agricultural industries in the area, along with nurseries, cut flowers, pasture seeds and cultivated turf. Bacchus Marsh and Hepburn Shire are other key locations

for horticultural production, whilst Moonambel near Avoca is a significant wine producing district. Destinations for horticultural produce include Melbourne and food manufacturing facilities such as McCains in Ballarat.

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 gold mines at Ballarat and Stawell. Historically coal has been mined near Bacchus Marsh and this may occur again in the future with 1.6 billion tonnes of brown coal identified in the area (subject to feasibility and approvals proceeding). Copper deposits have been identified north and south of the Grampians Ranges which may present long term options for resource extraction, with the Ararat-Hamilton-Portland railway being an important infrastructure asset for transport to processing plants and port.

Mineral sands are not produced in the region, but rather the Central Highlands is an important part of the supply chain 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 and rail. 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. It is noted additional longer term mines are proposed near Horsham and Donald which may increase this traffic through the region in future.

The Central Highlands is also a strategically-important location for sand and gravel supplies, supplying stone resources to Melbourne. A number of extractive industry operators exist to the north of Bacchus Marsh.

Figure 30: Proposed GrainCorp Victorian network 2015-16



14 Tourism

The *Central Highlands Regional Growth Plan* highlights a number of key areas where tourism is a major land use focus, these being the Daylesford spa country, Pyrenees wine region, Ballarat and other goldfields tourism and the Grampians National Park. Not surprisingly, Figure 27 confirms the higher relative importance of tourism to local economies of Pyrenees, Northern Grampians and most particularly Hepburn. Indeed Tourism Victoria data confirms that of all Victoria's tourism regions, the Daylesford and Macedon Ranges region is ranked third overall in terms of the comparative importance of tourism to the regional economy (6.5% direct contribution and 33.5% total contribution to the region's Gross Value Added).

Figure 31: 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)
Ararat	3.4%	11 th
Ballarat	3.7%	11 th
Central Goldfields	3.6%	10 th
Golden Plains	1.2%	17 th
Hepburn	13.1%	2 nd
Moorabool	3.4%	12 th
Northern Grampians	5.9%	6 th
Pyrenees	5.7%	6 th
Ararat	3.4%	11 th

Source: Loddon Mallee and Grampians RDA Economic Profiles, Remplan

The different tourism regions have different visitor profiles that need for be catered for as shown in Figure 28. Nature based tourism features is the top Grampians and Daylesford tourism region activities, whilst cultural activities play a more important role in the Goldfields tourism region.

Figure 32: Selected characteristics of regional tourism profiles

	Grampians	Goldfields	Daylesford and Macedon Ranges
Day-trippers as % of trips	35%	50%	58%
Intrastate overnight stays as % of trips	42%	32%	28%
Top 7 activities for domestic overnight visitors	Restaurants Visit friends/relatives General sightseeing Bushwalking* Visit national parks* Pubs Shopping	Visit friends/relatives* Restaurants General sightseeing Shopping Pubs Visit museums/galleries* Visit heritage buildings and sites*	Restaurants* Visit friends/relatives General sightseeing* Bushwalking* Shopping* Markets* Pubs

Source: Tourism Victoria

* Activity proportionally more likely to occur in this region than regional Victoria as a whole

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

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, Maryborough - Ballarat Heritage Trail and Daylesford to Macedon Ranges Rail Trail.
- Issues for some towns in Hepburn Shire where truck routes can conflict with tourism precincts with high amenity expectations, eg Daylesford and Creswick.
- A desire for better access by train from Melbourne for day trips to Goldfields towns.

15 Around the region

This section sets out some of the local transport issues that help inform the regional strategy.

15.1 Ararat

Notable freight and trip generators	<ul style="list-style-type: none"> • Grain and livestock • Willaura, Lake Bolac and Westmere grain collection hubs generate significant traffic. • Lakaput Bulk Storage Terminal - issue around this facility given it is located on local roads • Potential future mining and quarrying in the municipality, although mining a long term proposition • Abattoir and manufacturing at Ararat • Proposed wind farm construction • North-south route for fodder to Mortlake
Current initiatives	<ul style="list-style-type: none"> • Sustainable growth strategy being prepared by Council • Western Highway duplication – construction to Buangor, planning to Stawell • Grampians Way ring road proposal • Ararat On The Move – active transport and lifestyle strategy being prepared.
Other transport issues	<ul style="list-style-type: none"> • Potential bypass of Ararat • Passenger rail improvements, eg morning rail service to Melbourne

15.2 Ballarat

Notable freight and trip generators	<ul style="list-style-type: none"> • Largest employment areas are: <ul style="list-style-type: none"> ◦ Ballarat CBD ◦ Wendouree retail and industrial area ◦ Hospital and ACU precinct ◦ Federation University and Ballarat Technology Park • Significant population growth expected. Ballarat West Growth Area will be the focus for residential growth • Major manufacturing businesses, particularly food • In the future Ballarat West Employment Zone expected to generate 9000 jobs and include a freight hub for HPFVs. • Saleyards are a regional livestock facility that may relocate
Current initiatives	<ul style="list-style-type: none"> • Ballarat Strategy being prepared to inform local growth over the next 30 years. Traffic modelling is being prepared to help inform this. • New Ballarat Transport Strategy • Ballarat West Link Road • Planning for railway station precinct revitalisation • Delivery of Ballarat West Employment Zone, Ballarat Freight Hub and airport upgrade including an Aviation Emergency Services Hub. • Expansion of Technology Park • Plans for improved CBD car parking • Crossing borders tracks and trails project

15.3 Central Goldfields

Notable freight and trip generators	<ul style="list-style-type: none"> • Large grain storage facility at Dunolly (rail and road) • Moolort grain facility • Manufacturing in Maryborough
Current initiatives	<ul style="list-style-type: none"> • Ballarat – Maryborough Heritage Trail • Talbot Station and trial bus connection recently opened
Other transport issues	<ul style="list-style-type: none"> • Rail Revival Study – issues around enhancing public transport Ballart – Maryborough – Bendigo • Last mile issues • Inappropriate vehicles on local roads

15.4 Golden Plains

Notable freight and trip generators	<ul style="list-style-type: none"> • Private grain storage facility at Werneth but accessed via local roads • Bannockburn rapidly growing • Timber • Links to Cressy
Current initiatives	<ul style="list-style-type: none"> • Intensive agriculture precinct to be developed around Lethbridge • Interest in Ballarat West Link Road – need for land acquisition in the shire
Other transport issues	<ul style="list-style-type: none"> • Rail Revival Study – issues around enhancing public transport Ballart – Geelong • Midland Highway condition • Ballarat-Colac Road condition

15.5 Hepburn

Notable freight and trip generators	<ul style="list-style-type: none"> • Timber • Horticulture • Tourism – reliance on bus to access Daylesford • Grain – Smeaton grain processing facility
Current initiatives	<ul style="list-style-type: none"> • Crossing borders tracks and trails project
Other transport issues	<ul style="list-style-type: none"> • Industrial area in Daylesford constrained by access issues • Amenity of towns with major highways through town centres • Farm gate access • B Double routes

15.6 Moorabool

Notable freight and trip generators	<ul style="list-style-type: none"> Bacchus Marsh growing rapidly Timber Horticulture to Ballarat and Melbourne Abattoir in Bacchus Marsh Proposed wind farm construction in the west of the Shire Quarries near Bacchus Marsh
Current initiatives	<ul style="list-style-type: none"> Bacchus Marsh traffic access improvements Council undertaking traffic modelling of Bacchus Marsh to assist with future planning Parwan agricultural industrial area proposed which could be a major trip generator Proposed additional access to Western Freeway at Bacchus Marsh Proposed extension to Halletts Way
Other transport issues	<ul style="list-style-type: none"> Major access issues through Bacchus Marsh due to limited north-south links and constraints in relation to access improvements Uncertainty around future timber roads funding Transport to small towns in the west of the Shire eg Gordon

15.7 Northern Grampians

Notable freight and trip generators	<ul style="list-style-type: none"> Grain Abattoir at Stawell Grampians tourism
Current initiatives	<ul style="list-style-type: none"> Western Highway duplication being planned to Stawell Grampians Way tourist ring road proposal Grampians Peaks Trail proposal
Other transport issues	<ul style="list-style-type: none"> Use of local roads for freight movement Public transport access to the Grampians Lack of regular passenger trains to Stawell Quality of some local roads – Stawell-Halls Gap Potential mineral sands traffic Seeking ongoing airport improvements

15.8 Pyrenees

Notable freight and trip generators	<ul style="list-style-type: none"> Lakaput Bulk Storage Terminal (in neighbouring Ararat Rural City) - issue around this facility given it is accessed by local roads Timber: Mount Cole to Skipton or Western Highway heading to Geelong or Melbourne
Current initiatives	<ul style="list-style-type: none"> Western Highway duplication
Other transport issues	<ul style="list-style-type: none"> Potential bypass of Beaufort

PART C – PROJECT SELECTION AND PRIORITISATION

One of the purposes of the Central Highlands 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 Central Highlands.

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.

16 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.

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

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

17 Project prioritisation

A number of existing project prioritisation tools were examined to determine an appropriate methodology for the Central Highlands 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:

- Uses a multi-criteria analysis to allow for a range of considerations relevant to the broad scope of the region.
- Includes 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)
- Includes criteria which considers social, economic and environmental impacts and potentially some other specific transport outcomes as well.
- Establishes detailed scoring guidelines
- Is relatively simple and fully transparent to ensure it enjoys the support of stakeholders across the region.

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.

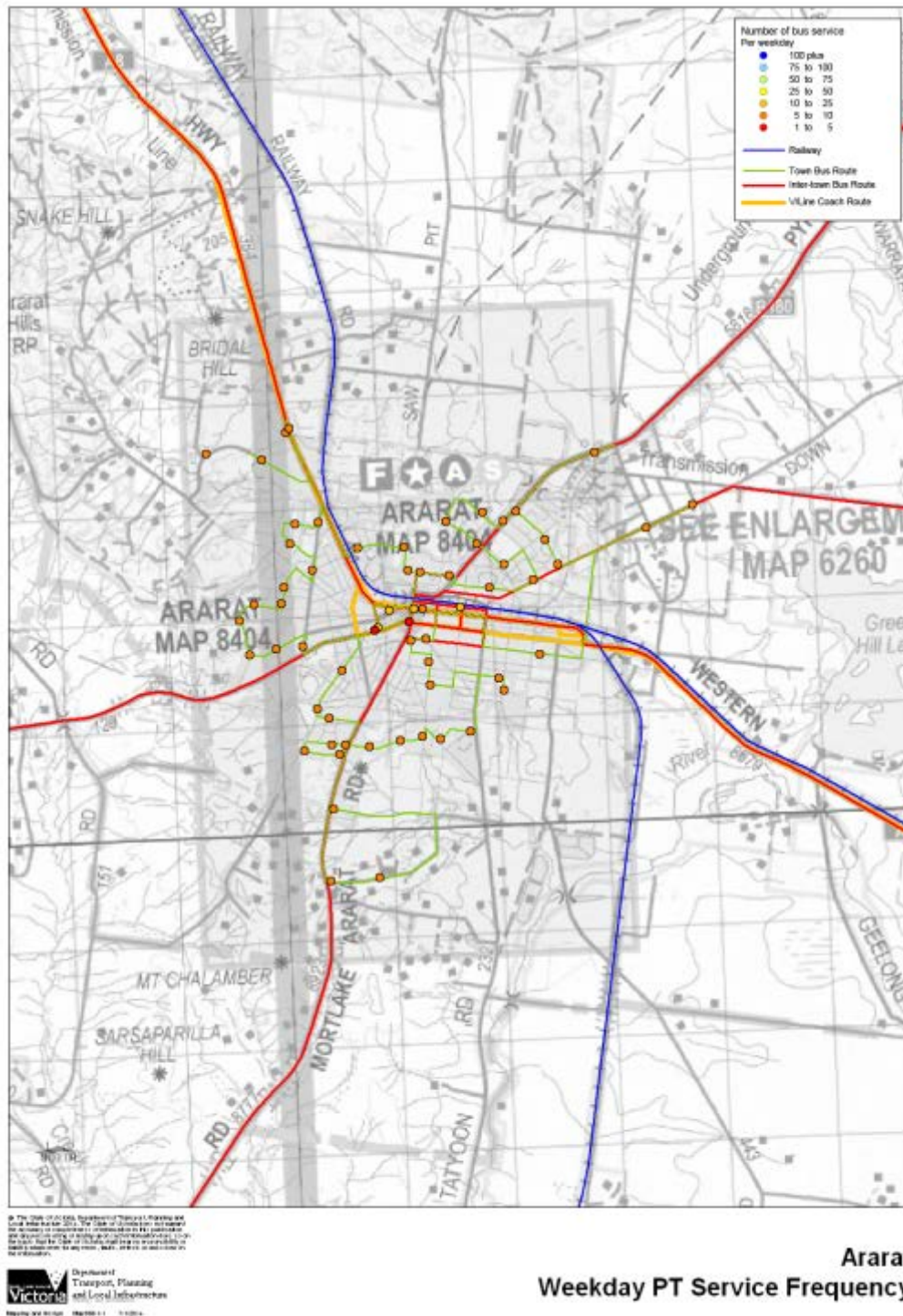
The final methodology used for prioritisation of projects is as follows:

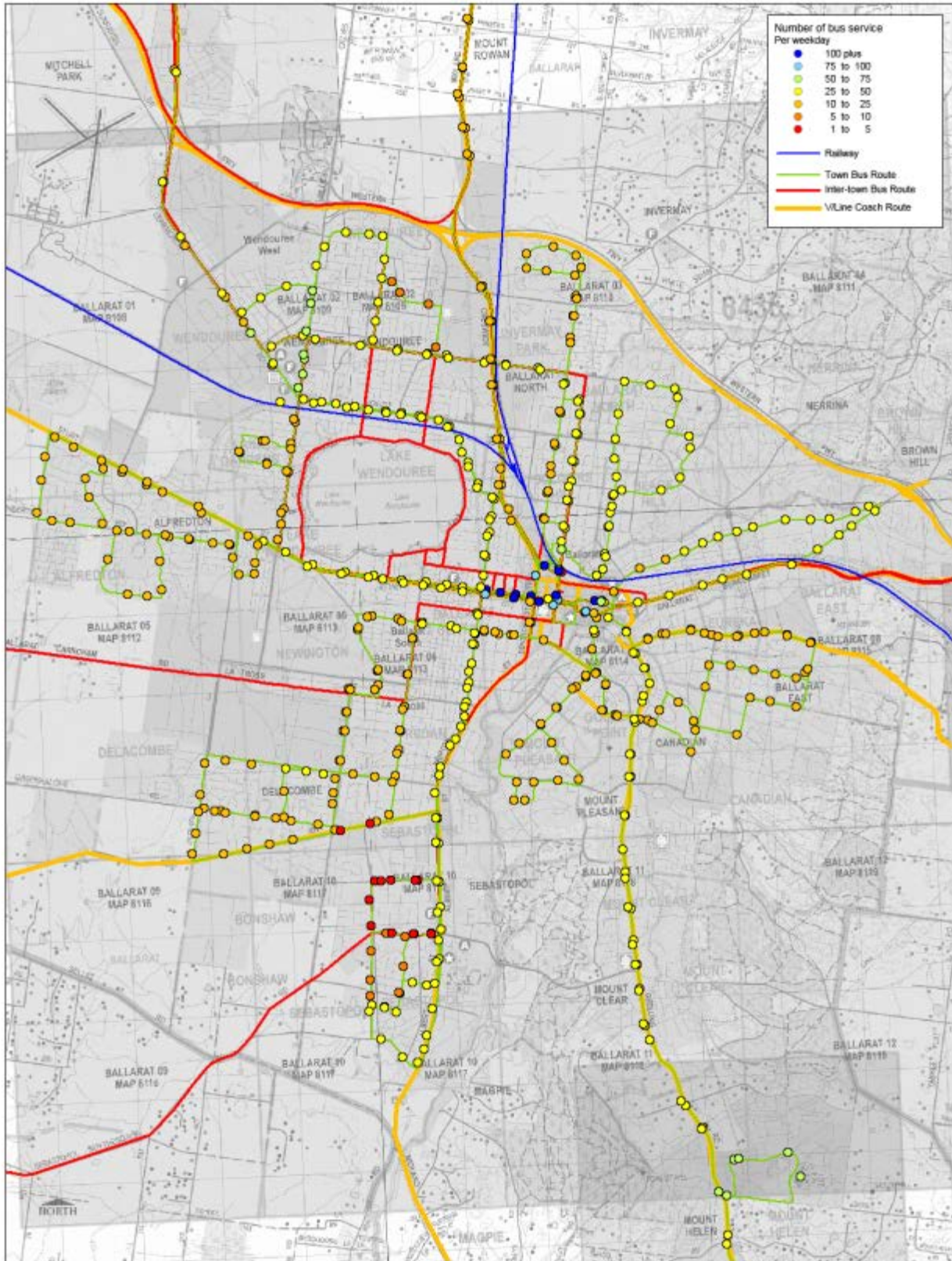
PROJECT ASSESSMENT FRAMEWORK			
Strategic objective criteria	Weightings	Score (0-10)	Result (W x S)
Economic impact	35		
Social impact	25		
Environmental impact	20		
Transport Network impact	20		
Total	100	<i>Sub-total</i>	
Regional impact criteria	Weightings	Score (0-10)	Result (W x S)
Regional impact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

The scoring guidelines for each category are set out below:

SCORING GUIDELINES			
Assessment criteria	Description		
Economic impact	Contribution to job growth, increased investment, productivity and innovation; building on competitive strengths		
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
Social impact	Contribution to building skills, health and wellbeing, safety, addressing disadvantage and community building		
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
Environmental impact	Contribution to the protection, restoration and enhancement of the environment; supports sustainable outcomes		
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
Transport network importance	Critical nature of network proposal and ability to build on existing services, plans, investigations and infrastructure and offer additional capacity/flexibility		
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
Regional impact	Breadth of impact (local/subregional/regional)		
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
Link to CH Regional strategies and plans	Status of project delivering on CH Strategy and Plan outcomes (Noting that the CH Strategy and Plan do not list projects per se.)		
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
Level of support / funds committed	Level to which project has received either support and/or committed funding from government(s) / private sector		
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.
Extent of planning ('Project Readiness')	Extent to which project has been planned, designed and/or undergone business case assessment		
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

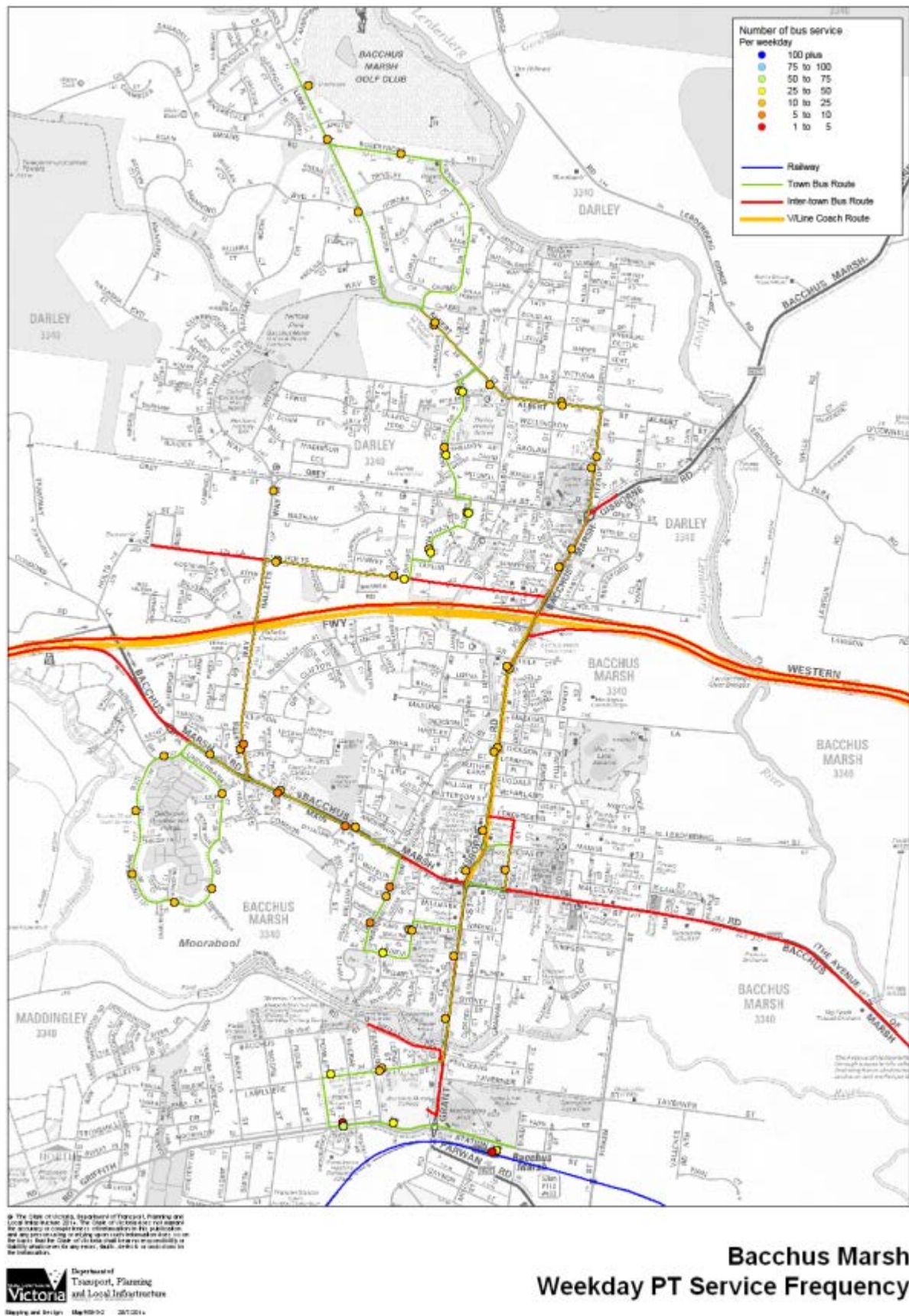




3. The State of Alaska, Department of Transport, Planning and Land Information 2014. The Code of Ordinances and Manual for Accuracy or Completeness of Information in his publication, and any person providing or relying upon such information shall be liable to the State of Alaska shall have no responsibility or liability whatsoever to any third party, directly or indirectly, in the information.

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People. Places. Productivity.