

Ballarat Integrated Transport Action Plan

For a Compact and
Connected City



62

Part A Report | July 2020

CITY OF
BALLARAT



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An Integrated Transport Action Plan towards 2050

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Vision Approach Immediate advocacy needs and priorities Future directions

As our city experiences unprecedented growth in population and jobs, this Integrated Transport Action Plan supports a more connected, sustainable and prosperous Ballarat. The City's economic and social prosperity is reliant on a well-connected community where everybody can move safely to jobs, schools, community services and shopping facilities. As the way we travel continues to evolve and change, the City needs to ensure that it can create an integrated transport network which is adaptable and flexible.

Ballarat's population is on track to reach 160,000 people by 2040 and we need to future-proof the city's transport network and plan for the long term. Ballarat residents will require increased access to homes, jobs and services within the city and region. Improvements to transport, including investment in roads and the public transport network will ensure this can be achieved sustainably and efficiently.

- more liveable, sustainable, healthy, equitable and prosperous city through increased emphasis on walking, cycling and public transport; based around five key objectives, which are:
- To support a liveable and people first approach in the movement of people;
- To create a fully integrated and reliable transport network which meets the changing needs of our community;
- To support more sustainable approaches to transport; and
- To enable advocacy and partnership arrangements which enable State Government and private investment in transport to enhance the City's liveability and its economic and social prosperity.
- Take practical steps to support Ballarat being a city less reliant on cars.

This Action Plan seeks to manage the inevitable transport impacts of population and job growth over the coming decades. The objectives and actions established within the Plan also seek to create a

This plan should be read in conjunction with the Ballarat Integrated Transport Action Plan - Technical Reference (2020), which provides background research, analysis and context.





Vision

Seamless, better connected and less car dependent transport system that a growing Ballarat deserves

People who live in and visit the City of Ballarat will be able to walk safely and comfortably and at their own pace through the City's many beautiful streets and laneways. Walking through the City will be made safe and comfortable for everybody regardless of circumstance through people centred design, seating, canopy trees and other forms of weather protection.

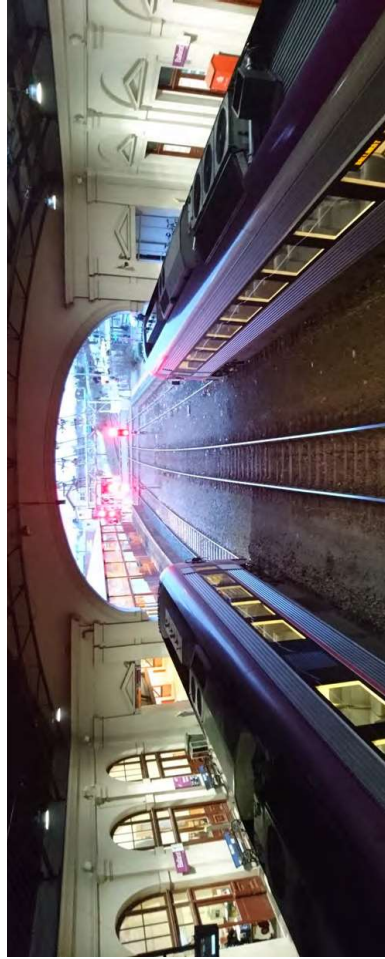
As people move through our City on foot or by bicycle, our City's unique history and the many stories that can be told will become a cornerstone to the experience. The 'people first' approach will make our public spaces and transport connections vibrant and safe, and - through our City's designed program - our streets and laneways will be friendly places for people to move through. Public spaces around public transport nodes will be designed to prioritise safety and accessibility for all, and we will support a healthier and happier community through reduced reliance on private car travel, facilitating active travel options, improved recreational tracks, protected and dedicated bike lanes throughout the City, and end of trip facilities for bicycle users.

Our train station is iconic and, for many, represents the arrival experience to the City. It is the biggest

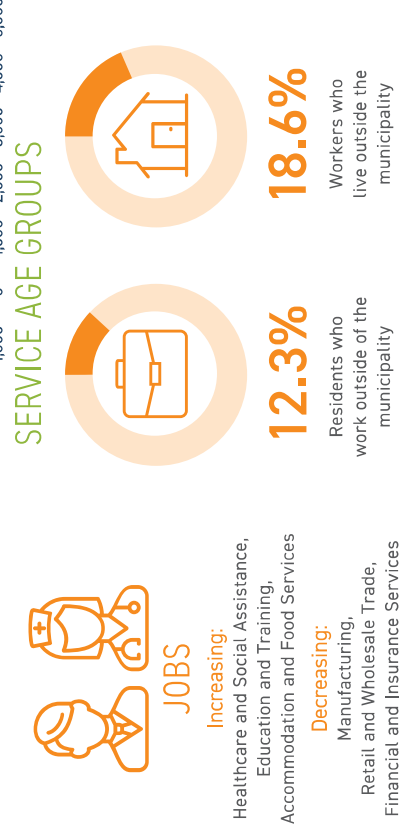
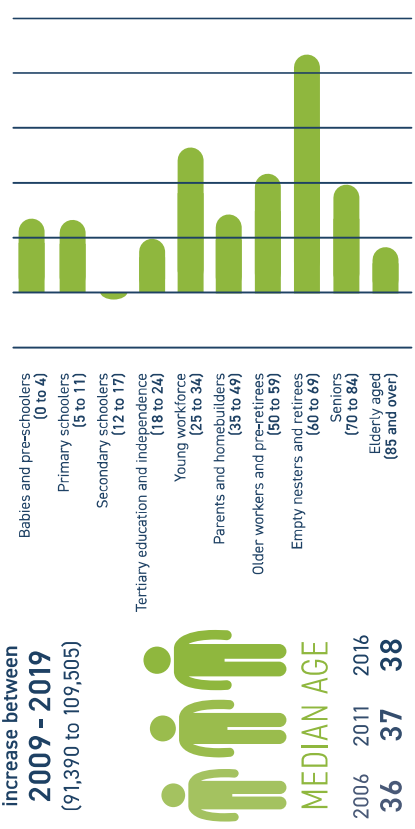
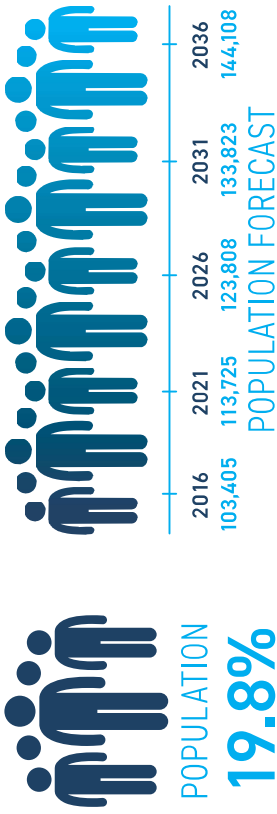
inter-modal facility for the City and the hub of many inter-transit opportunities. By improving safe connections to other forms of transport, people will be able to continue to move freely and easily through the City to their jobs, their schools, their friends, their family or to their homes. All public transport within the City of Ballarat will be efficient, reliable, safe and convenient.

As a large regional city, Ballarat has an important role to play in advocating for enhanced economic linkages through a range of initiatives, including more efficient freight movement, creating a regional aviation hub and opening up connections to other regional facilities for Central Highlands and the greater Western Victorian region. This can only be achieved through strong regional and State government partnerships and programs.

We will embrace the changing technologies which will make the City of Ballarat a 'Smart City'. We will design and deliver infrastructure which is resilient and adaptable to changing technologies. Smart City infrastructure will ultimately change the way we travel in the longer term and will make a significant contribution to the overall benefit of our community.



Demographics Summary





People First Approach

Where safety, high quality designed spaces, access for all, transport affordability, and a healthy community are a key focus.



1. Understand user needs
2. Build and manage places for people
3. Safety for all

People First Approach



1 - Understand User Needs

Policy Position

Data is integral to managing and planning for transport in Ballarat, particularly detailed understanding of community needs and aspirations.

Data can be used to both record usage and to support promotion and behaviour change programs.

Ballarat will adopt a range of reliable, repeatable and insightful ways to capture and monitor performance of the transport network, to guide advocacy, investment and project prioritisation.

The Current Situation

Long-term network performance is modelled using the Victorian Integrated Transport Model (VITM) to forecast changes in response to changing land use patterns. Site specific SSIDRA modelling is undertaken for traffic impacts.

Data on public transport usage is provided by Public Transport Victoria using a combination of survey and MYKI data.

Walking and cycling usage is monitored using an expanding network of automated counters at Lake Wendouree, Victoria Park and in the Ballarat CBD.

Key Issues

- Better data is required on the needs of users of the transport network, including more detailed information on journeys and routes
- Realtime data is not always available
- Current network of automated sensors is focused on key recreational sites, but will continue to expand coverage over time

Actions

1.1 – Establish and maintain data framework for understanding movement, journeys and experience

Capture and make publicly available in real-time data on usage of the transport network by all modes, including for walkers, those riding a bike, driving or potentially using public transport

1.2 – Proactively seek to understand what is needed for access and mobility by different user groups

Take opportunities to engage with the full range of demographics and types of users to understand their specific needs with regard to transport, including perceptions of safety, accessibility, enjoyment and convenience. Use real data to underpin decision-making.





2 - Build and Manage Places for People

Policy Position

Walkable streets are good for both business and community, both of which benefit from face-to-face interaction and the sharing of knowledge and ideas. Highly walkable cities which support people focused transport, safe and convenient cycling connections and convenient, safe and efficient public transport have healthier populations and more sustainable environments. Streets designed for people bring life to all aspects of the city.

The economic value of walking has been described as the 'walking economy'. Ballarat supports the view of advocacy group Victoria Walks which notes there is a direct link between the city's economic prosperity and the safety and convenience of the pedestrian experience.

Based on a design-led approach, Ballarat will invest and upgrade the amenity, accessibility and safety of public areas to encourage people to walk and use it as a form of stimulus for business. Improvements in tree cover, quality materials, legible environments and way-finding will be prioritised to support more people walking.

The Current Situation

Walking is an important part of the transport mix, but car-parking is often valued by the community and businesses as a far higher generator of benefit than enjoyable, accessible environments.

Key Issues

Feedback received indicated significant barriers to walking in Ballarat:

- Incomplete footpath network
- Lack of safe crossing points, particularly on busy roads
- Lack of accessibility
- Limited funding for new connections
- Timely infrastructure in growth areas
- Maintenance of existing infrastructure
- Poor connections to public transport
- Perceptions of safety
- Local weather and shelter

2 - Build and Manage Places for People

Actions

2.1 - Establish a principal pedestrian network

Planning and constructing a Principal Pedestrian Network (PPN) which would describe routes that pedestrians use more often will improve connections to key destinations. A PPN would also assist with potential new funding sources.

2.2 - Target pedestrian improvements around schools, road crossings and missing footpaths

Crossing the road can pose a challenge, especially for people with limited mobility or those crossing at a roundabout where there are reduced gaps in the traffic. Improving walking routes and crossings close to schools and key community hubs provide highest order community and safety benefits.

2.3 - Invest in quality street furniture, trees and the public realm to improve accessibility and comfort

The availability of accessible seating at regular intervals, shelters, tree-lined streets and street art all contribute to making walking more pleasant and attractive.

2.4 - Improve disability access

In Australia, around 20 per cent of the population have some sort of disability. Some areas in Ballarat contain poorly designed legacy infrastructure which limits or prevents access for people with limited mobility. The City of Ballarat should work with other authorities to increase the number of areas with compliant and accessible infrastructure.

2.5 - Improve recreational trails and green space

Recreational trails should link to make the most of Ballarat's parks, rivers and other green spaces.

2.6 - Investigate new ways of funding infrastructure to fill the gaps in current networks

Retrofitting footpaths and walking connections can be expensive. Innovative mechanisms to fund new infrastructure will be required to fill gaps in the current network.

2.7 - Address gaps in signage and wayfinding

Improved wayfinding signage can help pedestrians with important directional information, travel times and details about disability access, local information and events. This could incorporate new technologies, such as digital signage or online tools to assist with planning your route.

2.8 - Commit to minimum standards for walkable neighbourhoods

Investigate appropriate tools and standards to critically assess compliance when investing in new infrastructure, prioritising resources or planning for new areas and developments. Identify most appropriate standards, considering frameworks such as Healthy Active by Design Guidelines and the Victorian Government's Movement and Place framework.





3 - Safety for All

Policy Position

In partnership with State and Federal Governments, Ballarat will strive for zero road and pedestrian fatalities and serious injuries in the Municipality by 2050 – pursuing advocacy on relevant transport issues and seeking funding support to address infrastructure gaps and deficiencies.

Improving safety through a 'design led' approach

A 'design led' approach to our public realm will improve amenity and safety for all users in a seamless manner, so safety is not necessarily an obvious intrusion.

- ✓ The streets of Ballarat will be safe places for people of all ages
- ✓ Vehicle speeds will be moderated by quality urban design where needed
- ✓ Infrastructure will be designed with all users in mind, focussed on contributing to sense of place, as well as managing capacity and movement.
- ✓ Infrastructure will continue to be delivered to a high standard, including provision of redundancy to mitigate driver mistakes.
- ✓ Pedestrians will be protected, the risk of harm posed by motor vehicles reduced by slowing vehicles down and creating more car-free spaces.
- ✓ Lighting and the design of transport links will move beyond Crime Prevention through Environmental Design (CPTED) standards to truly support usage by all users, at the full range of times.

Providing for emotional and psychological safety

As well as physical safety, areas such as Ballarat CBD need areas to rest, relax and feel emotionally safe and connected. Opportunities to convert roadspace or parking to create new public spaces will be pursued, seeking to offer new spaces of respite.

The Current Situation

Crash statistics show Ballarat has a number of vehicle blackspots across the city, some ranking highly in terms of crash risk in Western Victoria. Significant investment in Sturt Street is seeking to address the areas of highest crash risk, but other sites along Remembrance Drive and scattered across the Municipality are also of concern. Vehicle speeds are noted by residents to be excessively high in some local neighbourhoods.

Key Issues

Community members who participated in 'Right to the Night' project identified over 150 places predominantly located within the CBD where they have walked that were of particular significance to them. Over 75% of these were marked as 'unsafe spots' by participants, denoting negative perceptions and experiences.

The large number of roundabouts in Ballarat, very wide streets, deep gutters in many areas and relatively high vehicle speeds on many roads pose safety issues and barriers for everyone who visits, passes through or moves along Ballarat streets.

3 - Safety for All

Actions

3.1 - Implement reduced speed limits within activity centres and other pedestrian hotspots

Targetted speed limit reductions across Ballarat's busy shopping areas and other pedestrian hotspot brings significant benefit to the community, with minimal impact on travel time.

Vehicle speeds of 40kmh or 30kmh result in significantly reduced injury and death to pedestrians than if vehicles are at higher speeds, whilst providing greater amenity.

Seek to partner with the Victorian Government for a trial of reduced speed limits in select pedestrian hot spots (this will require State Government approval).

3.2 - Design traffic infrastructure with the full range of users in mind – examples include:

- reducing crossing distances and seeking to provide pedestrian crossings on all legs of an intersection
- narrowing traffic lanes and introducing traffic calming
- removing kerbs to create level 'shared' streets
- converting roundabouts to more pedestrian friendly designs

3.3 - Maintain strong advocacy for blackspot funding and pursue State and Federal Government partnerships

There are new and emerging opportunities to trial and implement innovative safety approaches in Ballarat, including in terms of vehicle standards and technology, road and infrastructure improvements, driver training and education.

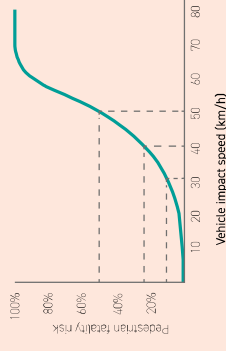


Case Study: Slower speeds for safer streets

Speed limits around the world are being reduced in busy areas. This is in response to a significant and growing body of evidence of the safety and amenity benefits that slower speeds deliver.

According to the World Health Organisation a pedestrian in a collision with a motor vehicle has a 90 per cent chance of survival when struck at 30 km/h, compared with a less than 50 per cent chance of surviving an impact at 45 km/h*. At 80 km/h there is almost no chance of survival.

The risk of death for people walking substantially increases above 30 km/h



Around the world, reduced speed limits in central city areas has been found to have a minimal impact on private vehicle travel times. Travel time in built-up areas is heavily influenced by congestion, parking movements and time spent stopped while waiting for other road users and at traffic lights. Streets with slower-moving traffic have a greater capacity and are more space-efficient due to the reduced distance between vehicles. A lower speed limit in congested areas may even reduce travel time since it facilitates a more constant traffic flow.

Reduced speed limits also have significant amenity benefits. Slower streets are less noisy and easier for people walking to get across. Street design outcomes are also improved, as slower streets require less space for turning movements, fewer signs, fewer barriers and improved sightlines present additional opportunities for planting street trees.

Source: City of Melbourne, Transport Strategy 2030 (2019)



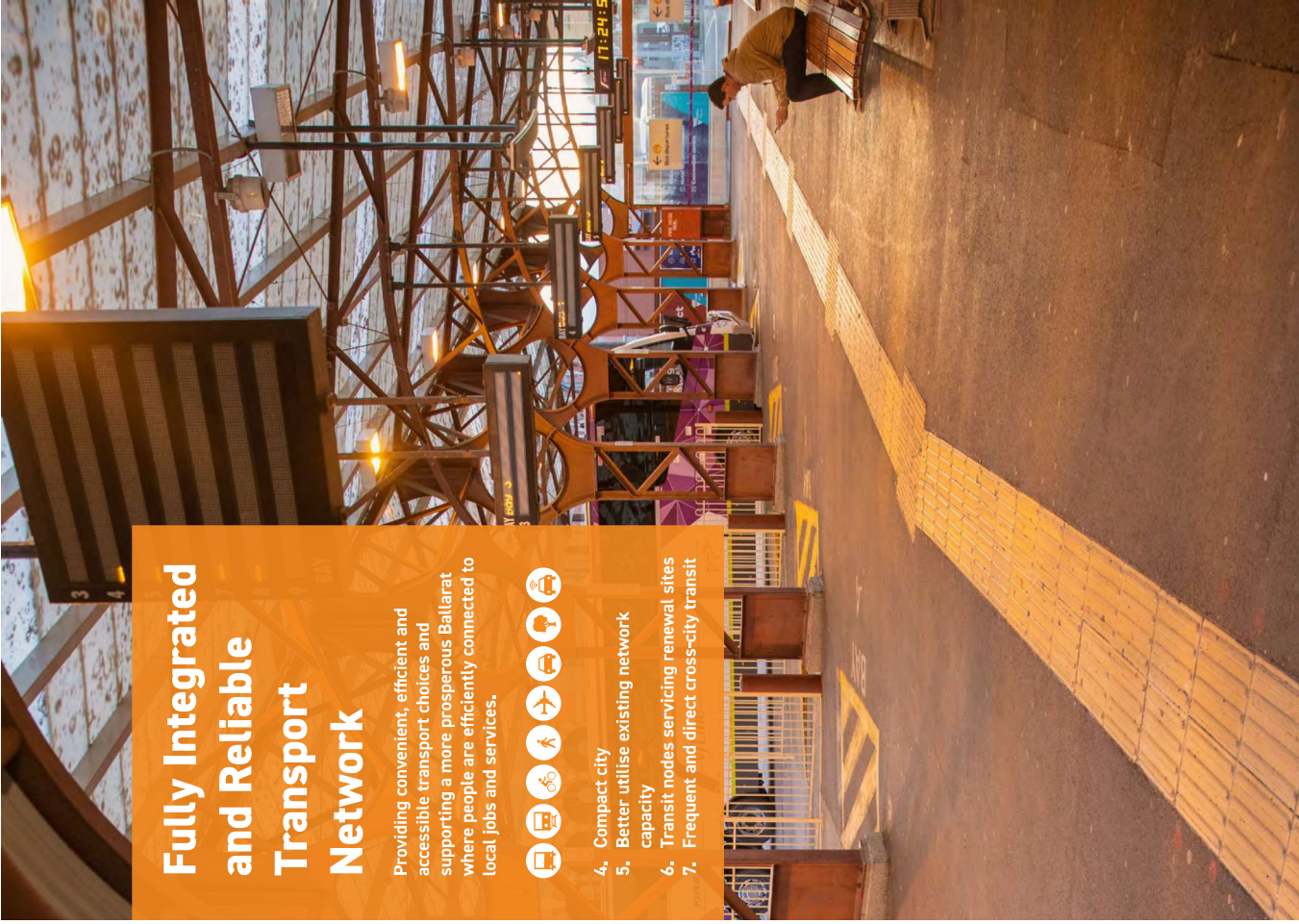
Fully Integrated and Reliable Transport Network

Fully Integrated and Reliable Transport Network

Providing convenient, efficient and accessible transport choices and supporting a more prosperous Ballarat where people are efficiently connected to local jobs and services.



4. Compact city
5. Better utilise existing network capacity
6. Transit nodes servicing renewal sites
7. Frequent and direct cross-city transit



4 - Compact City

Policy Position

This Integrated Transport Action Plan is underpinned by the 10-Minute City principal of the Ballarat Strategy: Our Vision for 2040. This plan seeks to provide updated guidance on land use and infrastructure planning and provision to achieve an integrated, compact 10-Minute City. This reflects community aspirations – a desire to maintain the existing level of access to destinations and services as the city grows.

A new housing framework plan will be adopted for Ballarat, focused on creating an efficient, compact and convenient city in which to live and visit, which promotes higher rates of growth in the CBD, defined urban renewal areas, new greenfield areas and other strategic sites, whilst increasing protections for local neighbourhood character.

Ballarat will become an even healthier, inclusive and liveable compact city.

A coordinated approach by all stakeholders, communities, agencies, developers and businesses will be required to achieve a 10 minute city.

- ✓ Provide well serviced local neighbourhoods that are desirable, convenient and provide for day to day needs
- ✓ Improve local travel* options to support 10-minute neighbourhoods
- ✓ Create safe and well connected neighbourhoods for pedestrians and cyclists
- ✓ Provide a diverse range of housing choices
- ✓ Improve public realm and open space amenity and connections
- ✓ Provide a well connected and efficient public transport network that connects people to activity centres, jobs and higher-order services
- ✓ Deliver housing/population at densities that make local services and transport viable
- ✓ Facilitate thriving local economies.

* Local travel relates to daily service, recreational and social activities—such as sport and shopping—as well as personal business and education. It is different to journey-to-work travel, which tends to occur at peak travel times of day.





4 - Compact City

The Current Situation

Compact city planning does not mean just increasing urban density. Compact urban form must be carefully planned to ensure the lifestyle and environmental benefits are also achieved. From a transport planning perspective, high density corridors with large numbers of people moving from one point to another are the easiest to plan for and service. Trams, trains and high frequency buses can be most easily justified under this type of land use model. However, this can impact on local character and amenity. The existing policy position of Convenience Living Corridors will be replaced with a more nuanced and character-driven approach.

Where people live and work makes transport provision difficult

Influencing where people live has a major impact on the viability of transport provision. Where there are very few people wanting to travel between destinations, and the destination is not nearby, there are few alternatives to driving. To realise the vision for truly seamless, coordinated, affordable and enjoyable transport options there must be land use change which encourages people to live and work locally, near activity centres/nodes and along transit routes. There is significant capacity for this to occur in Ballarat across all suburbs and areas, however this is not evenly distributed across the city - some areas have minimal opportunity for growth whilst others can cater for substantial growth.

The following maps illustrate the concepts of defined neighbourhood character, and consideration of their potential to grow and accommodate additional people - a key requirement for considering where improved services and ultimately high frequency transport corridors could be located.

Key Issues

Planning for a compact city faces a number of challenges in Ballarat:

- Ensuring that neighbourhood centres are fully serviced and accessible
- Increasing density whilst appropriately managing character and protecting environmental values
- Managing greenfields growth and sprawl
- Activating urban renewal areas that provide huge opportunities for new housing and employment.
- Ballarat is currently a car-centric city with most people using a private car for most trips.
- Low population densities make rapid transit challenging to justify - current population densities in residential areas is between 3 and 13 people per hectare. Densities around activity centres need to be closer to 35 people and jobs per hectare, or about 10,000 residents and jobs within a 10-minute walking catchment to achieve maximum benefit.

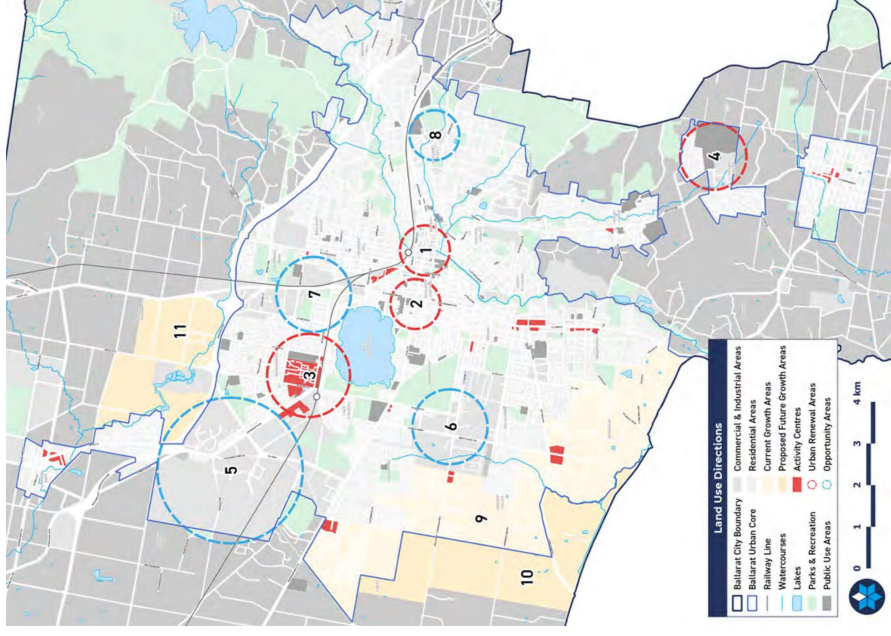


16 Ballarat Integrated Transport Action Plan | Fully Integrated and Scalable Transport Network

4 - Compact City

Shaping the City

The spatial location of Ballarat's housing and jobs underpins principles and actions for the provision of transport investment in Ballarat. The Integrated Transport Action Plan provides a basis for the integration of transport and land use through building on the City's strengths, while continuing economic and population growth in Ballarat. Importantly, the action plan will inform and prioritise transport projects requiring targeted advocacy.



The proposed future growth of Ballarat reinforces the core elements of:
A growing CBD
A connected network of urban renewal precincts
Specialised employment precincts such as the BWEZ

Urban Renewal and other Opportunity Areas
1 CBD & Bakery Hill
2 Health & Knowledge
3 Wendouree & Howitt Street
4 Federation University
5 BWEZ, Airport & Wendouree West
6 Saleyards Precinct
7 Selkirks Precinct
8 East Ballarat
9 Western Growth Area
10 Proposed Western Growth Area Extension
11 Proposed Northern Growth Area

Figure 1 | Land Use Directions Map

Ballarat Integrated Transport Action Plan | Fully Integrated and Scalable Transport Network 17



4 - Compact City

Actions

4.1 – Prepare a housing strategy

A housing strategy and neighbourhood character study will be prepared to ensure that residential development protects character and reinforces a compact city. Updates to the Ballarat Planning Scheme will include the housing guidance, transport gateways and networks and key land use including regionally significant precincts, activity centres, housing change areas, employment precincts and open space networks.

4.2 – Adopt new '10-minute city' guidelines for greenfield growth areas

Prepare and implement new Growth Areas 10-minute city guidelines addressing; design standards for planning and provision of infrastructure for walking and cycling; provision for public transport; walkable neighbourhoods with high quality public realm and well-serviced activity centres providing for local services and jobs

4.3 – Revise and update existing industrial and commercial land use plans

A new industrial and commercial land use plan needs to be prepared to identify future land use needs, with consideration of areas identified for land use change, and incorporating findings of the urban renewal and other local area planning projects. The current plan was prepared pre-BWZ and the industrial land needs of the city are changing with new technologies and infrastructure needs and with consideration of Council's adopted Circular Ballarat Framework. Implications for integrated transport and freight movement will be a key consideration of this plan.

4.4 – Prioritise development in urban renewal sites, acting as catalyst projects for jobs and investment

Develop guidelines for urban renewal site planning to ensure integrated transport planning objectives are achieved, and where appropriate achieve Transit Oriented Design (TOD) outcomes. Complete the Latrobe Street Saleyards Precinct Urban Renewal Plan. Design and develop this area as a TOD Regionally Significant precinct offering new employment, housing and transport opportunities.

4.5 – Review and update the Open Space Strategy to match the demands of a larger city

Ballarat is well provided with open space for its current size, however as the city grows and more people live in smaller houses with less private open space, there is an increasing need to provide quality open space areas. Future review of the Open Space Strategy to include consideration of missing links and opportunities to provide for active transport.

4.6 – Undertake missing links strategic and government land review

Undertake a strategic review of missing links for transport connections, and implement actions to reserve and plan acquisition.

4.7 – Update Strategic Planning around Activity Centres

Ensure that integrated transport planning principles of this plan are embedded in the development of framework plans for Activity Centres.

5 - Better Utilise Existing Network Capacity

Policy Position

Maintain major emphasis on finding better ways to utilise existing infrastructure and transport assets. Be proactive and open to trialing and implementing new technology, techniques, business models and projects which better utilise the investments already made.

The Current Situation

There are many ways to provide more transport capacity, convenience and options by leveraging what is already in place – often at far reduced additional cost.

Ballarat is well served by an extensive road network, footpath network and safe and connected recreational and off-road trails. However, many parts of that network are single dimensional in their use and underperforming compared to their potential. The biggest opportunity for Ballarat lies in public transport given buses are often half empty and far more people could be moved for the same cost.

Key Issues

There are many ways – small and large – that other cities have better leveraged existing network capacity, including :

- Using detailed analysis of patronage data to better match services to what the community wants
- Creating cultural change in attitudes to public transport use
- Bus priority
- Current model of all bus services focusing on Ballarat Station artificially reduces the efficiency of the bus system with limited benefit - most bus users seek a destination other than the station
- Introducing a bus tracker system to better inform commuters of the next available service

- Providing improved Wi-Fi and other digital initiatives to make the journey more productive.
- Technology also provides solutions to getting more use of existing infrastructure, such as:
 - Reviewing traffic signal phasing on key routes to increase capacity for the busiest direction
 - Dynamic signalling on the railway network to reduce the need for new physical infrastructure to increase capacity
 - Encouraging new opportunities for ride-sharing
 - Capturing and sharing more transport data – data is often a key input for new technologies.
 - City of Ballarat will continue to seek partnerships with the State Government and private sector to embrace technology, as a way to better inform transport users and improve overall management of the transport network.

Actions

5.1 – Proactively seek and implement opportunities to better utilise network capacity

Look for opportunities in partnership with State Government Agencies and the private sector to find ways to better leverage the network capacity of the city.

5.2 – Investigate precinct specific transport and traffic management plans for key education clusters

The transport task associated with school and other educational drop-off and pick up is the reason for most periods of congestion across the Ballarat road network. Multiple schools and organisations working together to provide better coordinated transport will help alleviate congestion, and improve safety. Particular opportunities for a coordinated management plan within the Sturt Street Education Cluster.



6 - Transit Nodes Servicing Renewal Sites

Policy Position

Focus growth, development and change around a network of key transit nodes servicing the City. In addition to existing railway stations at Ballarat and Wendouree, pursue Transit Oriented Development in Urban Renewal Areas and major suburban centres so they transition from servicing local and regional driving catchments to become more accessible for visitors and residents via a range of modes.

The Current Situation

The lack of a focussed network of transit nodes limits the frequency of services and diversity of transport options provided at each site. A strong and cohesive network is vital to supporting long-term land use change which in turn provides for the levels of transport services desired by the community.

Key Issues

The transport hubs across Ballarat face a number of challenges including:

- Transport hubs are currently only related to the rail network – which provides for regional access not local and cross-city transport (the most common type)
- Growth areas are not well serviced – except by car
- Unsustainable demand for car parking at stations for regional services
- Pattern of housing and jobs growth emphasises growth in areas totally reliant on additional bus services.

Actions

- 6.1 – Establish a network of key transit interchanges across Ballarat**

Investigate the following as key transit interchanges and hubs for walking, cycling, driving and bus users, which can transition to a hub or rail hub over the longer term:

Existing:

- Ballarat Railway Station – the main ‘destination station’ for Ballarat CBD
- Wendouree Railway Station

Future:

- Victoria Park / Latrobe Street Saleyards (as the major transport gateway servicing Ballarat West)
- Eureka Stadium Precinct (major events and game day access and improved everyday access to Ballarat Sports and Events Centre)
- Delacombe Town Centre
- Northern Growth Area (details to be determined)
- Warrenheip (long-term - interchange for access to Federation University, Buninyong and eastern destinations)
- BWEZ (Freight only)

Land use policies already support this outcome, and opportunities for commercial partnerships will be pursued to affect real change.



6 - Transit Nodes Servicing Renewal Sites

The proposed network of transit hubs are shown in the figure below. 6 potential future transit hubs will form a network of nodes with city-wide significance. They will be supported by a range of other hubs scattered across the city in convenient locations.

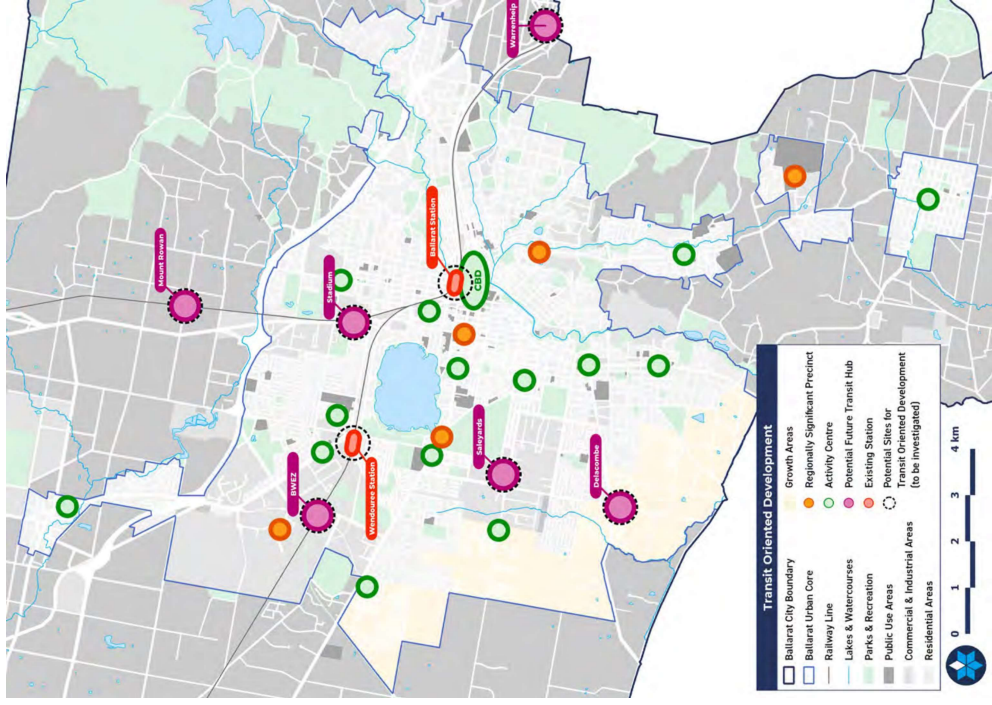


Figure 2 | Transit Oriented Development



7 - Frequent and Direct Cross-City Transit

Policy Position

Ballarat will pursue a long-term transition of its current bus network to a network of high frequency transit corridors between key nodes and destinations.

The City will advocate for improvements to these corridors over time, including increasing service frequency, span of operations, priority, directness and legitimacy.

These corridors will be refined in partnership with the Department of Transport and Public Transport Victoria to become the Principal Public Transport Network (PPTN) for Ballarat – with an expectation that they are funded and improved accordingly.

Land use policies will support appropriate growth in areas which can benefit from access to the network. Over time, these corridors would evolve to initially include priority for bus services, whilst being future-proofed to become high capacity bus or tram corridors over the longer term.



The Current Situation

The Ballarat bus network currently caters for around 120,000 trips per month (public and school services), a low proportion of overall trips. Just 451 people or approximately 1% of Ballarat's working population caught the bus to work in 2016. Although this is comparable to other regional centres, there is significant scope to increase usage.

The bus network functions as an important safety net for people who don't have access to other forms of transport. The aim of bus network improvements is to ensure catching the bus is a much more attractive option for all commuters.

Note: All public transport services in Victoria, included the bus network in Ballarat, is funded and managed by the State Government. City of Ballarat has an advocacy role to partner with Public Transport Victoria and the Department of Transport to improve services in Ballarat.

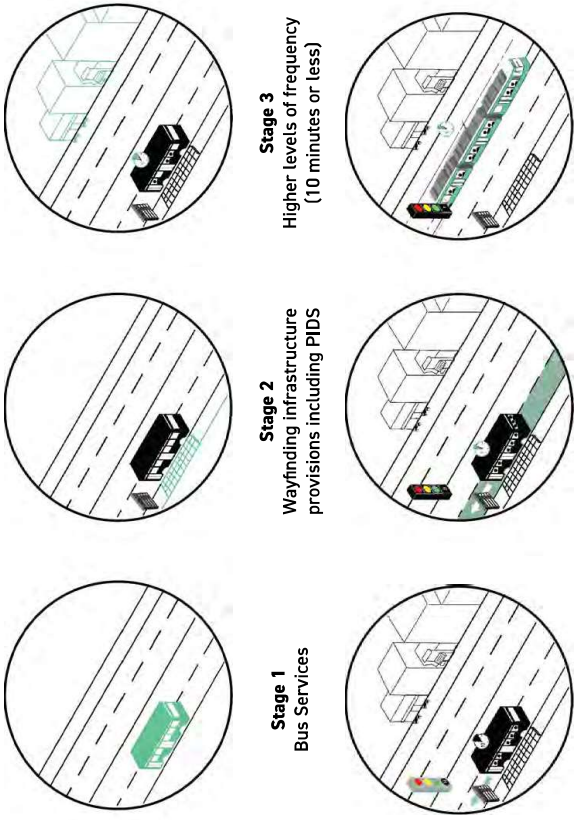
Key Issues

The Ballarat bus network faces a number of challenges including:

- Poor frequency
- Indirect routes
- Low patronage and mode share
- Poor route legitimacy
- Poor connections with other modes of transport
- Lack of integration with surrounding land use



7 - Frequent and Direct Cross-City Transit



Stage 3
Higher levels of frequency (10 minutes or less)

Stage 2
Wayfinding infrastructure provisions including PIDS

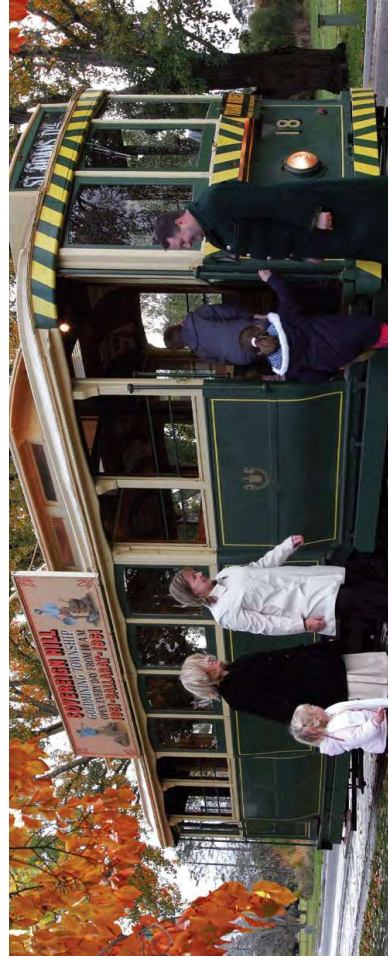
Stage 1
Bus Services

Stage 6
Tram services

Stage 5
Dedicated bus lanes and 5 minute headway

Stage 4
Priority signalling infrastructure

Figure 3 | Stages of transport and land use development along transit corridors





7 - Frequent and Direct Cross-City Transit

The indicative route corridors are the potential high frequency corridors of the future, likely to form the basis to Ballarat's Principal Public Transport Network. Headway frequencies are aspirational with regard to the urban transit of the future. Refer to the associated Technical Reference document – Urban Transit section for more detailed information.



Figure 4 | Indicative Route Corridor Options Map

7 - Frequent and Direct Cross-City Transit

Actions

7.1 – Advocate to Public Transport Victoria to review and overhaul the Ballarat bus network

The current bus network, even with the same number of services and spread of operating hours could be vastly more convenient and well patronised if it were to be reviewed and modified to best practice bus service planning. Work with Department of Transport to progress a review and overhaul of the Ballarat Bus Network.

7.2 – Transition to faster and more direct bus routes

Revise the service offering to consider more direct cross-town bus routes, 'turn up and go' network frequency, bus priority, expanded operating hours and live commuter information. This improves the legibility, speed and competitiveness of buses for use.

7.3 – Define and adopt a Principal Public Transport Network (PPTN) to guide long-term planning

There is a need to identify and protect dedicated transit corridors to future-proof the City. These corridors provide long-term certainty the service won't be removed or re-routed. This allows for land use change of increased density within proximity to bus services (as occurs near tram and railways stations). These priority transit corridors are known as a Principal Public Transport Network (PPTN).

Potential key destinations for the PPTN could include the CBD, Sovereign Hill, Federation University, Western Growth Corridor and other destinations. Further detailed planning and investigation is required in partnership with the Victorian Government. Definition of routes should specifically investigate rapid transit and high quality

connections linking Ballarat West with Wendouree Station and the wider network, consideration of the long-term potential for the Ballarat – Skipton rail trail to be utilised for rapid transit, as well as other identified opportunities.

7.4 – Future proof commuter transit corridors

The Principal Public Transport Network will bring important short and medium-term service and connectivity improvements. In the long term, these transit corridors have the potential to transition from one mode to another as patronage increases. Ultimately, in a much larger city, this could include technologies such as trackless trams which are optically guided and generally require dedicated transit corridors. The design of changes to the corridors over the short-medium term should consider the need to allow for flexibility and change.

7.5 – Maintain a policy position to retain transit corridors for future use

Identify and plan for the acquisition of land and preservation of corridors to ensure long-term network connectivity, in partnership with the Victorian Government. This includes disused rail corridors and rail trails.

7.6 – Explore feasibility of extending heritage tram network

Most likely opportunity from Lake Wendouree to Sovereign Hill, via the CBD. Costs of track and associated infrastructure have previously made the option unfeasible. Opportunity to revisit the proposal considering options which do not require tracks or associated infrastructure, including trackless tram and rubber tyre conversions to heritage rolling stock – as a tourist experience.



Universal Accessibility
 Building a city that is accessible and welcoming for all.

8. Universal Accessibility

Universal Accessibility

8 - Universal Accessibility

Policy Position

A future of universal accessibility in Ballarat considers both the types of communities in which we live and the services they offer, and fine grained personal accessibility in the built environment.

The land use policies of Ballarat will prioritise the creation of a network of 'Complete Neighbourhoods', and within those areas the pursuit of a 'design led approach' to deliver a built environment which functionally enables access for all.

Complete Neighbourhoods:

The term 'complete neighbourhood' refers to a neighbourhood where one has safe and convenient access to the goods and services needed in daily life. This includes a variety of housing options, supermarkets and other commercial services, quality schools, public open spaces and recreational facilities, affordable active transport options and daily services. An important element of a complete neighbourhood is that it is built at a walkable and bikeable human scale, and meets the needs of people of all ages and abilities.

The concept is based around recognising human needs and behaviours. Land use planning should enable residents, whether urban or rural, to access as much of their daily needs as possible in their local communities.

In Ballarat, complete neighbourhoods will have:

- A discernible centre
- Most houses within a 10 minute walk of the centre
- A variety of housing types
- A variety of shops and offices should provide daily needs, including incidental food shopping
- A primary school close enough so most children can walk to school
- Small playgrounds or open space accessible within 10 minute walk (or less) of all homes
- The streets within the neighbourhood as a logical, safe, legible and connected network
- People focussed places, with high amenity and trees and gardens
- Space for neighbourhood meeting places, community centres or places for public events
- Access to a range of convenient transport options.





8 - Universal Accessibility

Policy Position

Design Led approach to universal accessibility - 'seamlessly integrating inclusivity'

Universal Design is a design philosophy that ensures products, buildings, environments and experiences are innately accessible to as many people as possible, regardless of their age, level of ability, cultural background, or any other differentiating factors that contribute to the diversity of our communities. Universal Design can be applied to all fields of design, including but not limited to product design, interactive design, architecture and urban planning.

Refer to the [Victorian Health and Human Services Building Authority \(VHHSBA\)](#) for more information

The Current Situation

Ballarat has some highly accessible areas, including the Inclusive Playspace at Victoria Park and deploys the Marveloo accessible change space to priority areas in response to demand. However, these are quality areas in a City which more broadly has many barriers to seamless movement and accessibility and often does not seamlessly integrate inclusivity in its built form.

There are many barriers to movement across the city, and a long-term prioritisation of design thinking and delivery will be required to lift the general standard to the desired level. Heritage streetscapes, including deep bluestone gutters in the CBD are just one of the many critical issues.

Key Issues

Feedback received indicated Ballarat needs to significantly improve accessibility:

- Single functional designs in some spaces, providing overt or subversive exclusion of certain demographics
- Lack of legibility and ease of use in navigation
- Lack of intuitive use and access to some spaces
- Lack of flexibility in the use of certain spaces
- Variance in facilities and infrastructure across different areas of the city
- Lack of DDA compliance across the transport network, including at many bus stops and Ballarat Station



Source: Victorian Health and Human Services Building Authority

8 - Universal Accessibility

Actions

8.1 - Advocate for essential Ballarat Station Upgrades

Ballarat Station is the key transport interchange in the city but does not provide DDA compliant access across its platforms. The precinct more broadly needs to be upgraded, including:

- upgrade of the regional bus interchange
- restoration and activation of main heritage building
- pedestrian linkages to the GovHub
- improved connectivity to Mair, Hummfray and Lydiard Streets
- activation of underutilised spaces

8.2 - Revise land use policies to deliver 'Complete Neighbourhoods' and work with developers towards its delivery

The 10-minute neighbourhood concept supports more locally accessible services and infrastructure to reduce the need to travel. There is an opportunity to develop a consistent network of well-designed pedestrian infrastructure to encourage people to walk, particularly to local destinations.

8.3 - Investigate, design and deliver universal accessibility and truly 10-minute walkable neighbourhoods

Adopt and implement the 7 principles of universal accessibility as part of a Design Led approach to thinking, planning and delivery new infrastructure, programs and spaces:

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible Information
5. Tolerance for Error
6. Low Physical Effort
7. Size and Space for Approach and Use

8.4 - Consider enforceable requirements for inclusion in the planning and design of new suburbs

Retrofitting the built environment to achieve universal accessibility is challenging and expensive. It is important for any new development areas to adopt universal access principles in their initial design.

8.5 - Provide specific design guidance on overcoming barriers unique to Ballarat

Local features such as historic bluestone gutters are important parts of the built fabric but cause major access challenges for many people. Detailed policy and design guidance is required to consider and manage competing priorities to achieve better outcomes.

8.6 - Prioritise improvements to accessibility in highest impact places

Physical changes to improve the access and legibility of spaces should be done in an integrated way, considering opportunities to improve amenity, comfort, safety and enjoyment at the same time. Given the significant amount of work required over the coming decades, it is best to start with areas which will have the highest benefit - including the CBD and Health Knowledge Precinct surrounding the Ballarat Base Hospital.

Prioritisation to be guided by masterplanning, funding opportunities, community and business led advocacy and the ability to leverage multiple projects together for greater benefit.





Sustainable and Diversified Travel Options

To achieving a city-leading shift towards more sustainable, resilient and adaptable modes of travel.



- 9. Embrace new technologies
- 10. Diversify service offerings
- 11. Investment in roads and streets
- 12. Cycling City

Sustainable and Diversified Travel Options

9 - Embrace New Technology

Policy Position

Ballarat will be open and progressive in trialling and adopting new technology to build, manage and use its transport network.

Partnerships with commercial businesses, consideration of whole-of-life project costs, policies to reach zero carbon emissions and use of 100% renewable energy are just some opportunities which can be achieved through adopting a philosophy of thinking outside the conventional norm, taking an appropriate level of risk to achieve reward.

Establishment of Ballarat as a 'hydrogen city' producing, distributing and utilising hydrogen as a renewable fuel remains a key strategic opportunity, with significant commercial potential for public transport vehicles to be designed and built in Ballarat for either local use or export. Where feasible and affordable, Ballarat will be an early adopter of hydrogen and other renewable fuel cell vehicles. There are significant opportunities for jobs and investment if these vehicles and fuel cells are manufactured locally.

Establishment of a shared services model for providing Council services to the region is being progressed, and the shared use of technology is a major focus to drive efficiencies and reduce costs. Rise in usage of autonomous vehicles and artificial intelligence will require changes to the design standards adopted for roads to cater for digital monitoring and guidance systems.

Key Issues

There are many ways – small and large – that other cities have better leveraged existing network capacity, including:

- Rapidly changing range of opportunities, not always supported locally
- Additional up-front costs can be required, to be recouped over time
- Community concern regarding inclusion and usability of new technology

Actions

- 9.1 - Adopt a proactive and progressive philosophy to trialling and implementing new technology

The Current Situation

City of Ballarat already trials and utilises a range of relevant technologies.



Source: Infrastructure Victoria, Advice on Automated and Zero Emissions Vehicles Infrastructure (2018)



10 - Diversify Service Offerings

Policy Position

Embrace new and innovative approaches to provide transport, welcoming approaches to pilot or test new and innovative opportunities in Ballarat – as a self-contained city where the learnings would have application across the Country and internationally.

Invite interest from digital disruptors, community transport providers, vehicle manufacturers and software developers to pilot and experiment with new offerings.

Better utilise existing infrastructure and services which are provided, including investigation of a network of park and ride stations in Ballarat, linked to underutilised car parking areas across the city and existing network services which could be re-positioned to offer such a service. Example would include adjusted timetables and consideration of pricing and marketing opportunities for commuters who park in an at-grade carpark at a sports ground not utilised during the day, who can use a bus route to reach their destination.

Park and Ride stations can link with bus services but also be utilised as free parking locations for those who are walking or riding the remaining of their journeys into paid parking areas.

The Current Situation

Current service offerings in Ballarat are traditional forms of transport, car, bus, walking, trains and cycling.

Key Issues

Transport service offerings in Ballarat are not leading to a surge in usage:

- Low levels of potential usage limit interest from innovative transport providers to trial products in regional cities
- Statewide policies for provision and funding of public transport by the State Government limit flexibility for nuanced service delivery in regional cities
- Residents and visitors to Ballarat need access to more convenient transport options
- Lack of cohesive and legible mix of modes leads to confusion and a poor user experience

Actions

10.1 - Diversify Service Offerings

Pursue transport opportunities not currently mainstream in Ballarat, including bike share schemes, e-scooters, on-demand bus services and other forms of community or 'just in time' transit.

Pursue specific opportunities of electric and hydrogen fuel technologies to power these types of vehicles, seeking to establish and grow manufacturing and research related industries in association with new services.

10 - Diversify Service Offerings

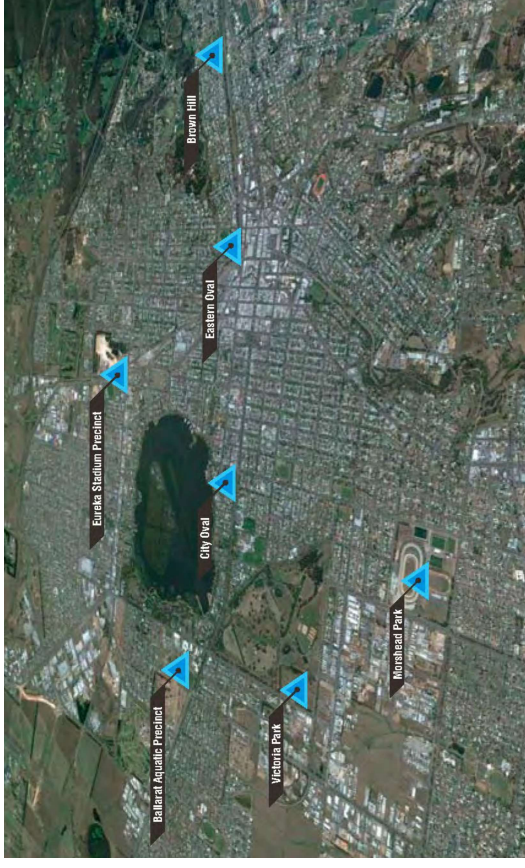


Figure 5 | Potential Network of Park and Ride Stations

Case Study: Launceston Tiger Bus Park and Ride and Tourism Transport Services

Greater Launceston has a similar population and a low density land use pattern with similarities to Ballarat. The Free Tiger Bus is a well established commuter and tourist focussed bus service funded and managed by the Launceston City Council. It offers a convenient way to travel into Launceston's inner city and surrounds from Inveresk precinct, which provides out of CBD car parking.

The bus service operates:

- The **Commuter Run** which takes people from Inveresk car park to Launceston's city centre before and after common working hours.
- The **River Explorer Run, City Explorer Run and Cataract Gorge Run** are designed to

take sightseers and shoppers into the inner city, and surrounding destinations.



11 - Investment in Roads and Streets

Policy Position

Advocate for ongoing partnership with State and Federal Governments to deliver a package of priority road upgrades across Ballarat – essential for managing increasing demand on the network.

Consider new or upgraded routes which relieve pressure on the north-south corridors of Geelong Road and Midland Highway, pursuing a model of providing additional linkages on which to travel rather than expansion of the width of roads along these corridors, which impacts on amenity, pedestrian connectivity, and where it cuts a community into two parts along its length.

Current State and Federal Government grant funding levels are too low for Ballarat's growth rate and local circumstances. Pursue increased funding support for upgrading the road network, including capacity increases, road safety improvements and completing the Ballarat Western Link road.

Remembrance Drive (Avenue of Honour) is a historical boulevard and alternatives should be investigated over the longer term to minimise traffic growth along that corridor. Changes to improve road safety and capacity along that corridor should consider its historical and commemorative significance in their design.

The Current Situation

Private car-based travel is by far the most common way to get around Ballarat. Roads are Council's largest expenditure and carry the largest mode share of travellers. In 2016, 74% of Ballarat residents travelled to work by car. Council spent \$13 million in 2019 and \$29 million in 2018 on capital works on the road network.

Some key road corridors are in the process of being upgraded but further funding is required to complete upgrades to major intersections and routes connecting Ballarat West to the established area, including Ballarat – Camargham Road/

A series of road upgrade projects are currently underway to relieve congestion in various traffic hotspots around the city, including:

- Gillies Street and Gregory Street.
- La Trobe Street and Wiltshire Lane.
- Dyson Drive and Ballarat-Camargham Road.
- Glenelg Highway and Midland Highway.
- Midland Highway, Sebastopol.
- Wiltshire Lane and Glenelg Highway

Future phases of the Ballarat Link Road are currently in planning and will be delivered in upcoming years, subject to funding.



11 - Investment in Roads and Streets

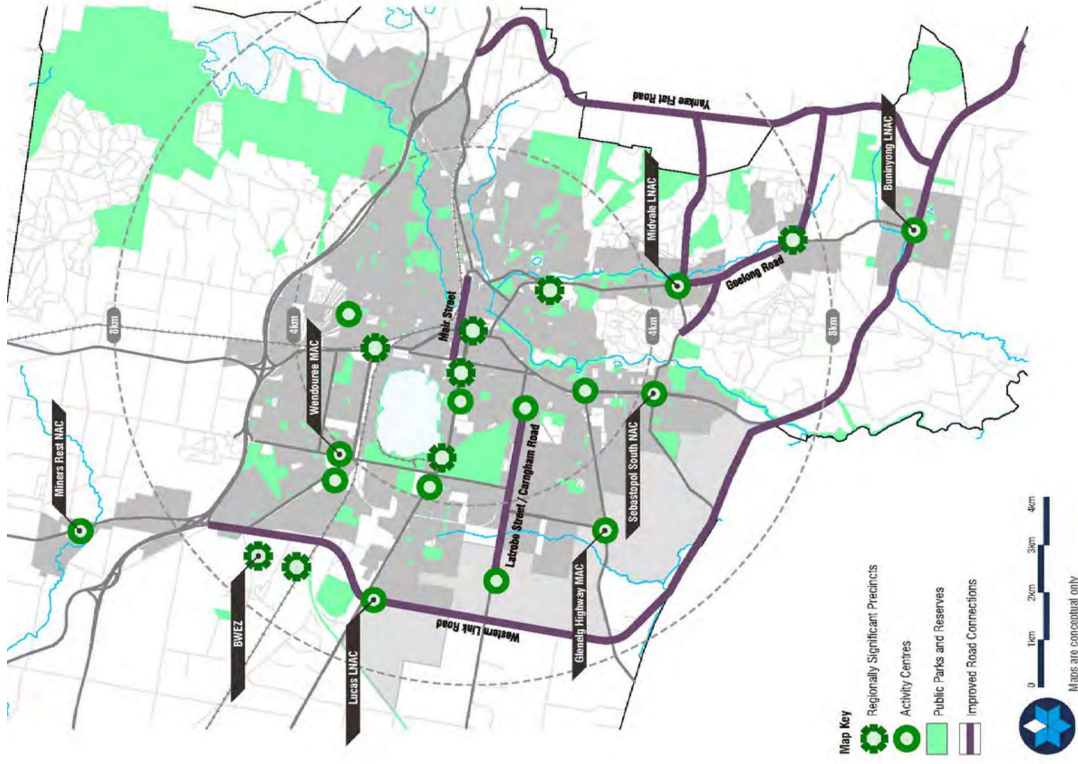


Figure 6 | Improved Road Connections



11 - Investment in Roads and Streets

Key Issues

The current road network faces a number of challenges including:

- Congestion hot spots at peak times across the City
- Modelling indicates site specific congestion issues to be resolved as the population grows
- Necessary road upgrades not currently funded
- Traffic hotspots and capacity limitations
- Growing congestion, including carparking
- Heavy vehicles in urban areas
- Road safety for cars and other users
- Greenhouse gas emissions from use of fossil fuels
- Cost of maintenance and upgrades
- CBD arterial roads impact north-south pedestrian connectivity

Actions

11.1 - Advocate for ongoing partnership with State and Federal Governments to deliver a package of priority road upgrades, addressing areas of need

Significant investment required to improve safety and capacity of the infrastructure to match the road hierarchy and user levels. 10-year rolling package of specific sites and projects continually updated using latest data, guiding specific decision-making on investment priorities.

11.2 - Consider new or upgraded routes which relieve pressure on the north-south corridors of Geelong Road and Midland Highway

Pursuing a model of providing additional linkages on which to travel rather than expansion of the width of roads along these corridors, which impacts on amenity, pedestrian connectivity, and where it cuts a community into two parts along its length.

11.3 - Complete the Western Link Road

Advocate for funding to deliver the final stages of the Ballarat Western Link Road from the Western Freeway to the Midland Highway.

11.4 - Advocate for completion of the orbital road network

The Ballarat Western Link Road will provide vital access to the Western Growth Area and the BWEZ, and provide an option to bypass the Ballarat CBD.

The current requirement for high productivity freight vehicles to utilise the historic CBD of Ballarat as the arterial road route, through a high pedestrian, high amenity zone, is not acceptable. Further investigations should consider bypass options to the east of Ballarat for freight vehicles connecting Geelong with Ballarat and the Western Freeway. This could provide for high frequency public transport services for Federation University and Buninyong via the eastern route, as well as the Western Growth Area via the west.



12 - Cycling City

Policy Position

Riding a bike is an important transport mode for Ballarat, offering an efficient, convenient and enjoyable option to move across the city. Detailed guidance on cycling in Ballarat is provided in the adopted *Ballarat Cycling Action Plan (2017)* and its associated technical reference guide.

The Current Situation

Major improvements are being made to the Strategic Cycling Corridors across Ballarat, providing an additional 12km of safe, separated bicycle routes to link existing trails to each other, via the CBD.

Key Issues

Gaps in the Ballarat Bicycle Network act as barriers to people feeling safe and confident to ride.

Actions

12.1 - Fast track the construction of the Ballarat Bicycle Network

Continue to invest and construct safe cycling infrastructure across Ballarat in accordance with relevant design standards and guided by the adopted *Ballarat Cycling Action Plan (2017)*. Accelerate delivery through external funding, partnerships and supporting community led initiatives that promote usage.

12.2 - Construct a dense network of separated paths or slow speed environments through the Ballarat CBD and to link key sites

The routes defined in the Ballarat Bicycle Network include access routes to the CBD and linkages to all Activity Centres. Given the rise in interest in riding, in addition to those routes defined in that plan, pursue opportunities to improve cycling infrastructure, particularly separation from traffic or reduced speed limits, on all streets into and through the CBD and around key community destinations such as schools - to provide maximum

flexibility and convenience to users. Separation or slow speed shared spaces are essential for these busier locations.

12.3 - Integrate cycling improvements with streetscape improvements

Given the experience of riding a bike is one its great elements, attempt to improve the comfort and amenity of cycling routes at the same time as improving safety, through inclusion of landscaping and trees, art and general quality design. Adopt a 'design led' approach which considers cycling routes as key recreational corridors.

12.4 - Promote safe routes, trails and circuits that showcase Ballarat from a bike

Riding a bike is a great way to see Ballarat, get active and be social. Safe introductory experiences are crucial to change the culture of riding - bad experiences turn people away who would otherwise be keen to leave the car at home.

12.5 - Pilot temporary rider friendly infrastructure or reduced speeds on key routes

Permanent infrastructure and changed road conditions are important to deliver ongoing safety and amenity for road users. However, where appropriate, be open for trialling temporary changes to infrastructure and speed limits which improve conditions for active transport whilst testing community views and taking feedback.





Advocacy and Partnerships

Delivering enhanced movement across the western region and movement, including through enhancing the movement of people and goods.



- 13. Strong Regional Advocacy
- 14. Regional Rail Links
- 15. Efficient Movement of Freight
- 16. Regional Aviation Hub

13 - Strong Regional Advocacy

Policy Position

Ballarat will pursue a greater role for Ballarat as a hub of regional transport, and an advocate for regional transport priorities. Key advocacy opportunities to benefit both Ballarat and the region include:

- Capitalise on the freeway location between Melbourne and Adelaide for greater economic return
- Pursuing new models for regional rail travel, focused on mainline services from Ballarat and shuttle services to regional destinations
- Advocate for completion of the Murray Basin Rail upgrade and the use of upgraded tracks for both freight and passenger services
- Partner with State and Local Governments to investigate re-opening regional rail connections
- Grow the use of Ballarat Airport as a significant gateway and general aviation hub
- Advocate for improvements to the Ballarat railway line which provide quality, reliability, frequency and multi-directional services required for Ballarat to prosper as a highly connected regional capital
- Support fast rail to Ballarat as an important improvement to connectivity

The Current Situation

Regional communities are advocating that a big picture, long-term view is required for the role that transport can and needs to play in regional Victoria. Different pressures, opportunities and realities exist from those experienced in suburban Melbourne, and innovative, agile and targeted responses are required.

Growth planning for both land use and transport is guided by its role in the region. Key connections for transport, business and services are illustrated in the *Central Highlands Regional Growth Plan (2014)* and *Central Highlands Regional Transport Plan (2014)* – both of which provide useful references but require ongoing review and updating to reflect current transport pressures, needs and advocacy priorities.

Key connectivity priorities are to Melbourne, but also to Geelong, Mildura, Bendigo, Adelaide and Ararat – plus other regional destinations.



Figure 7 | Ballarat's Key Regional Connections

13 - Strong Regional Advocacy

Key Issues

Advocacy needs to continue to realise the vision of established strategic plans prepared by City of Ballarat, Victorian Government, Regional Councils and regional advocacy groups.

Guidance on key connections and the preferred long-term pattern of land use growth and change as illustrated in the *Central Highlands Regional Growth Plan (2014)*.

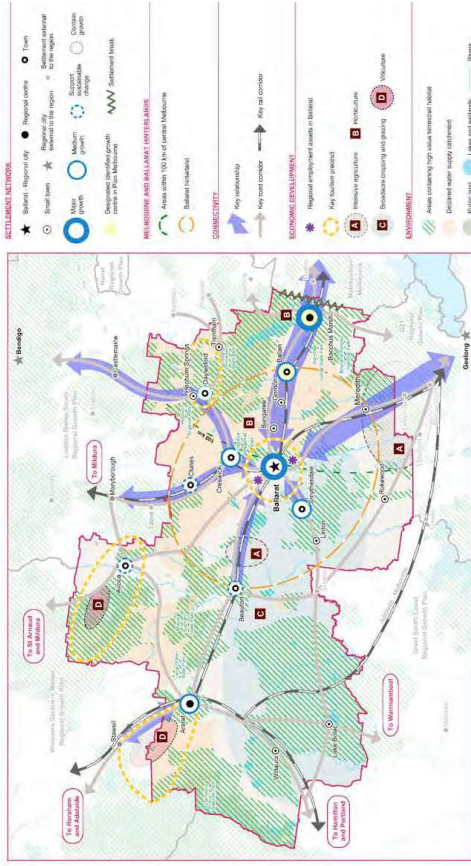


Figure 8 | Regional Overview (Central Highlands Regional Growth Plan, 2014)

Actions

13.1 – Advocate for critical investment in transport infrastructure and services

Engage and advocate to the State and Federal Government for policies and investment which align with the priorities and focus areas outlined in this plan, recognising how Ballarat and Western Victoria can take a greater share of the responsibility for the growth and prosperity of Victoria and Australia as a whole.

13.2 - Take a leadership role in supporting regional partners

Proactively support the advocacy of others for improvements to their local services, capitalising on Ballarat's leadership role in key groups such as Regional Cities Victoria and Regional Capitals Australia.

14 - Regional Rail Links

Policy Position

Regional Rail Links can play a significant role in improving access and economic activity within and between regional centres. The Victorian railway network is integral to Ballarat's economic and social prosperity for several reasons:

- Passenger services on the network provide an affordable alternative to car use, which in turn improves, local economic activity, road safety and health and environmental outcomes
- Passenger services improve access to employment for people who do not own a car or do not want to drive long distances (employment options could be in Ballarat or elsewhere)
- Freight services on the rail network reduce local traffic congestion and improve road safety

The Current Situation

Passenger patronage on the Ballarat Line has surged over the past two decades following a number of state led initiatives to improve service reliability, travel times, passenger comforts, as well as new stations and passenger services to Wendouree and Maryborough.

As Ballarat's population continues to grow, there is a critical need for further improvements to support Ballarat's position as a regional hub.

Key Issues

- Demand for rail travel to and from Melbourne exceeds supply, particularly during weekday morning and evening peaks
- Network capacity constraints, particularly where freight services within Metropolitan Melbourne
- Car trips dominate journeys to stations, creating congestion, inefficiency and costs due to it requiring large amounts of land for parking

Actions

14.1 – Advocate for passenger rail improvements to regional destinations beyond Ballarat

Opportunities include new and improved services to Ararat, Horsham, Maryborough and other regional centres.

14.2 – Advocate for re-establishment of Ballarat - Geelong passenger rail services

Direct rail connections between the second and third largest (and fastest growing) cities in Victoria is essentially for the State's development. Within the next 20 years, the two cities will easily exceed half a million residents. Federal Government upgrades as part of the Murray Basin Rail Project can help to overcome previous cost barriers.

14.3 – Seamless and direct mainline connections to Melbourne's CBD

Prioritise improvements to the quality, reliability and frequency of services, balanced convenience for commuters arriving into Ballarat as much as those departing from Melbourne, and seamless and direct journeys into the Melbourne CBD.

14.4 - Support new passenger rail options such as Fast Regional Trains and a Ballarat Metro network

Support government and privately led passenger rail initiatives such as fast regional trains, expanded electrified commuter network and local services between Ballarat's stations and those in surrounding commuter hubs.





15 - Efficient Movement of Freight

Policy Position

The movement of freight is essential to the Ballarat economy. Freight is necessary both for consumers and businesses seeking goods, and for manufacturing and production businesses which produce goods for market. The efficiency of accessing markets and receiving goods has a big impact on the competitiveness of doing business from and with Ballarat.

Intermodal freight opportunities

Ballarat will support heavy freight demanding industry and business through advocacy to complete the BWEZ Intermodal Freight Terminal, including consideration of it as part of the Metropolitan Freight Terminal Network, further bridge strengthening to increase network of high productivity freight vehicles, and completion of the Ballarat Western Link Road, as the western side to an orbital highway network.

Intermodal freight primarily assists with heavy freight movements between road and rail.

Support 'last mile' freight delivery

The so called 'last mile' is delivery of a product from warehouse shelf to customer doorstep – it is both the most expensive and time-consuming part of the shipping process.

As Ballarat consumers increasingly move to online deliveries, we will be flexible and responsive to the needs of deliveries. New approaches are emerging, including use of local distribution and consolidation centres and Ballarat will be open to business needs. Depending on the surrounding land use, heavy vehicles on some local streets can have cost, safety and amenity issues which can be addressed over the long-term as new distribution models come online and last mile deliveries become more streamlined.

The Current Situation

Freight and logistics generally well serviced in Ballarat for road freight by Western Freeway and Ballarat Western Link Road.

There are some key land use opportunities that maximise efficiency of freight movement, particularly co-location of industries near established transport gateways at the Ballarat West Freight Hub and Ballarat Airport precincts. Future investment in the Ballarat Western Link Road project will be important to leverage the benefits of the entire Ballarat West Employment Zone.

15 - Efficient Movement of Freight

Key Issues

- Murray Basin Rail Plan implementation stalled, and lack of clarity on future investment in standard gauge freight lines through the City
- Lack of integrated infrastructure planning to service the proposed intermodal freight terminal at Ballarat West Employment Zone, including lack of standard gauge connection along Ararat line and future-proofing for a third track at Wendouree Station
- Lack of provision for double stack containers in new railway over-bridges
- Weight limitations and road conditions across non freeway routes limits use of high productivity vehicles

Actions

15.1 - Improve the efficiency of supply chains with key infrastructure

Support Development Victoria to commercialise the Ballarat West freight hub, investigate additional intermodal opportunities in the northern growth

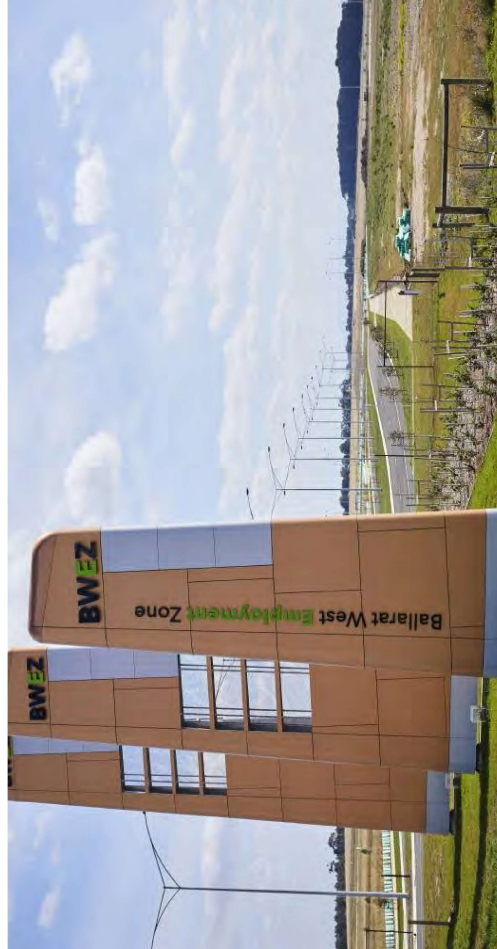
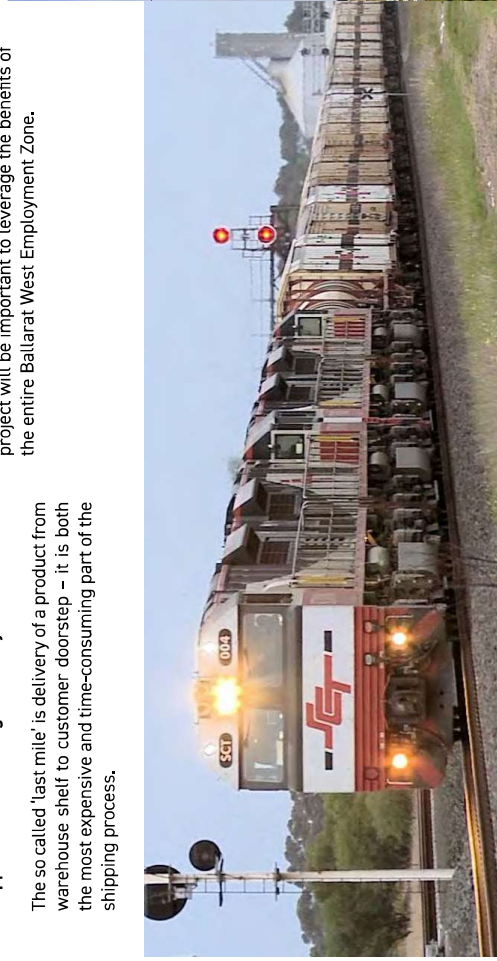
area adjacent to the Maryborough rail line and upgrade road and rail route which are important for freight but have limitations on their capacity.

15.2 – Prepare for the ongoing supply of high quality serviced land for freight intensive developments

Investigate and proceed with planning for quality development opportunities along strategic freight corridors, acting as future stages of Ballarat West Employment Zone beyond the currently defined boundary

15.3 – Advocate for upgrades which support High Productivity Freight Vehicles on additional routes

The road and bridge strengthening program undertaken on the Western Freeway between Ballarat and Melbourne has enabled expanded use of High Productivity Freight vehicles and improved efficiencies for business. In partnership with the industry, advocate for extension of this program to support upgrades to additional routes.





16 - Regional Aviation Hub

Policy Position

Ballarat is well serviced by the Ballarat Airport, which is fully planned as it interfaces with the premium industrial land in the adjacent Ballarat West Employment Zone. Ballarat will seek to further commercialise the airport, seeking to increase its contribution to local and regional jobs and investment.

The airport has a curfew and constraints on some approaches. A new unconstrained airport may be required over the long-term, but there are no plans at this stage to pursue this option. Protecting the current airport from encroachment by sensitive uses that would disrupt operations remains the priority.

The focus of management at the airport is on growing the general aviation and training sectors, whilst advocacy is focused on upgrades which enable usage by larger aircraft, crucial to realising the vision of the adopted Ballarat Airport Master Plan.

Continue to support establishment of an aviation emergency services hub at the airport, as a crucial element of the state-wide emergency management response framework.

The Current Situation

There are more than 100 highly skilled jobs in the general aviation, maintenance and assembly industries currently at the airport. Given the usage for pilot training, it is one of the busiest airports in the country considering the number of aircraft movements per day.

There is substantial land available at the airport for expansion and greater utilisation for job creating businesses.

Key Issues

- Airport is constrained by curfew and adjacent housing in alignment with the approach on one of the runways
- General aviation businesses are incredibly important to the local Ballarat economy
- The runway requires lengthening and pavement strengthening to enable access and usage by Class 3C aircrafts.

16 - Regional Aviation Hub

Actions

16.1 - Monitor demand for direct air capacity and investigate long-term opportunities

Monitor demand for direct air capacity and investigate long-term opportunities for a Ballarat Airport with passenger and freight services linking to key passenger and freight related destinations.

16.2 - Investigate greater commercial opportunities associated with the airport

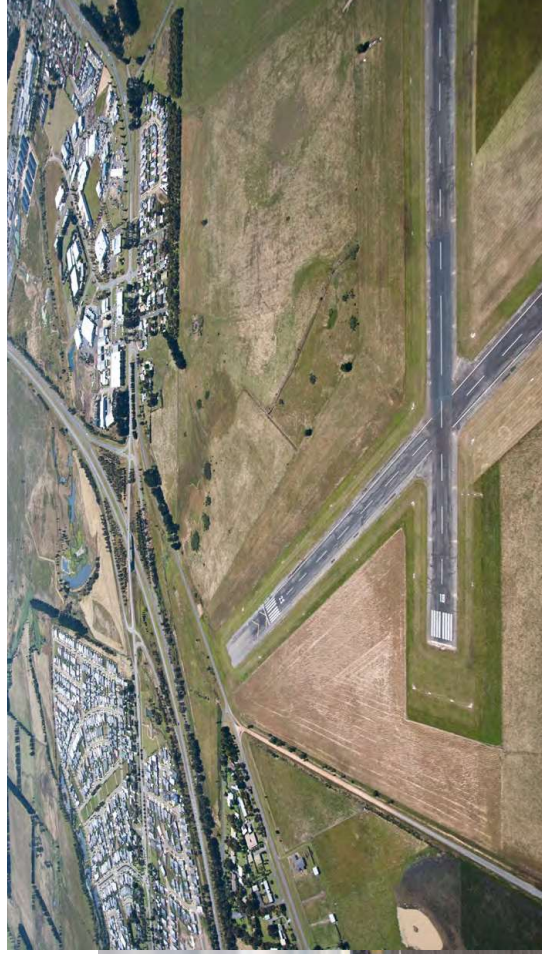
The airport is a key regional asset and it will continue to be leveraged for commercial, job and investment opportunities. There are significant opportunities to expand the aviation industry and its supply chains. The requirement for a site for a new unconstrained regional airport is not currently envisaged.

16.3 - Consider opportunities to further commercialise the airport

Needs to maximise the economic leverage from this major piece of regional infrastructure, seeking to expand its contribution to jobs and supply chains.

16.4 - Protect airport from encroachment

Continue to adopt a cautionary approach when considering developments in proximity to the airport, to ensure further constraints are not placed on its operations. Consider updating the Airport Master Plan as recommended by the *Ballarat Airport Safeguarding Study (May 2018)*.





Summary of Actions

Objective 1 - People First Approach

Where safety, high quality designed spaces, access for all, transport affordability, and a healthy community are a key focus.

Action	Actors	Priority
Understand User Needs		
1.1 Establish and maintain data framework for understanding movement, journeys and experience	COB, DOT	Short
1.2 Proactively seek to understand what is needed for access and mobility by different user groups	COB, DOT	Ongoing
Build and Manage Places for People		
2.1 Establish a principal pedestrian network	COB	Short
2.2 Target pedestrian improvements around schools, road crossing and missing footpaths	COB	Medium
2.3 Invest in quality street furniture, trees and the public realm to improve accessibility and comfort	COB	Medium
2.4 Improve disability access	COB, DOT	Ongoing
2.5 Improve recreational trails and green space	COB, PV	Ongoing
2.6 Investigate new ways of funding infrastructure to fill the gaps in current networks	COB	Short
2.7 Address gaps in signage and wayfinding	COB, PV	Ongoing
2.8 Commit to minimum standards for walkable neighbourhoods	COB, Others	Ongoing
Safety for All		
3.1 Implement reduced speed limits within activity centres and other pedestrian hotspots	COB, DOT	Short
3.2 Design traffic infrastructure with the full range of users in mind	COB, DOT	Ongoing
3.3 Maintain strong advocacy for blackspot funding and pursue State and Federal Government partnerships	COB	Ongoing

Objective 2 - Fully Integrated and Reliable Transport Network

Providing convenient, efficient and accessible transport choices and supporting a more prosperous Ballarat where people are efficiently connected to local jobs and services.

Action	Actors	Priority
Compact City		
4.1 Prepare a housing strategy	COB	Short
4.2 Adopt new '10-minute city' guidelines for greenfield growth areas	COB	Short
4.3 Revise and update existing industrial and commercial land use plans	COB	Short

Summary of Actions

Action	Actors	Priority
4.4 Prioritise development in urban renewal sites, acting as catalyst projects for jobs and investment	COB	Ongoing
4.5 Review and update the Open Space Strategy to match the demands of a larger city	COB	Medium
4.6 Undertake missing links strategic and government land review	COB	Medium
4.7 Update Strategic Planning around Activity Centres	COB	Medium
Better Utilise Existing Network Capacity		
5.1 Proactively seek and implement opportunities to better utilise network capacity	COB, DOT	Ongoing
5.2 Investigate precinct specific transport and traffic management plans for key education clusters	COB, DOT	Short
Transit Nodes Servicing Renewal Sites		
6.1 Establish a network of key transit interchanges across Ballarat	COB, DOT	Medium
Frequent and Direct Cross-City Transit		
7.1 Advocate to Public Transport Victoria to review and overhaul the Ballarat bus network	COB, DOT	Short
7.2 Transition to faster and more direct bus routes	COB, DOT	Short
7.3 Define and adopt a Principal Public Transport Network (PPTN) to guide long-term planning	COB	Medium
7.4 Future proof commuter transit corridors	COB, DOT	Medium
7.5 Maintain a policy position to retain transit corridors for future use	COB	Ongoing
7.6 Explore feasibility of extending heritage tram network	COB, DOT	Long

Objective 3 - Universal Accessibility

Building a city that is accessible and welcoming for all.

Action	Actors	Priority
Universal Accessibility		
8.1 Advocate for essential Ballarat Station upgrades	COB	Medium
8.2 Revise land use policies to deliver 'Complete Neighbourhoods' and work with developers towards its delivery	COB, Developers	Ongoing
8.3 Investigate, design and deliver universal accessibility and truly 10-minute walkable neighbourhoods	COB, Developers	Ongoing
8.4 Consider enforceable requirements for inclusion in the planning and design of new suburbs	COB	Medium
8.5 Provide specific design guidance on overcoming barriers unique to Ballarat	COB	Ongoing
8.6 Prioritise improvements to accessibility in highest impact places	COB, DOT	Short

Community Engagement

Two stages of extensive community consultation have been undertaken as part of the Action Plan's development.

Our community has contributed more than 400 written submissions and 300 site specific transport comments throughout the engagement process, which has guided the development of this plan.



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