

BUILDING A STRONGER SOUTH AUSTRALIA



THE INTEGRATED TRANSPORT AND LAND USE PLAN

July 2015



Government of South Australia

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A GUIDE TO THE INTEGRATED TRANSPORT AND LAND USE PLAN FOR SOUTH AUSTRALIA

The *Integrated Transport and Land Use Plan* (The Plan) comprises two documents. This document outlines its goals and objectives, and sets out where and when actions, investments and initiatives are proposed. There is also a Technical Report which presents supporting evidence and analysis and provides greater detail about the challenges and solutions identified in The Plan. There are also further supporting reports, including a Community Engagement Report.

The Plan is comprised of:

A BOLD PLAN FOR A STRONGER FUTURE

- An outline of how South Australia's transport system operates today and an overview of The Plan, including the key challenges we face, how The Plan addresses these, the solutions that are proposed and The Plan's goals and objectives.

OUR VISION

- A deeper analysis of why we need a transport plan that's integrated with land use.

OUR PLAN

- The details about how The Plan will create a more vibrant Adelaide and a better connected South Australia while building on the state's strengths and meeting the challenges ahead. This section outlines plans for the transport network in inner Adelaide, middle Adelaide, outer Adelaide (which together constitute Greater Adelaide) and regional and remote South Australia.

DELIVERING THE PLAN

- An examination of the sources and amount of funding required; regulatory and governance arrangements; and review and reporting arrangements.

SOLUTIONS AND ACTIONS

- An explanation of the solutions proposed by The Plan for the different modes of transport, the regional transport network, our freight network and ports and also solutions for challenges faced more generally across all of South Australia.

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FOREWORD FROM THE PREMIER

A PLAN TO KEEP OUR STATE MOVING

History tells us that much of South Australia's success in giving us the vibrant and strong communities we enjoy today arises from the vision and planning laid down by our forebears.

The international reputation of Adelaide as one of the world's most liveable cities and the wonderful heritage of our regional townships and communities are a direct legacy of their vision.

But as we cast an eye toward our state's 200th anniversary in 2036, it is now our time to lead the way and set out a plan for continued prosperity.

Unprecedented investment in transport infrastructure during the opening decades of this century is getting South Australia moving again. Projects that have been delivered or are underway include the revitalisation of our passenger train network, extension of the electrified train line to Seaford, the Northern Expressway, the South Road Superway, the duplication of the Southern Expressway, the Gallipoli Underpass and significant investments into the regional road network to improve safety and increase accessibility for people and business.

The *Integrated Transport and Land Use Plan*, South Australia's first truly integrated plan for transport and land use, will keep it moving for decades to come.

It is designed to keep our state amongst the most liveable places on earth. It will provide the foundation for us to achieve our strategic priorities from *South Australia's Strategic Plan*, including a more vibrant city; safer, healthier communities; manufacturing and mining development; and support for our premium food and wine industries.

Together with the volumes of the Planning Strategy, including *The 30-Year Plan for Greater Adelaide*, and the *Strategic Infrastructure Plan for South Australia*, the *Integrated Transport and Land Use Plan* will provide comprehensive and integrated plans for land use, infrastructure and transport for the coming 30 years.

This Plan recognises that how and where we live, work and play is fundamentally linked with how and why we move around. It poses the hard questions and provides the genuinely innovative transport strategy that we need to stay ahead of the game.

It shows how we move freight from place-to-place is integral to maintaining both our national and global competitiveness and to securing and attracting jobs for South Australians. It protects us from the congestion and social isolation that have befallen larger cities around the globe while improving our reputation for innovation, industriousness, creativity – and a "can do" attitude.

Together with the Australian Government, councils and the private sector we will develop modern, efficient and environmentally friendly ways to move around in order to connect people to places and businesses to markets.

This Plan will expand travel options by making bold choices to underpin urban uplift within the CBD and inner areas of Adelaide with a step-change in our public transport; delivering inter-connected cycling and walking networks; as well as ensuring our roads, rail, airports and sea ports provide mobility and reliability to meet our community and business needs. By carefully balancing these initiatives with our land use planning, we will create truly connected residential and commercial communities that are vibrant, safe, affordable, sustainable and prosperous.

The challenges laid out in this Plan are many and the solutions are exciting and demanding. But for South Australians to reach their potential and enjoy an even better quality of life they must be actioned.

The *Integrated Transport and Land Use Plan* shows us how it can be done.

HON Jay Weatherill MP
Premier of South Australia

MESSAGE FROM THE MINISTER FOR PLANNING AND THE MINISTER FOR TRANSPORT AND INFRASTRUCTURE

DELIVERING OUR STATE'S TRANSPORT FUTURE

By linking transport and land use planning we've always had a simple, but very important, goal – to make South Australia an even better place to live, work and do business.

By tapping into the very best expertise, local knowledge and insights from all corners of South Australia, we have a truly priceless resource to do just that.

We are genuinely proud to present South Australia's very first *Integrated Transport and Land Use Plan*.

At its heart is a focus on people. It's all about delivering a host of options for moving around both the city of Adelaide and across the vast expanses of our great State. Within these pages are a range of actions for tram, road, bus, train, cycling and walking for South Australians from all walks of life.

Simultaneously, the *Integrated Transport and Land Use Plan* will drive the investment we need in our rail and road freight networks to make businesses more competitive, our economy stronger and our lives safer, healthier and more affordable. And it will do all of this with an unwavering commitment to public safety and the health of our unique environment.

We will bring back the trams to Adelaide to inject more vibrancy and activity into our city while better connecting communities of greater density within the inner areas and the CBD. We will deliver strategic investments in the North-South Corridor and other key road corridors in Adelaide to pave the way for future economic development. We will also build upon our planning reforms and infrastructure delivery supporting the middle and outer areas of Greater Adelaide.

In regional SA, we will connect our key industries to intrastate, interstate and international markets by upgrading our road and rail corridors and sea ports. We will also provide more effective passenger transport opportunities and improve connectivity between towns.

We will undertake a comprehensive suite of actions to improve road safety, maintain and make better use of our existing valuable transport and infrastructure assets, capitalise on the benefits of new technologies, support tourism growth, reduce the impact of transport and land use on our environment, and adapt to climate change.

A living, dynamic plan for our future, it sets the agenda for how South Australia's transport system must evolve to support a modern and connected society that takes its opportunities for growth. It will provide certainty for industry by setting out a pipeline of improvements to ensure business invests with confidence. With a once-in-a-generation review of the legislation underpinning the state's planning system currently underway, we will ensure that the *Integrated Transport and Land Use Plan* is governed and reviewed effectively.

Put simply the *Integrated Transport and Land Use Plan* will help South Australia reach its considerable potential.

We certainly admire the determination, enthusiasm and endeavour of the public and private sectors and the people of South Australia that has allowed delivery of the most comprehensive integrated transport plan ever seen in this state.



HON John Rau MP
Minister for Planning



HON Stephen Mullighan MP
Minister for Transport and Infrastructure

A BOLD

PLAN FOR A

STRONGER

FUTURE



**BUILDING A STRONGER
SOUTH AUSTRALIA**



THIS PLAN IS ABOUT BUILDING SOUTH AUSTRALIA'S ASSETS TO ENSURE WE'RE ALWAYS ABLE TO MEET OUR AMAZING POTENTIAL

People to places. Businesses to markets.

South Australia offers a quality of life that's amongst the best in the world, thanks to our unique blend of heritage, culture, scenery, lifestyle, infrastructure, food and wine, safety and liveability. Transport plays an enormous role in this, making our towns and cities wonderful places to live, work, explore and enjoy.

We've been fortunate. Previous generations have left us a generous legacy of well-planned streets and train networks, a vibrant metropolitan centre in Adelaide, attractive suburbs and regional townships steeped in history and brimming with community spirit.

But such a legacy isn't simply the result of good luck. Those wise decision-makers laid down the plans that guided South Australia through good times and bad, through periods of very rapid growth and occasional decline.

Today is no different, but we face new challenges. We're more globally connected, competitive and mobile. Goods and people move quickly and the economic cycle is shorter. Large industries rise rapidly and need to adapt just as quickly to satisfy changing markets.

Facing these challenges without a plan would be short-sighted, leaving us ill-prepared and potentially vulnerable and it's not enough to simply build on what we have inherited. In order to develop and prosper, we need to think carefully about how we want our cities, towns and industries to grow.

- Where should people live?
- Where will the jobs be?
- How do we keep our best people here and attract new residents, industries and investors?
- How can we connect people and businesses to opportunities in a way that's efficient, sustainable and builds upon our successes?

If we get these decisions right, South Australia won't just continue to be a great place to live and do business – it will be a bold, progressive, prosperous state with strong, welcoming communities that are healthy, safe, vibrant and sustainable.

To get these decisions right we need our transport planning to support our future land use. We need a plan that shows us how we can best connect people to places and businesses to markets.

That is why the South Australian Government has developed the collaborative, extensive and visionary plan. It is part of a greater vision for the state – designed to shape and grow the places where we live and work in the best ways possible; attract new people, businesses and jobs; and help give our industries a bright and stable future.

1.1 STRENGTHS TO BUILD UPON

Integrating transport and land use

South Australia is a leader in the creative, responsive and high-quality planning of land use.

But until now, planning for our transport system hasn't always worked hand-in-hand with our plans for land use, urban and regional development, industry, etc.

Without common sense integration we could miss out on making the most of our opportunities – especially those that see people able to travel to work, education, services, shops and leisure activities, quickly, efficiently and in comfort.

Smart, careful planning backed up by innovative ideas and a bold vision delivers many benefits, including:

- providing a greater choice of travel modes
- distributing goods and services more efficiently
- improving road safety
- reducing the environmental impacts of the transport system
- fostering medium density mixed-use development
- creating more attractive and lively suburban centres
- protecting the vital freight routes needed by export industries.

By promoting greater coordination across governments and with the private sector, we can build infrastructure more efficiently and improve the way we use our space.

Most importantly, such planning will make it easier for South Australians to access the jobs, services and experiences that underpin our enviable quality of life and wellbeing. In turn, this will lead to stronger communities where people enjoy active, fulfilling and prosperous lives.

A vision takes shape through consultation

Premier Hon Jay Weatherill MP released South Australia's first *Integrated Transport and Land Use Plan* (The Plan) for public consultation on 21 October 2013.

The draft version of The Plan was developed by the South Australian Government in conjunction with key industry and advocacy groups, state government agencies and local government.

Forums and interviews were conducted with key industry and advocacy groups and local councils across the state where views were shared about the challenges facing South Australia and the potential solutions to be considered in The Plan. An online survey gave members of the public the chance to give input on a wide range of transport issues.

The data was collated and analysed in light of the latest research, providing a strong evidence-based foundation for the draft plan.

Extensive state-wide public consultation subsequently took place, with feedback helping to further shape and finalise a definitive, far-reaching and inspired Plan for South Australia. The initial consultation phase was scheduled to close on 29 November 2013. Such was the level of interest from South Australians in The Plan and its vision for the state, the former Minister for Transport and Infrastructure, and now Treasurer Hon Tom Koutsantonis MP, extended the public consultation timeframe to 17 January 2014.

Staff from the Department of Planning, Transport and Infrastructure (DPTI) travelled across the state, visiting communities in urban, regional and remote areas to hear, first hand, ideas on how we can shape the transport system we need for the future. This visiting program included 32 public events, group briefings with local councils, Local Government Association organisations and Regional Development Australia associations, and meetings with many industry and advocacy groups. More than 2,500 people attended community events and almost 1,500 submissions and enquiries on the draft Plan were received.

1.2 THE PLAN: A SNAPSHOT

Greater Adelaide

The Greater Adelaide area is home to eight out of ten South Australians and makes up 83 per cent of our economy – needless to say, Adelaide's viability is critical to our state's future.

While Greater Adelaide residents enjoy a high quality of life, people's increasing mobility means that we face tough competition from other Australian cities to keep our young people, attract skilled migrants and grow those industries that rely on expert knowledge and training.

Enhancing Greater Adelaide's liveability, creating a more vibrant city and supporting growth in the city's successful industries are core aims of this Plan.

In 2010, *The 30-Year Plan for Greater Adelaide* (which The Plan works in conjunction with) was released and it envisaged a more compact city in the future. At the time, property and employment markets were beginning to respond to changes in the state's economy: namely the rise of the services and information sectors and the decline in traditional manufacturing.

It showed that while job growth was strongest in the inner and middle suburbs, population growth occurred mostly in the middle and outer suburbs. This meant that more people had to travel further to work, which in turn put greater pressure on our public transport and road networks.

A BOLD PLAN FOR A STRONGER FUTURE

In recent years, transport investment has focused largely on making sure that Adelaide's transport system kept up with the growing middle and outer suburbs. This has included:

- a modernisation of the rail, bus and O-Bahn networks and services
- extension of the train to Seaford
- construction of the Northern Expressway, the South Road Superway, and the Gallipoli Underpass
- upgrades to the South Eastern Freeway
- duplication of the Southern Expressway
- Port River Expressway and bridges
- Sturt Highway duplication between Gawler and Nuriootpa
- extension of the tram line
- electrification of the Seaford and Tonsley train lines
- Bakewell Underpass
- deepening of Outer Harbor.

Since 2002, the State and Australian Governments investment into transport infrastructure has totalled approximately \$5.5 billion for Greater Adelaide.

Already we've seen these investments greatly improve the way we travel across the city, and they'll continue to support new growth areas in the outer suburbs (such as the Playford Projects) and help attract even more private investment to these areas.

But it's not time to sit back and rest on our achievements. There is still a lot of work to be done.

With most of these programs well underway or completed, we need to turn our attention to inner Adelaide – recognising that more and more people now want to live in or near the central city. The Plan aims to support and assist this emerging trend by continuing with strategic investments into public transport that will boost the central city as a lively, creative, dynamic and safe place that continues to appeal to residents and businesses.

To do this, we must refocus our transport system to not only support medium mixed-use density, vibrant communities and business growth across inner and middle Adelaide but to actively encourage and drive these developments.

Building on the recent significant investment in roads and rail revitalisation, an expanded network of trams in inner and middle Adelaide, combined with a redesigned bus network improving connectivity and reliability of services, and greater investment into our cycling and walking networks, integrated with land development, will greatly increase people's choice of travel.

There will still be a need for people to travel by car. However, growing urban congestion can result in increased delays across the network. Adelaide's businesses need the certainty of reliable road and rail routes to operate successfully and deliver goods and services to local, interstate and global markets.

Adelaide is a key destination for freight which needs to access industrial areas, rail intermodal terminals and sea and air ports. To this end, the city's arterial road and rail freight network must have the capacity to service these needs well, reduce road congestion, and meet future transport demand, particularly along major freight and traffic routes.

The Plan will build on the strategic investment in recent years, including the Northern Expressway, South Road Superway and Port River Expressway, to meet this demand. The Plan will continue with investment into the North-South Corridor to complete the non-stop route between Gawler and Old Noarlunga.

Targeted improvements will also ensure the Inner and Outer Ring Routes effectively distribute traffic and address chokepoints on other major traffic routes across the city.

An alternative rail freight line in northern Adelaide will reduce travel times for goods to Port Adelaide and Outer Harbor and reduce the need for freight trains to use the existing line through the northern suburbs.

In conjunction with the rail grade separation of Goodwood Junction, resolution of freight capacity constraints at Torrens Junction and longer-term upgrades to the rail freight line through the Adelaide Hills will also improve domestic and interstate access to our industrial centres and to Outer Harbor.

The Plan will also focus on active transport, extending our cycling and walking networks and catchments, and working to improve the attractiveness and convenience of cycling and walking in order for these to become desired modes of travel, particularly for short trips.

Regional South Australia

Our diverse and distinctive regions also play a crucial role in the economic development and social fabric of our state. Efficient, reliable and safe connections across regional South Australia are essential for supporting vital regional industries and sustaining our country centres, towns and remote communities. Improving and maintaining these connections raises some big challenges and we face difficult choices about where and how investment is best directed.

Actions proposed in The Plan will better connect regional communities to jobs, services and opportunities. Without question, the regional road network is central to people's quality of life, and so The Plan focuses on making sure the network can handle a wide range of users, from freight and haulage to passenger transport, business travel, private cars, motorbikes and active transport such as bicycles and pedestrians.

What's more, improved access to community and passenger transport will give regional South Australians more travel options.

A central objective of The Plan is to find specific solutions to support the three 'productive and competitive' industries named in South Australia's *Economic Statement 2013* as being at the heart of the state's economic future. This includes:

- mining and resources
- advanced manufacturing
- premium food and wine from our clean environment.

In particular, The Plan aims to make sure that we are able to continue to respond to our expanding mining sector, and we can quickly and cost-effectively provide critical infrastructure when and where it is needed.

With massive growth expected in the volumes of freight moving around the state, interstate and overseas we must find ways to manage this task efficiently and safely, by using High Productivity Freight Vehicles, freight rail and ships.

At the same time though, we also need to reduce conflicts between heavy vehicles and other traffic, maintain good access to our famed tourist destinations, and preserve the social environment of regional centres and townships.

The Plan proposes a broad range of solutions, however since each region in South Australia faces its own transport and land use challenges, ongoing collaboration between the State Government, local councils, Regional Development Australia associations and the private sector will be needed to ensure that our transport system matches the unique needs of our regional communities, businesses and industries as they change and grow. The preparation of a ports strategy and freight strategy, and the *Regional Mining and Infrastructure Plan* will assist with this collaboration.

All of South Australia

There are, of course, a number of statewide issues that are pivotal to our success.

Effective management of our valuable transport assets, including maintaining, operating, replacing and making the best use of existing assets, will be critical to ensuring our transport network's ongoing financial sustainability and performance.

Transport expenses make up an estimated 8.2 per cent of the cost of South Australia's exports. In 2010/11 domestic freight grew by 5.9 per cent to 35.7 billion tonne kilometres.

South Australia's traditional manufacturing and agricultural base is maturing, and logistics and supply chains are becoming more complex and sensitive to time and cost. These developments mean that modern, well-managed freight networks are essential to our continued prosperity. Managing the freight and port networks to get the best out of these assets, while investing strategically for the future, is an important component of The Plan.

Likewise, making our entire transport system safer is also a key focus, and The Plan identifies ways to support a comprehensive approach to achieve this, which involves research, culture change, road upgrades and the use of new technologies to improve safety in accordance with *South Australia's Road Safety Strategy 2020 Towards Zero Together* and the *Road Safety Action Plan*.

Finally, but no less importantly, managing the impacts of transport on our environment is critical to our ability to provide effective and sustainable transport networks into the future. We need to re-think many of our approaches to the way we design our cities and towns, how we travel and the kinds of vehicles we use.

HOW TRANSPORT SHAPES OUR CITIES

The *National Charter for Integrated Land Use and Transport* describes how the link between the transport and land use systems can shape the pattern, design and scale of development, and the mix of land uses within a city.

The nature of this transport-land use link will vary depending on the type of infrastructure involved and the characteristics of land use zoning. For example, a new road into the fringe of the metropolitan area might spur new low-density residential and industrial development, whereas a new tram link into an existing low-density urban area could stimulate medium density development.

1.3 THE KEY CHALLENGES AHEAD

Our extensive consultation, along with research and analysis conducted by the Department of Planning, Transport and Infrastructure (DPTI), has identified six key transport challenges facing South Australia. The Plan proposes solutions to these challenges.

1. Growing the role of public transport in servicing our city and urban and regional centres

A change in the focus of the South Australian economy from a traditional dispersed manufacturing base to a clustered economy, is leading to growth of the central city and suburban activity centres – all of which need to be serviced by public transport.

In outer Adelaide however, the bus network cannot continue to expand simply by implementing small incremental changes. Bus service planning must build on the substantial investment in rail infrastructure and rail services.

In our regional centres, there is a need for more efficient passenger transport services that meet the diverse travel needs of communities.

2. Providing efficient connections to export/import gateways

In an increasingly globalised world, any transport infrastructure limitations will have major impacts on trade competitiveness in an export-reliant economy such as South Australia – with flow-on effects on jobs, investment and economic development across the state.

3. Prioritising transport infrastructure and services to encourage mixed-use development in inner and middle Adelaide

Providing adequate transport services to low density, new outer metropolitan growth areas can be expensive and inefficient. With more people wanting to live in inner and middle Adelaide, providing transport that facilitates higher density, mixed-use development in the inner and middle areas needs to be a priority.

4. Supporting lively communities by encouraging active travel modes

Vibrant communities have more jobs and are better, safer and healthier places to live. Transport network enhancements that enable cycling and walking will support the vitality and sustainability of communities, adding to the state's liveability, as well as boosting economic growth and attracting new residents, businesses and investors.

5. Fine-tuning, maintaining and better utilising our existing transport assets

Making better and more efficient use of existing infrastructure – and maintaining our valuable transport assets in good condition – is essential to manage growth in travel demand with limited funding and resources. It will also help to reduce the environmental impacts of our transport system, improve economic efficiency and enhance accessibility, including compliance with the *Disability Discrimination Act 1992* and other relevant accessibility standards.

Making informed decisions on the best investment choices is important to ensure the financial sustainability of our transport system.

6. Developing and maintaining a planning system that ensures integrated transport and land use

Modern centres like Greater Adelaide and our regional areas have highly diverse and dispersed land use patterns that generate complex, and sometimes conflicting, transport responses. Effectively integrating transport and land use planning is critical to overcome these problems and to shape investment and development in efficient, equitable and sustainable ways.

A PRACTICAL PLAN

As well as setting goals and objectives, we have used new planning tools and the latest research and information to develop a comprehensive but practical plan that can be delivered over time by:

- working in partnership with the Australian Government, local government, Regional Development Australia associations and the private sector
- making better use of our existing transport assets and infrastructure
- choosing carefully targeted investments that match our land use goals and deliver value for money
- putting transport investment on a sustainable financial footing.

1.4 RESPONDING TO THE CHALLENGES

Priorities for Greater Adelaide

To meet the key challenges, the priority solutions will be:

Continue improvements to the public transport system

• Responds to: Key challenges 1, 3, 4

South Australia has seen unprecedented levels of investment into transport over the previous decade, much of which has been targeted at revitalising Adelaide's public transport system.

We will complete the electrification of the Gawler, Seaford and Tonsley train lines as the backbone of the system. We will improve the amenity of stations, get more electric trains, grade separate key pedestrian and level crossings, focus on the use of technology to provide real time information about services and, in the longer term, potentially deliver an underground train link through the city as well as preserve corridors for train network extensions in outer Adelaide.

Upgrades to and development of park and ride and bike and ride facilities will expand public transport catchment areas and mode transfers will be made easier through more coordinated timetables and improved amenities.

Bringing trams back to the central business district (CBD), inner and middle Adelaide

• Responds to: Key challenges 1, 3, 4, 6

We will progressively bring new tramlines along core routes through inner Adelaide and the middle suburbs, and build a new tram network that will not only change the way we move about inner Adelaide, but increase convenience and promote residential and commercial development along tram corridors. The Outer Harbor and Grange railways will be converted to tramlines and new tram routes to Semaphore and West Lakes will be constructed.

A redesigned and modernised bus network

• Responds to: Key challenges 1, 3, 4

A remodelled bus network will deliver improved frequency, directness, connectivity and reliability of services to major activity centres, and provide simplified bus route numbering.

High capacity 'Priority Corridors' have given on-road priority to bus services and the O-Bahn city access project will further improve bus access into the city. Further consideration of more bus priority will take into account impacts upon general traffic flow. There will also be more feeder services to provide connections to the high frequency services such as the train and O-Bahn, while new 'Super Stops' will be provided at strategic locations which have a very high level of passenger demand. Such 'Super Stops' will be distinguished in their design with supportive passenger facilities and allow for pre-validation of tickets to enable efficient boarding.

Integrated planning to support a more compact Adelaide

• Responds to: Key challenges 3, 6

Maintaining and enhancing Adelaide's superior levels of liveability will be an important goal of transport and land use planning for the foreseeable future. Transport investment will be prioritised to foster the type of development Adelaide needs to become a more compact, liveable city.

Public transport networks will be designed to support major suburban activity centres and mixed-use developments. Roads and public transport upgrades will be coordinated with the timing of land releases and future train corridors will be defined and preserved.

Enhancing vital freight and road traffic corridors

• Responds to: Key challenges 2, 6

There will be a focus on providing efficient connections between import/export gateways and intermodal terminals, employment and industrial centres, removing capacity constraints on freight networks, and protecting vital freight routes and assets. Completion of the North-South Corridor and targeted road upgrades will give greater certainty to business and industry in moving goods and freight across the city, while still providing safe, timely access for motorists.

Better road and regional bus connections to the Barossa Valley and the Fleurieu Peninsula will attract even more visitors to these areas and support Adelaide's role as the gateway to some of the most unique tourist attractions in the world.

Less reliance on cars, and fewer trucks on city streets

• Responds to: Key challenges 3, 4

The Plan seeks to reduce reliance on car travel across inner and middle Adelaide by supporting development around transport hubs and encouraging the use of public transport and the creation of more jobs closer to where people live, including in the CBD. Investment in infrastructure to support public transport, cycling and walking when coordinated into existing networks and integrated with land use and the design of walkable and cyclist-friendly environments can help reduce car dependency.

Improvements to major traffic routes will reduce the need for travel through the inner city, and make it easier to get around Greater Adelaide by car. Solutions will be put in place that help take the cars and trucks that don't need to be in the city out of central Adelaide and off streets that are not major traffic routes, while still protecting important freight corridors and routes.

More travel options and more sustainable and healthier travel choices

• Responds to: Key challenges 1, 4

A connected public transport, walking and cycling network enables more active travel. Public transport use also increases incidental physical activity because people often walk to and from stations and stops. Our rail and bus services will keep up with growth and demand in Greater Adelaide by increasing service frequency, connectivity and providing greater route coverage. The Plan will see continued extension and improvement to cycling and walking networks and the creation of walkable environments in and around public transport stations to enable more cycling, walking and public transport use.

Changing between different modes of transport will be easier and quicker, and there will be more options for cross-city travel. The capacity of Greater Adelaide's public transport system will be increased, becoming a more appealing travel choice for more people.

Public transport, cycling and walking connections in and around the CBD and suburban activity centres will be a priority – making it a more convenient choice for walking and cycling, especially for shorter trips or in combination with public transport. Walking and cycling networks will, of course, also cater for those who choose these types of travel for longer journeys.

Priorities for regional South Australia

Priorities in meeting the key challenges facing regional South Australia will be:

Support for regional industry

- Responds to: Key challenges 2, 6

South Australian industry must be able to compete in a global market. The Plan will ensure that our transport and land use system supports the state's vital regional industries by working with the private sector and other levels of government to provide the infrastructure, services and regulation needed for integrated and efficient end-to-end supply chains. Regional port facilities and support infrastructure needed for mining, agriculture and timber exports will be a key focus, creating seamless, safe and efficient access to interstate and international gateways and markets.

Expanded 'pit to port' capacity

- Responds to: Key challenges 2, 6

Rapid growth is forecast for our mining sector, presenting South Australia with a once-in-a-generation opportunity to boost export income, jobs and prosperity. There will be an emphasis on ensuring the right investments are made at the right time and in the right places to shift mine output from the 'pit to the port'.

Maintaining the liveability and appeal of regional towns

- Responds to: Key challenges 1, 4, 6

Due to the growth in mining and mining exploration, tourism and agriculture, increasing traffic and heavier vehicles on regional roads are placing a strain on parts of the road network as well as exacerbating conflict between through-traffic and local trips within regional towns. Town bypasses and road upgrades will be investigated to help manage this growth in traffic efficiently and safely, and to preserve the attractiveness and sustainability of regional centres and towns. Integrated passenger transport, and cycling and walking options will also be expanded.

Regional passenger transport and aviation

- Responds to: Key challenges 1, 2

Building on the success of regional South Australia's integrated passenger transport services, The Plan continues to support and improve passenger transport services across the state. A set of regional passenger transport strategies will be prepared that respond to the diverse travel needs of regional communities. Services will be tailored to meet specific community needs, and we will see ongoing improvement to the safety, capacity and quality of regional airstrips as regional aviation continues to grow.

Greater freight productivity

• Responds to: Key challenge 2

Our regional industries need freight movement to be as efficient as possible to remain competitive in global markets. High Productivity Vehicles represent an opportunity to increase freight efficiency, but they need a well-designed, connected and maintained road network that supports their use.

Working closely with industry and other states, those parts of the network that are compatible with safe and efficient use by these vehicles will be progressively expanded. Priority will also be given to improving vital interstate and intrastate road and rail links.

Statewide priorities

Many transport and land use issues are not specific to any one place: they are important for all of South Australia. Our priorities in meeting the key challenges will be:

Maintaining and making better use of our transport assets

• Responds to: Key challenge 5

The risks of not performing appropriate maintenance on our transport assets are significant. The Plan prioritises investment that will fine-tune the operation of our transport system, increase commitment to maintain our assets to specific performance targets and make better use of our existing infrastructure. This will help to ensure that our transport assets continue to play a central role in supporting the state's economy, connectivity and liveability.

Protecting freight corridors and facilities

• Responds to: Key challenge 2

Ensuring efficient freight movements on vital corridors while also preserving and protecting the amenity of local neighbourhoods poses some difficult challenges. To achieve this important balance, The Plan addresses ways to safeguard freight routes, corridors and facilities from the encroachment of inappropriate or incompatible land use.

In cases where existing land use alongside freight routes is already sensitive, land use policy will be implemented to minimise or avoid any potential further conflicts.

Making our transport system safer

• Responds to: Key challenges 4, 5

No death or serious injury on our roads is acceptable or inevitable, and we must continue to build on South Australia's record of achievement in reducing fatalities and injuries from road crashes. As well as continuing with approaches that have proved successful, further action will be implemented through *South Australia's Road Safety Strategy 2020* and *Road Safety Action Plan* to reduce the personal and community costs of road crashes and make our transport system safer.

Components of The Plan also cover ways to improve safety and personal security on public transport.

Better integration of transport and land use planning

• Responds to: Key challenge 6

A number of proposals within The Plan are designed to ensure that integrated transport and land use planning supports the state's economic development – and that it's in line with the phased delivery of the land use outcomes of *The 30-Year Plan for Greater Adelaide* and the regional volumes of the Planning Strategy (as these are regularly revised).

This will include consideration of a potential legislative framework to coordinate land use planning with transport as part of the current Planning Reform project (see section 4.2).

The focus of any framework will be to improve collaboration between all levels of government and the private sector.

Managing our impact on the environment

• Responds to: Key challenges 1, 3, 5

The Plan will work to minimise the transport and land use effects on the natural environment by continuing to integrate both systems, allowing us more options to re-think how we travel and the mode of travel that we use.

Strategies will be implemented to encourage the adoption of more sustainable forms of transport and apply the *Low Emission Vehicle Strategy* to reduce emissions from vehicles. Furthermore, sustainable design, along with new technologies, targets and practices, will be encouraged and adopted so that our transport systems make a positive contribution to the sustainability of our built and social environment.

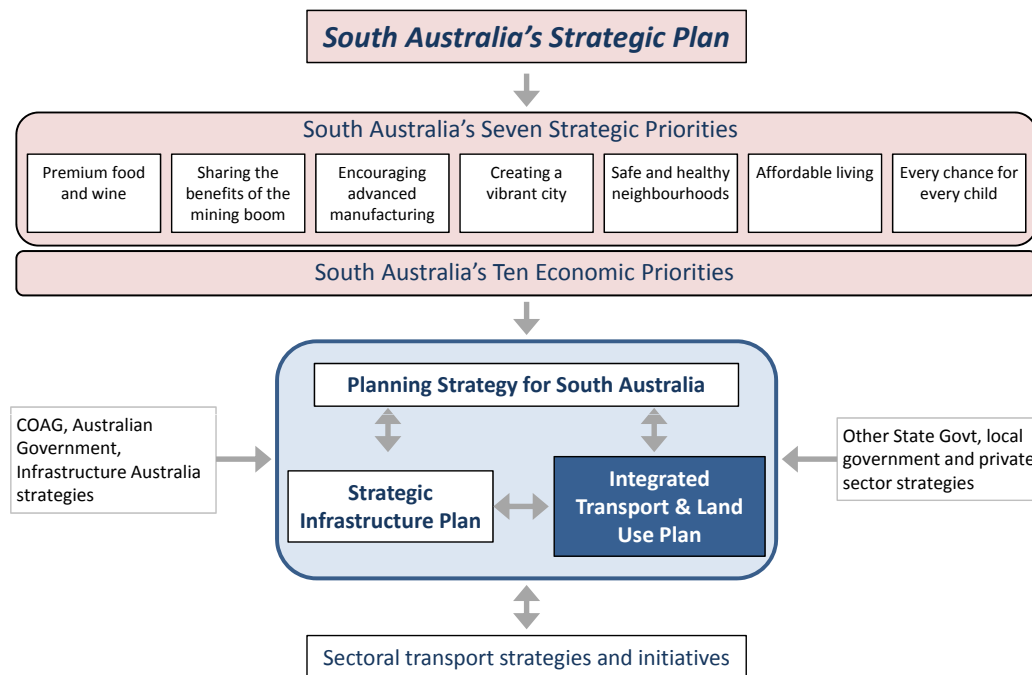
1.5 PART OF A GREATER VISION FOR SOUTH AUSTRALIA

The *Integrated Transport and Land Use Plan* fits with other government plans

This Plan should not be read in isolation. It is one part of a larger framework of policies and plans that are intended to work together as a comprehensive, long-term strategy for South Australia.

The chart below shows how the Plan fits within the State Government's overall strategic framework.

Figure 1-1 South Australia's Hierarchy of Plans



South Australia's Strategic Plan

South Australia's Strategic Plan is the overarching plan for South Australia. It provides a comprehensive statement of what our state's future can be. The Premier has nominated seven priorities for action to focus and guide the government's work in delivering the Strategic Plan. The Premier has also nominated ten strategic priorities to lead the modernisation and transformation of the South Australian Economy.

In relation to land use and transport specifically, two other important planning documents – the South Australian Planning Strategy and the *Strategic Infrastructure Plan for South Australia* – connect very closely with the Plan. As Figure 1-1 illustrates, these three strategies together create a comprehensive and coordinated suite of plans for land use, infrastructure and transport planning and investment over the next 30 years.

The South Australian Planning Strategy

The Planning Strategy provides the framework for land use development across the state. It defines how the state will balance population and economic growth with the need to protect the natural environment and the heritage and character of our communities, while also considering the infrastructure and services we'll need. The Planning Strategy comprises *The 30-Year Plan for Greater Adelaide* plus seven regional volumes, each of which is reviewed as required every five years.

The 30-Year Plan for Greater Adelaide is currently being reviewed. As the development of The Plan has provided us with greater insight into how land use and transport are to be integrated, the review of the 30-Year Plan will necessarily respond to the various market changes and transport initiatives identified in this Plan. This review, along with the reviews of the seven regional volumes, will ensure the ongoing consistency of the Planning Strategy with The Plan.

The Strategic Infrastructure Plan for South Australia (SIPSA)

The 2005-2015 SIPSA provides a framework for the provision and delivery of infrastructure by both the state and the private sector. SIPSA sets out priorities for infrastructure until 2015 across fourteen industry sectors, including transport. With some 80 per cent of priority projects now completed or underway, SIPSA will be updated to reflect The Plan.

Local government and private sector plans

Local government and the private sector will play important roles in South Australia's growth and economic development. Local transport plans aligned with this Plan, the Planning Strategy and the SIPSA will enable transport and land use planning to be consistent and coordinated across the state, while identifying and addressing local needs.

The Plan will also provide guidance to – and be informed by – private sector infrastructure plans, particularly for businesses involved in urban development, freight and port operations, and industries with significant transport and export requirements.

Other national and state plans

In addition to these South Australian plans, this Plan also complements national reforms and strategies supported by South Australia, such as the *National Land Freight Strategy* and more specific strategies dealing with public transport, cycling, walking, roads and road safety, vehicle emissions, rail and freight.

Sectoral transport strategies and initiatives

The Plan will guide a number of more detailed strategies and action plans in the future by targeting specific issues and opportunities for the transport system. These include a freight strategy, ports strategy, Road Management Plans, Network Operating Plans and future versions of the *Road Safety Strategy* and the *Cycling Strategy*.

In developing this Plan, wider economic, social and environmental goals have been identified that are consistent with *South Australia's Strategic Plan*, and the specific objectives for transport to contribute to those goals. A clear understanding of the goals and objectives is important to ensure we recognise the challenges that we must focus on. This then leads to the identification of solutions, priorities and actions.

GOALS	OBJECTIVES
<p>GOAL 1</p> <p>Healthy, safe, affordable and connected communities</p> <p>Our communities become even better places to live, work and raise a family, with access to social and economic opportunities, whether in Greater Adelaide or in regional and remote South Australia.</p> <p>A vibrant Adelaide CBD connects people and provides safe and active environments.</p> <p>We maintain and enhance South Australia's liveability as one of our greatest assets into the future.</p>	<p>Liveability</p> <ul style="list-style-type: none"> • Connected, vibrant, safe and attractive places throughout South Australia. • A land use and transport system in Greater Adelaide that delivers connectivity, safety and choice of travel for people at a level that maintains Adelaide as one of the world's most liveable cities, while increasing densities in inner Adelaide to support the knowledge and services economy. • Public transport, walking and cycling become a desired choice of travel for residents, reducing reliance on the car. • A land use and transport system in regional and remote areas which delivers connectivity, safety and affordable travel for people to access services.
<p>GOAL 2</p> <p>A strong, diverse and growing economy</p> <p>We maintain a strong economy, building on our existing strengths and the growth potential of our education, knowledge-intensive industries, mining, advanced manufacturing and premium food and wine industries. The right infrastructure is provided to support our existing diverse industries and other future opportunities to build greater resilience and growth for the South Australian economy.</p>	<p>Prosperity</p> <ul style="list-style-type: none"> • A transport network which connects people and businesses to jobs, markets and services in a safe, reliable and timely manner. • A transport and land use system which promotes knowledge-intensive services in the inner city. • An efficient and effective freight transport system that adds to the competitiveness of South Australia. • Seamless end-to-end supply chains and transport networks that attract businesses to South Australia, and then help them trade competitively at the domestic and global level. • A transport system that can be maintained and operated into the future, and take advantage of growing opportunities in industries such as mining, advanced manufacturing and agriculture. • World class tourist experiences supported by strong international, interstate and local transport services with easy connections to key tourist destinations across South Australia.
<p>GOAL 3</p> <p>Thriving natural and built environments</p> <p>A land use and transport system that plans for climate change and contributes to a healthy and functioning natural environment, which is valued for its unique biodiversity and the ecosystems that underpin South Australians' health, wellbeing, lifestyles and livelihoods.</p>	<p>Sustainability</p> <ul style="list-style-type: none"> • A land use and transport system that is resilient to climate change, extreme weather events and emergencies. • Significant reduction in transport emissions, including greenhouse gases and other harmful emissions. • A land use and transport system designed to not only minimise impacts on the natural environment (land, water, air and biodiversity) but also to enhance environmental outcomes.

HOW TRANSPORT AND LAND USE WORK TOGETHER

There is a fundamental relationship between the transport and land use systems. Any new land development will increase the pressure on an area's existing transport network and may require the development of new transport infrastructure.

Conversely, the provision of new transport infrastructure will help open up new land developments by attracting residents and businesses. In turn, this will increase the demand for and use of new transport infrastructure, ensuring the ongoing links between the two systems.

Failure to adopt an integrated approach to land use and transport planning leads to problems that cannot always be easily fixed.

In essence, integrated planning means transport decisions take account of (and support) land use considerations, and land use decisions take account of (and support) transport system considerations.

To achieve this integration and alignment, the South Australian Government has used a new planning tool: *A Functional Hierarchy for South Australia's Land Transport Network*.

It identifies the state's transport corridors that are important for different modes of transport, including public transport, cycling, walking, major traffic, freight and tourist routes.

It is intended to guide the management, operation and use of rail and road corridors in order to improve the safety and efficiency of the transport network for all users. In recognising the different roles of corridors, the Functional Hierarchy helps shape the development of land along each corridor and provides guidance as to what kind of land use planning policy is needed to support the safe and efficient function of the corridor.

The Functional Hierarchy describes the functions of each transport corridor for which the State Government is responsible, as well as strategic corridors that are owned and maintained by local government or private operators. These strategic corridors are linked to the land use planning process via a range of mechanisms including Structure Plans and the South Australian Planning Policy Library.

This will enable specific transport plans, investments and actions to be applied according to the roles of a particular corridor, and guide the way development should occur adjacent to the corridor. This is at the heart of an integrated transport and land use system.

A FUNCTIONAL HIERARCHY FOR SOUTH AUSTRALIA'S LAND TRANSPORT NETWORK

South Australia's land transport corridors (including road and rail) are a key component of the urban and rural environment and provide for a variety of different transport modes and users (i.e. functions), such as public transport, freight, bicycle, pedestrian, motorcycle and car movements.

The State Government has developed *A Functional Hierarchy for South Australia's Land Transport Network* that identifies which transport corridors are important for different modes of transport. It shows the functional hierarchy for both metropolitan and regional transport networks, and covers the following functions:

- public transport corridors
- cycling routes
- pedestrian access areas
- major traffic routes
- freight routes
- peak hour routes
- tourist routes
- key outback routes.

The Functional Hierarchy provides a clearer picture of the roles individual corridors perform in achieving the broader goals and targets identified in the *Strategic Infrastructure Plan for South Australia*, the South Australian Planning Strategy (including *The 30-Year Plan for Greater Adelaide*) and *South Australia's Strategic Plan*. The Functional Hierarchy is a key input into The Plan, as the transport role for individual corridors is a key consideration in identifying system improvements.

OUR VISION



**BUILDING A STRONGER
SOUTH AUSTRALIA**



OUR VISION IS THAT SOUTH AUSTRALIA IS GLOBALLY COMPETITIVE, VIBRANT AND CONNECTED

- We focus our efforts on building on South Australia's strengths – advanced manufacturing and defence, mining and resources, premium food and wine, tourism, liveability and a unique environment.
- Adelaide is recognised as one of the world's most liveable cities and a great place to live and work – with strong and cohesive communities, successful industries and a growing services sector.
- In a fiercely competitive global economy, boosting and continually improving Adelaide's liveability is a critical economic strategy for South Australia's long term prosperity.
- Adelaide's liveability is built on a more compact city with a high quality transport system, healthy and safe communities and a strong commitment to environmental sustainability.

2.1 OUR VISION FOR SOUTH AUSTRALIA – BUILDING ON OUR STRENGTHS

History and geography have bestowed many advantages on South Australia. The state's early days of European settlement saw the rapid development of mining and productive agricultural lands – two economic strengths that continue to this day. Adelaide grew rapidly following the Second World War, largely on the back of strong growth in manufacturing industries under conditions that favoured domestic enterprises. In recent decades the services sector has grown strongly, in line with the global growth of knowledge-intensive industries such as design and engineering, finance, law, information and communications technologies, health and education.

There is now fierce competition in the global economy for highly mobile companies, direct investment, tourism, major events and skilled labour. Over the last two decades, the engine of global economic growth has shifted from Europe, North America and Japan to include rapidly developing nations in Asia such as China and India. These global economic forces are reshaping our state and, as a small economy, South Australia feels the impacts of these forces more than most.

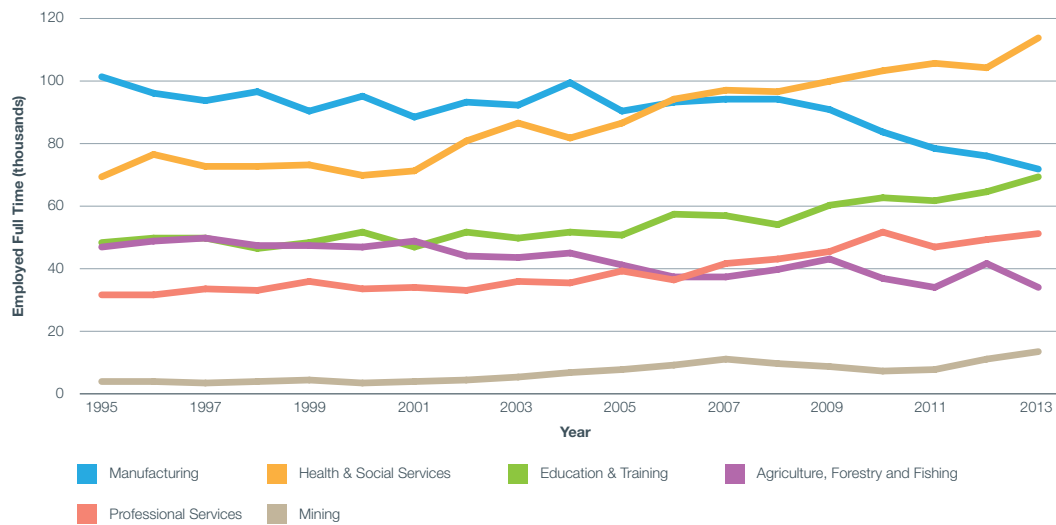
The economy of South Australia continues to evolve, and we must make the most of our existing economic, social and environmental strengths, while being open and flexible so we can quickly respond to new opportunities. This means that South Australia needs to focus on its areas of competitive advantage including premium food and wine, defence industries and mining, and its ability to offer the promise of strong, healthy and safe communities to prospective migrants through high liveability levels acknowledged worldwide.

Manufacturing has become a smaller share of income generated for the state, but the sector has become increasingly hi-tech. The growth of Asia has increased demand for mineral and energy resources and, as a result, these sectors are becoming a more important part of South Australia's economy – seen in the expansion of exploration and a four-fold increase in the number of mines operating in the state over the last decade. The rise of the middle class in Asia is opening up opportunities for premium food and wine exports. The urbanisation of China has also created demand for engineering, design and architectural services – creating opportunities for professional services firms based largely in central Adelaide.

Increased growth in Asia also presents challenges. Rapidly industrialising nations with lower wages increase competitive pressure on our traded goods sectors, particularly our manufacturing industries. However, rather than resisting or seeking protection from these global forces, South Australia should embrace them and maintain an outward orientation.

Figure 2-1 shows the growth in jobs in services, education and health as against the decline in manufacturing employment over the past 18 years.

Figure 2-1 Changes in employment by type of industry in South Australia, 1995-2013



Source: ABS Labour Force Survey

Our 'big three' globally competitive industries

In addition to building a more outward-looking economy, South Australia's *Economic Statement 2013* envisages three productive and globally competitive industries at the heart of a more prosperous future for the state.

Advanced manufacturing and defence

Manufacturing in South Australia has suffered from the high Australian dollar affecting export markets and trade exposed sectors. The need to adapt to such an environment is pressing and the future success of South Australian manufacturing lies in its ability to transform itself to supplying higher value solutions in new industry sectors – competing on the basis of value rather than cost.

The vision for manufacturing in our state is that South Australia has a diverse and growing manufacturing industry, underpinned by a design-led advanced manufacturing culture that has created new products and services which have captured significant international market share. South Australia will also consolidate its position as the 'defence state', winning significant future contracts.

Mining and resources

Our mining and resources sectors have seen rapid growth over the past ten years. The rapid increase in exploration activity is transitioning into production as more mines commence operations – and more are planned. Given the significant growth in the contribution from the mining sector to the economy, and the promise of strong future growth, it is imperative that strategies are pursued to maintain the growth in minerals and energy production.

The vision for the mineral and energy resources sector in our state is that South Australia's abundant resources have been unlocked by new technologies, with South Australia becoming known as a world centre of mining excellence. Furthermore, the potential growth in onshore and offshore energy basins will revolutionise Australia's energy future. To ensure the benefits of the mining boom flow through to all South Australians, the Economic Statement's vision includes a Future Fund derived from revenues from mining and energy extraction. This fund will maximise the benefits of the strong growth in mining across the economy and ensure that the wealth from extraction activities is shared with future generations.

Premium food and wine from our clean environment

Agricultural commodities, aquaculture and wine comprise a significant proportion of South Australia's exports, but our food and wine products are under pressure from low labour cost countries and a changing Australian dollar. However, the rise in demand for food and wine presents an opportunity to leverage South Australia's reputation as a producer of 'clean and green' food and wine products, as well as move an increasing proportion of our agricultural commodities up the value chain by engaging in value-adding activities.

The vision for the agricultural sector in our state is that South Australia is renowned as a producer of food and wine from its clean water, clean air and clean soil, and that our food and wine are labelled and recognised as South Australian around the world. We also aim to substantially boost exports to Asia of our food and wine in both volume and value.

The state's grain industry will clearly play a major role in meeting this aim with 85 per cent of the grain currently produced in South Australia being exported to south-east Asia, China, Japan and the Middle East. Grain production is one of South Australia's most prominent export industries, generating up to \$4.3 billion in revenue in 2012/13 from commodity and processed products, comparing with the wine (\$1.9 billion) and seafood (\$400 million) industries*.

* Government of South Australia (2013) Premium Food and Wine from our Clean Environment, Primary Industries and Regions South Australia.

Tourism

Whilst not included in the 'big three', tourism is already a very significant industry in South Australia, with visitors drawn by our unique outback environment, our stunning coastline and wilderness regions, and our Indigenous and European heritage. The industry is worth over \$5 billion to the state's economy, directly employs more than 33,000 people and indirectly supports tens of thousands more. To maintain and grow South Australia's appeal as a key destination in any Australian holiday experience, we must continue to develop the quality and breadth of our tourism product and to nurture and protect our environment. The South Australian Tourism Commission works closely with major tourism operators and peak regional bodies to achieve this, helping to establish experiences as diverse as shark-cage diving off Port Lincoln, balloon flights over the Flinders Ranges, the Ghan train trip from Adelaide to Darwin and the chance to get up close to view Kangaroo Island's seals.

As these examples illustrate, much of the direct benefit of a growing tourism industry is experienced in South Australia's diverse regions. This is equally true of other industries: our key regional industries include primary production, mining and mineral resources and tourism, with some regions also having significant fishing and aquaculture, viticulture, forestry and alternative energy generation industries. Our regions generate a significant proportion of the state's wealth – contributing \$15.3 billion or 17 per cent of Gross State Product in 2011/12 – and will play a vital part in the future of all these industries in the coming decades.

Our way of life

South Australians enjoy an enviable lifestyle. We have an affordable cost of living, high quality schools and world class universities, as well as safe, well maintained uncongested and unpolluted suburbs and towns. These attributes have seen Adelaide continue to be rated as one of the most liveable cities in the world and the state continues to attract people from interstate and overseas.

South Australia will continue to have a wide range of affordable homes and be recognised as a great place to raise healthy, thriving children. Families will have access to a children's centre in their local area, and homes and neighbourhoods will be designed to conserve energy and water to help reduce living costs. Our neighbourhoods and towns will be safe and welcoming, enabling people to live active and healthy lives and feel part of the community.

Our vision for South Australia is to continue to enhance this way of life by finding ways to increase our involvement in active pursuits and social participation, improve people's access to jobs and services and improve the day-to-day safety of our communities.

Our unique environment

South Australia's unique environment and spectacular natural attractions from the vast outback areas to the delicate natural environment of Kangaroo Island or the Coorong are rich in biodiversity. This contributes strongly to our reputation for tourism and as a producer of premium food and wine from clean water, clean air and clean soil. South Australia is recognised globally for its premium food, beverages and culinary-tourism. The food industry holds a competitive edge in both domestic and export markets through innovation and a strong reputation for being clean and safe.

Our vision is to have South Australia continue to be known for these advantages and to effectively protect and manage these assets for the benefit of present and future generations.

South Australia will reap benefits and rewards from its great strengths in advanced manufacturing and defence, mining and resources, premium food and wine, tourism, liveability, and a unique environment.

2.2 OUR VISION FOR GREATER ADELAIDE – CREATING A VIBRANT CITY

The Greater Adelaide area – where 82 per cent of South Australians live and which contributes 83 per cent of Gross State Product – is vital to our state's future. South Australia's capital city, Adelaide is the state's administrative centre, its main international gateway, the nerve centre of the State's health and higher education hubs and the first port of call for most visitors. It is the focus for the state's growing services sector and its knowledge intensive industries. Nevertheless, it is buffeted by the same global pressures and challenges as the rest of the state and is open to the same opportunities presented by globalisation.

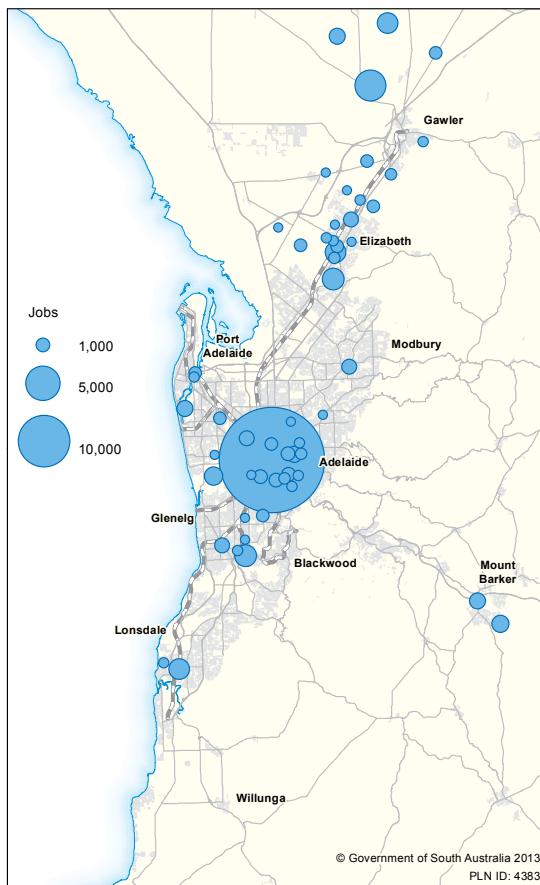
While Adelaide residents enjoy a high quality of life and the city is consistently rated as one of the world's most liveable cities, people's increasing desire to move around means that we face tough competition from other places in keeping our young people and attracting highly skilled migrants. As a consequence, Adelaide – and South Australia – suffers from negative net interstate migration. Many of our most talented and skilled young people leave the state, heading interstate or overseas to pursue a range of employment and lifestyle opportunities.

To build the strong communities we want and to be economically successful into the future, Adelaide must be a beacon of opportunity not only to South Australians seeking career paths and job opportunities, but to expatriates and migrants considering moving to Australia. The city must show that it can offer more lifestyle and career choices, and support an advanced and diverse economy that is sustainable and supports healthy and safe communities. To achieve this, our vision is to create a vibrant and lively city that is the cultural, economic and social centre of the state and a place where more people want to live, work, invest and spend time.

Adelaide's liveability itself is built upon healthy and safe communities and a strong commitment to environmental sustainability. The very wellbeing of our communities is embedded within the notion of liveability. The vibrancy, employment opportunities and rich cultural life we associate with liveability both contribute to and result from the confidence and security we feel when our community is strong. This means having cohesive local communities with an active street life that enables walking and cycling and boosts personal safety through passive surveillance; maintaining high quality public transport services and addressing transport disadvantage, as well as reducing road congestion; and protecting and improving our parks and open spaces. It means having easy access to services such as health and education as well as jobs. It means creating a Greater Adelaide that is active, lively and inviting, 24 hours a day. It also means creating a city that is sustainable by building prosperity without damaging the long-term health of the environment.

Our vision includes the bio-medical, sporting and entertainment precincts on the Riverbank within the CBD becoming a thriving part of the city, with new food and entertainment venues lining the riverfront; for the city to become a huge integrated campus for university life, as students walk, cycle or take the tram around the inner city; and for the increased vibrancy and physical revitalisation to have attracted a new wave of knowledge-intensive, innovative and creative businesses, bringing with them the young professionals who want to live and work in the city.

Figure 2-2 Employment growth in Greater Adelaide (2011 – 2036)



Source: SGS analysis of Government of South Australian Population and Employment projections, 2010

As with the rest of the state, Adelaide must also focus on its comparative advantages by growing its successful industries and further investing in its liveability and quality of life. In many ways, Adelaide's industrial strengths mirror those of South Australia as a whole. Greater Adelaide is home to world class wineries and other agricultural industries, and to manufacturing and defence industries. While mining activities are less common, our mining services industry is based in Adelaide. This means that the state-wide focus on developing three productive and globally competitive industries – premium food and wine, mineral and energy resources, and advanced manufacturing and defence – applies to Adelaide as well.

Adelaide is South Australia's services and knowledge-intensive industries hub. In recent years, knowledge intensive services have become more prominent, with an increasingly skilled labour force helping to access local and international markets. These intensive services also offer our traditional industries (such as mining, manufacturing and agriculture) a competitive advantage by providing design, technical marketing and financial services.

These types of services tend to cluster within inner Adelaide, with firms and jobs drawn to this location by agglomeration economies (the benefits gained from firms clustering together). These benefits come about in a variety of ways, with knowledge exchange (businesses learning from each other) and job matching (finding the best match between skilled workers and jobs) being two of the most important. As a result, our vision is to focus on supporting jobs growth across Greater Adelaide and particularly where most jobs are envisaged to occur in the CBD and inner suburbs, as well as major regional activity centres.

Supporting jobs growth means embracing a more compact and accessible urban form. Adelaide residents are already making these choices – with more people seeking to live in or nearby the central city. We can support these choices and facilitate mixed-use medium density development through transport and land use planning. This will be critical for making Adelaide a more vibrant city with a growing services sector and remaining resilient to the impacts of changing global economic forces.

Our vision is to increase the connectivity of central Adelaide through greater densification of dwellings and employment in inner Adelaide and in close proximity to key centres across Greater Adelaide, and by prioritising transport improvements in the inner areas to bring people closer together.

Adelaide will be recognised as one of the world's most liveable cities and a great place to live, work and invest.

How we travel around the city

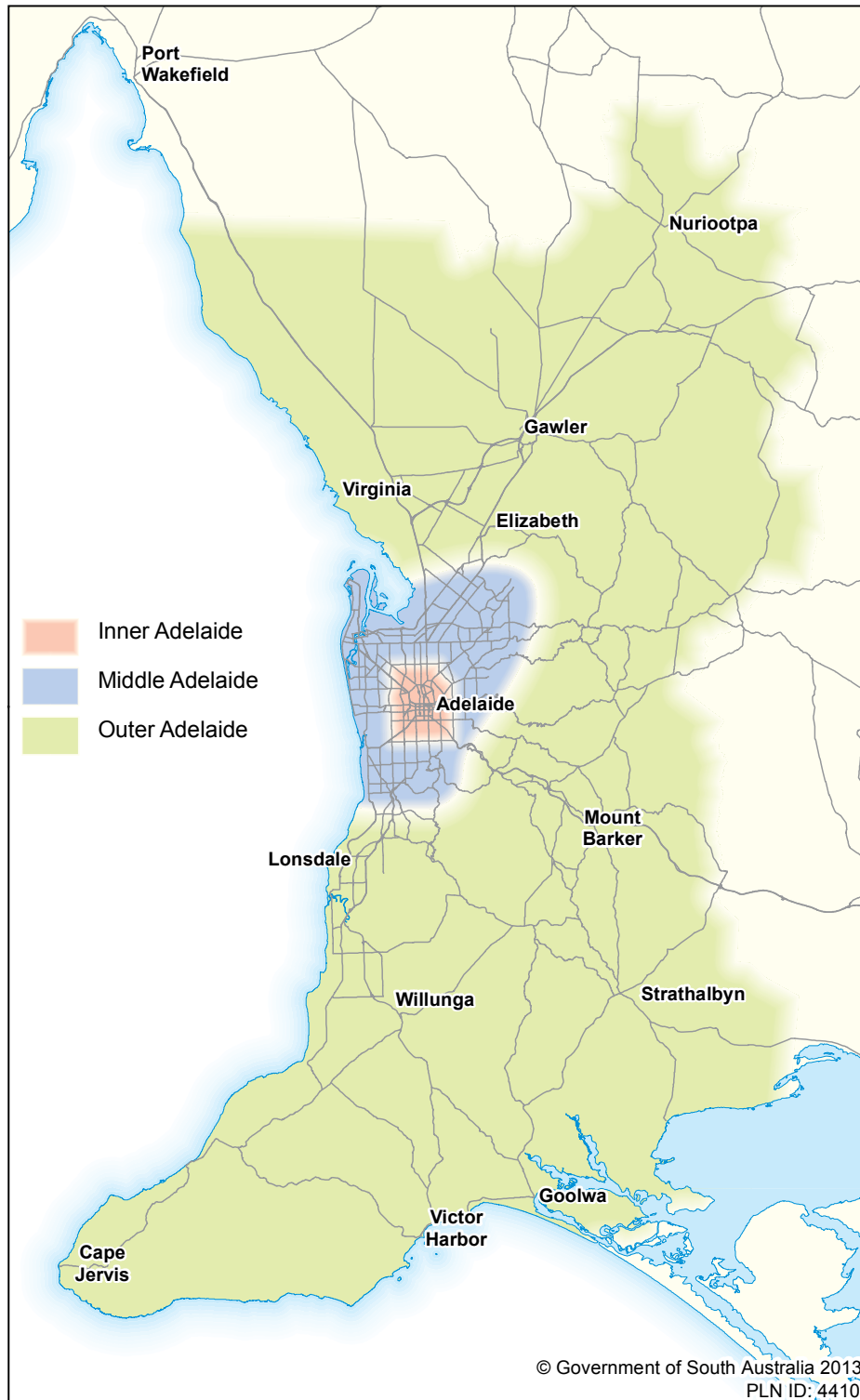
Adelaide's geography and history means that the city's travel needs and patterns are defined loosely by three concentric areas that spread out from the CBD and extend along an elongated north-south corridor. These travel needs and patterns are driven by distinctly different land use patterns and the relative proximity to employment and services in these areas. Similarly to other cities, these areas can also be defined by their distance from the central city. In the case of Adelaide, travel patterns within the CBD and inner Adelaide are similar within approximately five kilometres of the city centre, whilst travel patterns then change for middle Adelaide, an area broadly between five kilometres and 15 kilometres of the central city. Travel patterns outside 15 kilometres of the central city become increasingly dispersed as population density reduces and employment is more widely distributed.

- **The CBD and inner Adelaide** – Adelaide's CBD and inner suburbs are where a large portion of Greater Adelaide's jobs growth has occurred in the last 10 years and where further higher density development is most likely to occur, as shown by recent market investment. The journeys people make in these areas tend to be shorter and more frequent, with large numbers of commuters needing to travel into and around the CBD for work each day. More people walk and cycle in these inner areas than in other parts of the city.
- **Middle Adelaide** – Residents of Adelaide's middle areas enjoy good local amenities in attractive, well-established suburbs with relatively easy access to the CBD. Over the past decade, middle Adelaide has gained the largest amount of population growth. Further, but less rapid, growth is likely to occur, supported by higher density housing and subdivided blocks in and around activity centres. Public transport trips in middle Adelaide are longer and more dispersed, with the bus network having a major role. Car trips are also more dispersed as housing, services and jobs are located further apart than in the inner suburbs.
- **Outer Adelaide** – Growth in Adelaide's outer metropolitan suburbs has been driven largely by people choosing to live in new suburbs and housing estates with larger blocks and more open space. Outer Adelaide has had slower population growth than middle Adelaide over the last 10 years and future growth is expected to mostly occur in new growth areas such as Playford Projects. Transport options in many of these areas can be more limited than in middle and inner Adelaide and residents typically rely more heavily on cars to travel to work and access services. The costs of providing transport infrastructure in low density areas are high. Trips in these areas are typically longer, with public transport journeys currently focused on travel to major centres, inner Adelaide and the CBD. The bus network is important in reaching more dispersed residential and employment areas, and the train network is well-used for trips into the central city. A considerable proportion of car travel is widely distributed, as greater distances need to be travelled to access jobs and services.

Outer Adelaide also includes areas that are more rural in nature, extending to Cape Jervis and Victor Harbor in the south, the Adelaide Hills and Mount Barker to the east and the northern Adelaide Plains and Barossa Valley to the north. These areas attract residents and retirees seeking lifestyle changes while still enjoying the benefits offered by living relatively close to a major city. Most travel is by car, with some local and longer trips being taken by bus. Many towns and districts in this part of the region are also major tourist destinations, creating challenges in balancing growing tourism traffic with the travel needs of local residents, businesses and communities.

Reflecting Adelaide's development, the largest volume of total transport movements is in a north-south direction. Public transport is currently focused on moving large numbers of people to and from the Adelaide city centre, whilst travel by car for private, business or freight purposes is more dispersed and also goes across town.

Figure 2-3 Inner, middle and outer Adelaide



ACTIVE TRAVEL'S CONTRIBUTION TO THE LIVEABILITY OF GREATER ADELAIDE

Adelaide has long been recognised as one of the world's most liveable cities. It consistently ranks highly on a range of liveability indices, particularly for its high quality of life, low cost of living, affordable housing, low crime rate, ease of movement and vibrant cultural life.

Cycling and walking play a significant role in enhancing liveability by:

- increasing the vibrancy and attractiveness of places
- enabling greater levels of social interaction
- improving public health and community wellbeing outcomes
- supporting leisure and cultural activities
- attracting investment and growth.

Initiatives to improve the connectivity of cycling and walking networks with places offering a broad range of employment, services, retail, leisure and entertainment opportunities will not only build on Adelaide's liveability advantages, they will generate significant environmental, social and economic benefits. These directions are consistent with the vision and priorities of the *State Public Health Plan* entitled *South Australia: A Better Place to Live, Promoting and Protecting our Community's Health and Wellbeing*.¹

Accessing places by active travel modes will also enhance the attractiveness, walkability and vibrancy of these places, providing further impetus for investment and development that meets the living, working and leisure needs of an increasingly diverse urban population.



¹ <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/legislation/public+health+act/state+public+health+plan>

BUILDING ON THE 30-YEAR PLAN FOR GREATER ADELAIDE

The 30-Year Plan for Greater Adelaide released in 2010 envisages a more compact city, with more housing provided within the existing urban footprint. Significant housing construction clustered around transit nodes is anticipated as part of a long term strategy to achieve a 70/30 split of infill housing as opposed to greenfield development (increasing from 50/50 at the time the 30-Year Plan was released). The 30-Year Plan's focus on transit nodes aims to create centres of high and medium density mixed use development with housing located close to a range of employment, retail, entertainment and other services. Access to these services and facilities would be by public transport, walking or cycling, reducing the need to drive. The 30-Year Plan envisages that transit nodes will provide high levels of amenity during the day and vibrant night time economies.

The 30-Year Plan – and the planning work that preceded it – has been a catalyst for change, with evidence now emerging that progress towards a more compact city is occurring at a much more rapid pace than originally anticipated.

The direction of land use and development has changed since the development of the 30-Year Plan and that means that the focus of our transport and land use planning has to change as well. More people now want to live in or near the CBD or Adelaide's inner suburbs, prompting responses from the development industry and government. The 2012 Capital City Development Plan Amendment provides for an additional 60,000 residents in the CBD, reflecting this trend towards inner city living.

In recent years, population growth has been strongest in Adelaide's middle and outer suburbs, while jobs growth has been strongest in the inner urban and middle suburbs, as shown in Figure 2-4.

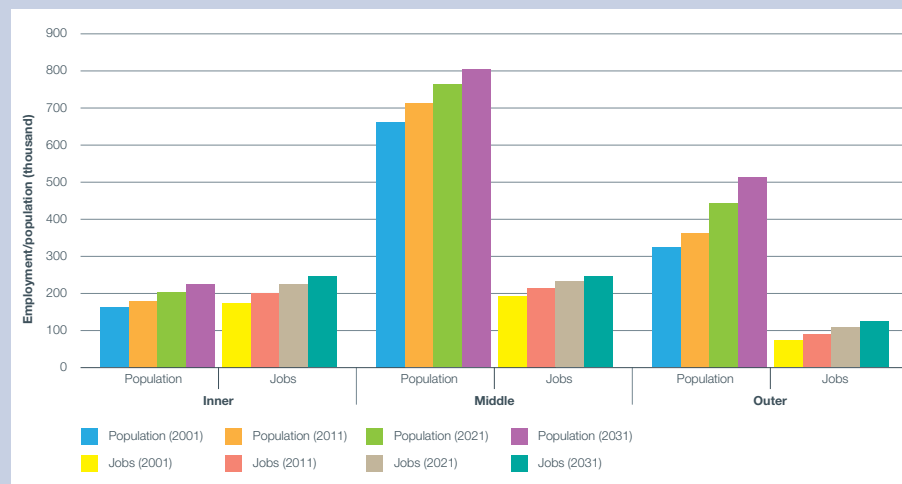
This imbalance has major implications for our transport system: more people needing to travel further to work places greater pressure on our public transport and road networks. The 30-Year Plan's focus on transit nodes aims to address this imbalance by promoting a significant shift in the pattern of suburban growth in Adelaide. But – as the projected growth in Figure 2-4 shows – we could do better.

In aiming for a more compact city, it is clear that we will achieve better results by going with the emerging market trend and supporting and facilitating people moving to the CBD and inner Adelaide.

From a transport perspective, this means we can make highly efficient investments in public transport to move larger numbers of people shorter distances to their jobs in the central city. Improving connectivity can also provide productivity benefits; research commissioned by the Council of Australian Governments found that the 'same job' in central Adelaide would be nine per cent more productive than one on the city fringes. At the same time, we need to continue to encourage development around strategic activity centres and precincts with good public transport connections and opportunities for active travel, thereby limiting the expansion of the city's footprint.

Aligning with an updated 30-Year Plan means we will reach our ultimate goal of a more compact, well-connected and highly liveable city much more quickly.

Figure 2-4 Employment and population in Adelaide by inner, middle and outer



Source: SGS analysis of Australian Bureau of Statistics and Government of South Australian Population and Employment projections, 2010

OUR PLAN



**BUILDING A STRONGER
SOUTH AUSTRALIA**



TRANSPORT NETWORKS THAT CONNECT PEOPLE TO PLACES AND BUSINESSES TO MARKETS

For inner and middle Adelaide

- A sharper focus on inner Adelaide to boost the central city as a creative, lively and energetic area where more people want to live and businesses want to locate.
- Making bold choices – bringing a network of trams back to Adelaide, called AdeLINK and refocusing our transport system to support and actively encourage mixed-use medium density, vibrant communities and business growth in inner and middle urban areas.

For Greater Adelaide

- An increasing focus on major urban centres and accessibility to these centres – building upon the electrification of the north-south backbone of the public transport system, a modernised and redesigned bus network with a focus on major activity centres, and supporting a more active city through better connected walking and cycling networks and walkable environments.
- Giving businesses the efficient, reliable transport connections they need to deliver goods and services around the city and to interstate and international markets – a well-targeted package of investment in the North-South Corridor, Inner and Outer Ring Routes and intersection and road upgrades.

For regional and remote South Australia

- Better connecting regional towns and communities to jobs, services and opportunities – focusing on a high quality, well maintained road network and improving community and passenger transport services.
- Managing the growing volumes of freight moving around the state and making sure the mining sector has the transport connections it needs to expand.

3.1 OUR PLAN FOR INNER AND MIDDLE ADELAIDE

Liveability is one of Adelaide's greatest assets. It not only makes Adelaide a more enjoyable place to make a home, create social networks and work; it sharpens South Australia's competitive edge by helping to attract skilled workers, knowledge-intensive businesses and high value jobs to the city. It also boosts our tourism industry, reinforcing Adelaide as a showcase for the best that South Australia offers in food, wine and the creative arts, and as a gateway to unique tourism destinations such as the Barossa and Clare Valleys, the Outback areas and Kangaroo Island.

Maintaining – and enhancing – Adelaide's reputation for liveability is a core aim of The Plan. Building on the direction set by *The 30-Year Plan for Greater Adelaide*, transport planning and investment will shift towards supporting a change in the nature of Adelaide's urban form – focused on containing the growth of the wider metropolitan area, encouraging higher density development in the central city, and creating a network of well-connected major suburban centres where people have good access to jobs, shops, services and recreational activities by a range of different travel modes, and where communities grow in strength through closer bonds and greater shared experience.

In recent years, transport investment has focused largely on making sure that Adelaide's transport system keeps up with population growth in middle and outer metropolitan Adelaide. In 2008, the South Australian Government embarked on a significant investment program to redress decades of under-investment and modernise Greater Adelaide's public transport system through:

- major rail revitalisation serving Adelaide's middle and outer suburbs, featuring train corridor electrification, extension of the train network to Seaford, major track upgrades (including new ballast and sleepers), new and upgraded train stations, new electric trains and an expansion of key park and ride facilities
- extension of the Glenelg tram line, more trams, upgrades to O-Bahn interchanges, 100 more buses and increased bus services
- a new smartcard ticketing system that can be used on trains, trams and buses
- more transit police
- free tram travel within the CBD, from South Terrace
- free inter-peak and weekend public transport services for Senior Card holders.

Road investment has focused on keeping traffic moving along Greater Adelaide's important North-South Corridor, including the Northern Expressway, the South Road Superway, the Southern Expressway duplication and the Gallipoli Underpass. The Sturt Highway has been duplicated between Gawler and Nuriootpa and the McLaren Vale overpass completed.

A sharper focus on inner Adelaide

These investments in middle and outer Adelaide will greatly improve connectivity across the city. Now, with many projects completed or underway, we need a sharper focus on inner Adelaide, recognising that our transport investment should aim to boost the central city as a creative, lively and energetic district where people want to live and businesses want to locate. To do this, we have to make bold choices about refining our transport system to not only support medium density communities and business growth, but to actively encourage and drive these developments.

Meeting these aims means tackling some difficult challenges.

We need to provide transport services that support a mix of residential and commercial uses in medium density inner Adelaide and the CBD.

We need to reduce congestion on inner city roads and have fewer cars and trucks moving through the CBD. We have to address pressure points along parts of our public transport networks. We have to reduce our reliance on cars, especially for commuting, and create walkable neighbourhoods and streets that are friendly to pedestrians and cyclists.

Moving large numbers of people to and from the central city on a daily basis means that we need our public transport system to provide reliable, fast, safe and affordable travel choices – and to deliver these choices with a minimum impact on our environment, in a way that is sustainable into the future and makes the best use of assets we already have.

CREATING A MORE COMPACT CITY

Over the next 30 years, Greater Adelaide's population is forecast to grow significantly. Initiatives that have been completed or are underway to accommodate this growing population in a more compact Adelaide include:

- relaxing height and zoning constraints in the city centre, and rezoning corridors and areas in the inner metropolitan area through the inner Metropolitan Growth Project to facilitate higher density and mixed-use development
- redeveloping Bowden from an industrial site into an inner urban 'village' as part of a \$1 billion urban renewal project to accommodate 3,500 new residents, new retail outlets and offices oriented around Bowden Station
- undertaking major projects within the Adelaide CBD – including the Riverbank Precinct Development, Adelaide Oval upgrade, new Royal Adelaide Hospital, Adelaide Convention Centre expansion and the new South Australian Health and Medical Research Institute – to act as catalysts in bringing people back to the central city.

Depending on take-up, Adelaide's city centre and inner metropolitan area could accommodate a far greater proportion of the population.

Focusing transport planning and investment on these areas is likely to deliver the greatest uplift in housing and employment densities.

Bringing back Adelaide's trams

Based on what we've learned from our own experiences and examples from other cities of Adelaide's size and level of development, for example Bordeaux in France, a modern tram network is the best choice for the city's future. Trams are often introduced alongside initiatives that aim to:

- enhance the accessibility of the population to employment, services, shops, education, entertainment and leisure opportunities, particularly as these opportunities are concentrated in inner and middle Adelaide
- improve the connectivity of urban areas by enabling people to easily and conveniently travel between destinations
- reduce car dependency, as people living and working along or in close proximity to tram routes tend to have lower rates of car ownership.

In addition, trams operate relatively smoothly and comfortably along easy to understand routes. When supported with convenient user information, such as city maps that show tram routes, stops and links to facilities and attractions, trams help grow patronage on public transport. Trams tend to be relatively effective at attracting discretionary travellers, that is, people who have the option of driving, including visitors or those travelling to major sporting or cultural events. Trams also tend to be viewed as being more attractive than conventional bus travel and, where there is a choice people will often walk further to travel by tram than by bus. Trams also are best suited for short to medium distance travel, with the longer distance travel best served by trains.

The return of tram services to inner and middle Adelaide will support the development of the inner city as a well-connected, dynamic, safe and attractive area that is home to more people, more businesses and more jobs. It will also help to secure Adelaide's reputation as a highly liveable city and one that values – and invests in – the attributes that make a city liveable. Importantly, it will support and contribute to the growing market demand for residential development in the CBD, inner and middle Adelaide.

This new tram network will be called AdeLINK.

BORDEAUX – TRAMS LEAD A CITY'S RENAISSANCE

The French city of Bordeaux has undergone a renaissance over the last 15 years, led by an ultra-modern tram network that links diverse districts across the city and runs alongside a revitalised riverfront area. Bordeaux has many similarities with Adelaide, particularly relating to its metropolitan area (population of over 1.1 million people), its parks and gardens, its wine and military industries and its desire to reduce its car dependency and the impacts this has had on their city.

The new tramway has helped to revive long-neglected historic districts, supporting the transformation of the centre of the city into one of the biggest pedestrian precincts in Europe. Greater access to previously rundown areas has led to more residents moving into these areas, restaurants and wine bars opening up, and the emergence of popular tourist destinations such as the new riverfront promenade.

Once dominated by old stone warehouses and grimy laneways, a 4.5 kilometre strip along the left bank of the Garonne River is now at the heart of the revitalised city. The ports along the river have been turned into public open spaces and gardens, and the area is now home to galleries, cafes and restaurants. With a strong commitment to multi-modal connectivity, city planners have carefully linked these new public spaces with other public spaces within the city – by tram, walking and cycling – drawing residents and visitors to the riverfront and encouraging businesses to locate to the area.

Bordeaux closed down its original tramway lines in the 1940s and 1950s, however by the mid-1990s, cars were choking the city and urban sprawl had become a significant problem. The first line of the new tramway opened in 2003, with a further two lines extending the network to around 44 kilometres. A feature of the network is its use of a ground-level power supply, which means there are no overhead wires.

The impact of trams on a city is not just in terms of moving people around, although that is important. As the experience of Bordeaux and other cities such as Melbourne show, a popular tram network can have a much wider influence on the structure of a city and the way in which new development occurs. Tram stops can be a focus of well-designed public spaces, clusters of shops and cafes, and new residential developments. A tram network can lead to more walkable and cycle-friendly streetscapes that are quieter, safer and more vibrant. An expanded tram network will significantly increase Adelaide's public transport capacity, thereby increasing opportunities to reduce the number of cars on the road.

Better connections to and between parts of inner and middle Adelaide can act as a catalyst in creating lively, medium density neighbourhoods that attract residents, businesses and visitors.

Realising a vibrant city requires inner Adelaide to be a place that all South Australians identify with, as much as they identify with the town or suburb in which they live. It is a place to visit, a place that attracts people from all walks of life, with its parks and streets, cafes and shops, markets and libraries, places that express the thriving community of South Australia, both economically and socially. Trams are seen to have an important role in developing this sense

of place. Through strengthening connections, and offering greater mobility that assists with the activation of streetscapes, trams assist in the creation of a well designed city, generating great experiences and a sense of belonging. AdeLINK will contribute to the cultural and economic focus of Greater Adelaide by providing enhanced public transport options and expanding an iconic public transport service to facilitate growth in residential, commercial and retail activities along its routes and in adjacent areas.

In Adelaide, the extension of the Glenelg tram line from Victoria Square to North Terrace (west) contributed to an increase in development activity at the western end of North Terrace and in the southern section of King William Street. This suggests that the new tram network will boost commercial and residential development in other parts of Adelaide's city centre and along those roads carrying trams.

As more and more people and businesses move into middle and inner Adelaide, the convenience and connectivity provided by trams will gradually replace car trips for workers commuting to and from the CBD and across the inner suburbs and become the main way residents, workers and visitors move around the central city.

Adelaide's tram-led revival will occur in several stages in line with the market for residential and commercial development, jobs and population growth, and as funding becomes available. The new lines in the AdeLINK network will add to the vibrancy of existing shopping and mixed-use precincts and support new growth areas, and will include:

- **PortLINK** – a conversion of the Outer Harbor train line to deliver a new tram service to Outer Harbor, Port Adelaide and Grange, and construct new tram lines to West Lakes and Semaphore
- **EastLINK** – a tram line running along The Parade to the University of South Australia Campus at Magill
- **WestLINK** – a tram line running along Henley Beach Road to Henley Square, with a branch line to Adelaide Airport. The existing tram line to Glenelg will also form part of WestLINK
- **ProspectLINK** – a tram line running from Grand Junction Road along Prospect Road and O'Connell Street
- **UnleyLINK** – a tram line running along Unley Road and Belair Road to Mitcham
- **CityLINK** – a tram running in a continuous loop at regular intervals along the Morphett Street, Sturt Street, Halifax Street and Frome Street corridors, with transfers available from other tram lines and railway stations.

Currently, bus services operate along these radial corridors. The shift to a tram network will mean fewer buses coming into the city centre and help to make the streets more conducive to cycling and walking. However, the bus network will continue to service areas between and beyond the tram network, with new priority and higher frequency corridors making bus travel to and from the city centre faster and more reliable.

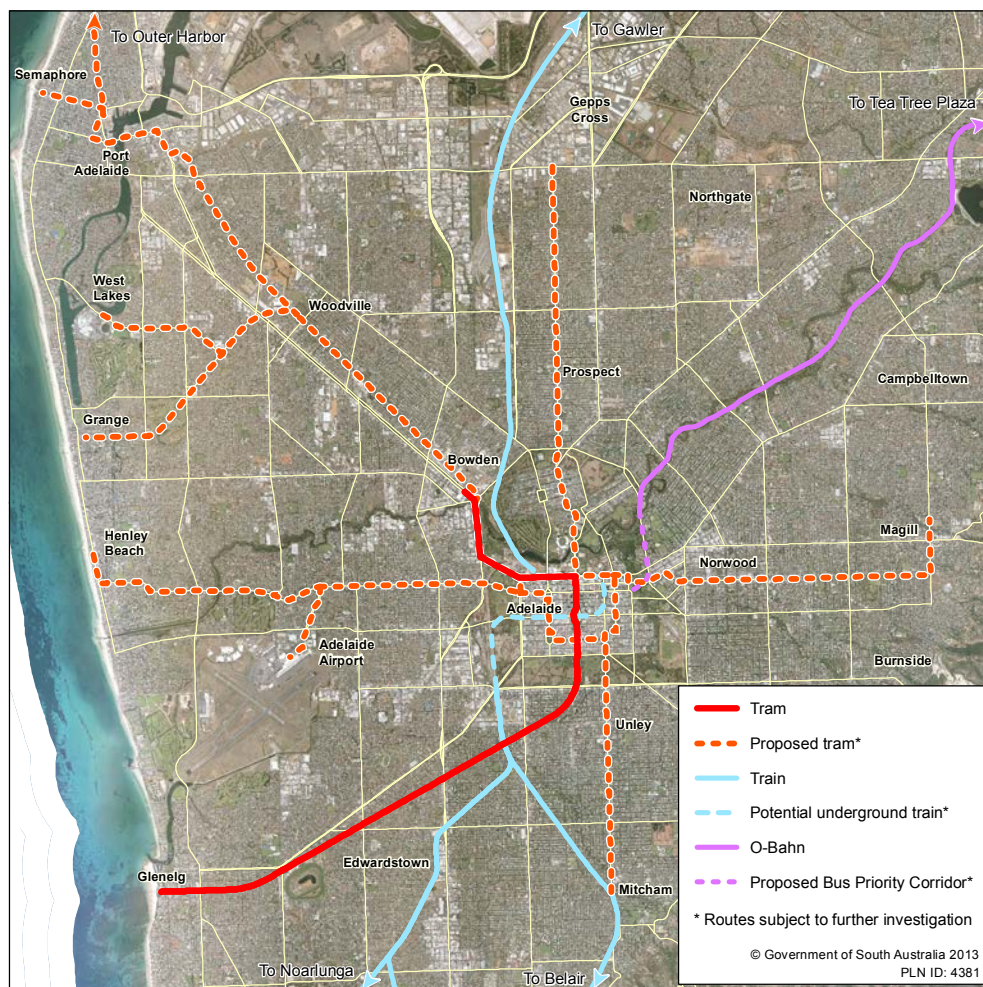
Developing AdeLINK will provide an alternative to the car for many trips to, from, through and within these areas. The tram routes have been chosen to both align with proposed land use changes enabling the development of medium density mixed-use precincts and increase the use of Adelaide's public transport system. These routes effectively establish the necessary pre-conditions to facilitate the creation of a more transit-focused city, with the added benefit of stimulating investment in and around these corridors. AdeLINK supports existing investment in infrastructure and, together with envisaged land use directions, seeks to stimulate the reactivation of inner and middle Adelaide.

Further investigation and analysis of final routes will be undertaken, such as the identifying the most beneficial routes for trams within the CBD. While the potential benefits are substantial, each stage will be carefully reviewed and evaluated to ensure The Plan continues to match the city's growth and changing travel requirements. Options for these stages will be investigated fully, including the safe and efficient integration of on-road tram services with other road users, subjected to rigorous business cases, and informed by consultation with communities, businesses and local councils. Where feasible, bus services will be replaced with tram services along key routes in line with *The 30-Year Plan for Greater Adelaide* and other urban development goals. Parallel roads will also be upgraded where required to provide efficient traffic flow for those people choosing to travel by car.

This doesn't mean neglecting our trains and buses. They will continue to be vitally important to moving people around Adelaide. Trains will continue to be the north-south backbone of the public transport system, providing fast, frequent services to access the outer northern and southern suburbs and Belair. The train and tram networks will be supported by a redesigned and modernised bus network providing more direct services to major activity centres and strengthened cross suburban bus services. This will provide an integrated and complementary network of public transport services involving trains, trams and buses to provide improved connectivity and choice of travel across Greater Adelaide.

It does mean that we will provide a sharper focus on tram services in our transport planning and investment in inner and middle Adelaide. It means that, over time, we build a 21st century tram network with modern new trams that is the envy of other Australian cities and that is recognised as the centrepiece of Adelaide's more compact urban form and liveability.

Figure 3–1 Adelaide's new tram network (AdeLINK)

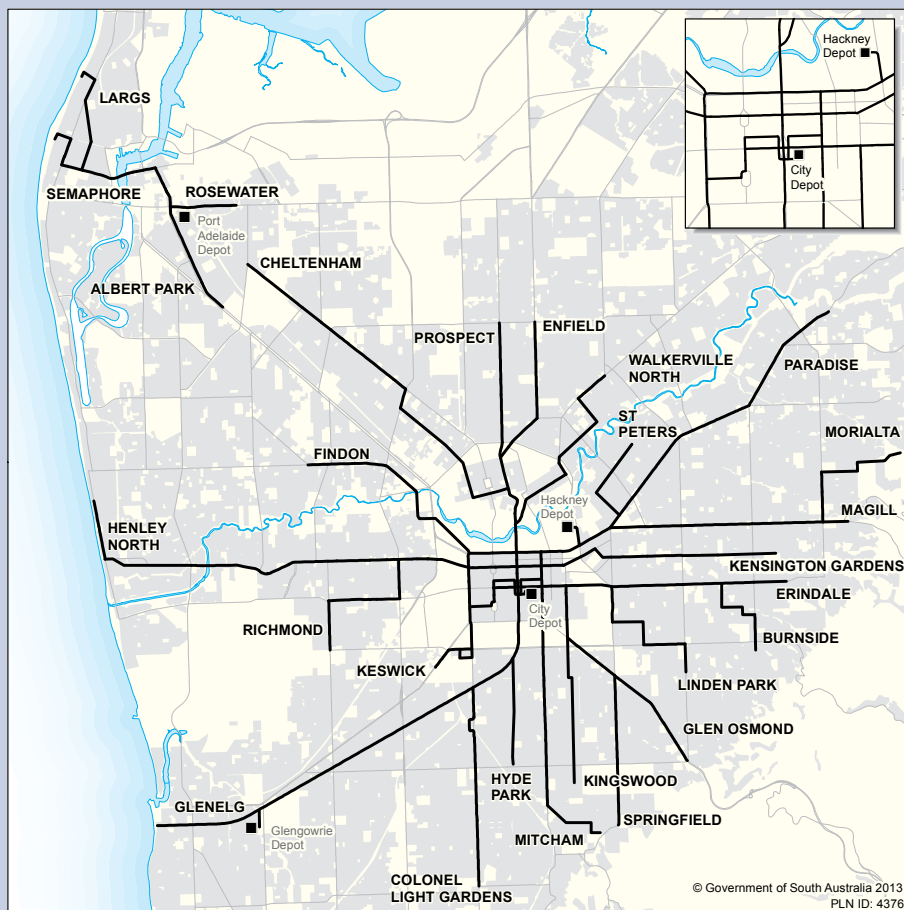


ADELAIDE'S TRAM ROUTES – 1870s TO 1950s

Adelaide's transport system was once dominated by an extensive network of trams that serviced a compact suburban form. This network was progressively implemented from the late 1800s when horse drawn trams were used to provide transport in the city. In the 1900s the lines were converted to electric trams and by the 1950s tramlines covered a large part of suburban Adelaide.

Similar to a large number of cities the world over, Adelaide's trams were progressively replaced by buses by the late 1950s, with the exception of the Glenelg tram. Figure 3-2 shows Adelaide's tram routes as they were in the 1950s, just prior to their replacement by buses. A number of Adelaide's wide boulevard style roads are testament to these early decisions to implement the wide network of tramways across Adelaide.

Figure 3-2 Adelaide's tram routes circa 1950s



STRATEGIC VISION FOR TRAMS

The experience of Portland, Oregon is a testament to how future city planning directions can be driven by staged expansion of urban tram networks. But what Portland showed was the need for a long term vision, which encompassed a land use vision, incremental extension of the tram network, and with funding plans for the extensions. The Glenelg tram line has shown effectiveness in land use activation in the City and along Jetty Road at Glenelg.

The Plan proposes a similar concept for inner and middle Adelaide, with proposed tram extensions along key suburban main roads, with through linkages in the CBD to bring about effective distribution of trips to the CBD and adjacent area destinations; these lines would integrate with the existing tram services, and assist in forming a loop of tram services in the CBD.

These networks will contribute to improved liveability and vibrancy along these corridors, as well as providing a catalyst for increasing residential density and mixed-use developments. Preliminary transport modelling has shown increased levels of future tram patronage, which would grow further in response to densification of these suburban areas, promoted by land use responses to the certainty of having a tram network in place.

Strategic Benefits of Tram Extensions

An expanded tram network will deliver a number of strategic benefits for inner and middle Adelaide.

- For short to medium distance corridors trams have the ability to expand into new urban areas using existing road corridors compared to train lines. For example, the proposed PortLINK tram will extend to West Lakes, into the centre of Port Adelaide, and to Semaphore in addition to Grange and Outer Harbor. The PortLINK tram will also provide effective services into the heart of the CBD including connecting to the new Royal Adelaide Hospital and a redeveloped Convention Centre and Riverbank Precinct. Closer stopping patterns mean that trams can also provide higher frequency services than trains at more stations along the corridor thereby reducing waiting and walking times. When considering walking times a tram can provide greater proximity to desired destinations along the northwest corridor, delivering people more directly to many places across the CBD and efficiently connecting to the suite of AdeLINK tram services.
- Permanent tram infrastructure has the potential to stimulate private investment activity to attract higher density living and mixed-use development along the inner city corridors. Facilitating increased densities along transit corridors within inner Adelaide is a key outcome of this Plan. The tram routes will help to increase the vibrancy of existing retail and service activities along the selected corridors, which goes hand in hand with the recent rezoning of areas as part of the Inner Metro Growth Project.
- Tram services can be provided at relatively higher frequency, and carry more passengers than a bus. With more people living in the inner and middle areas of Adelaide the AdeLINK network will provide a step increase in public transport capacity while providing greater travel choice.
- Reduced noise levels with fewer bus movements, and a decrease in local air emissions.

The various tram lines are forecast to attract significant levels of daily patronage of up to 25,000 on some lines by 2036. Putting these volumes into perspective, the daily boardings on the Adelaide O-Bahn are currently approximately 21,000 – the highest volume passenger transport corridor in Adelaide.

A 2009 study of Melbourne's tram network also found that:

- car ownership along tram corridors is lower than areas outside tram corridors
- there are significantly more commercial uses within tram corridors, particularly retail, than outside tram corridors
- excluding the CBD, 29 per cent of all Major Redevelopment Sites identified under Melbourne's Urban Development Network are within tram corridors and if the CBD is included, this figure rises to 40 per cent
- tram patronage is more related to employment density than dwelling density, leading to the conclusion that tram usage is more closely aligned with destinations rather than residences and that people may walk further to a tram, if it takes them close to where they want to go.

Bringing trams back to Adelaide will provide the focus needed for our transport system to support and actively encourage mixed-use, medium density, vibrant communities and business growth and investment in inner and adjacent urban areas.



3.2 OUR PLAN FOR GREATER ADELAIDE

Not everyone wants to live in the inner city. Many people value the lifestyles and opportunities provided in Adelaide's middle and outer suburbs, and in places such as Mount Barker and Victor Harbor. Our future transport planning and investment will preserve the high quality of life enjoyed by residents in these areas and support the creation of more jobs closer to home.

The 30-Year Plan for Greater Adelaide promotes a significant shift in the pattern of suburban growth towards infill development and urban renewal in activity centres located along transit corridors. For the growth that is still likely to occur in the middle and outer areas of Greater Adelaide, centres such as Elizabeth, Noarlunga, and Modbury have been identified for higher intensity residential, business and services activity using transit oriented development principles to capitalise on existing public infrastructure and facilities. Other sites along transit corridors, such as Salisbury, are being developed to encourage greater public transport use, attract new residents and businesses, and stimulate 'main street' development. As with inner Adelaide, the provision of effective connectivity, and walking and cycling networks is also important to achieve vibrant and walkable activity centres supporting increased density.

The modernisation and extension of the city's rail and bus networks is providing a strong foundation for these developments, as well as meeting the needs of growing populations in middle and outer Adelaide.

An efficient road network will remain important to Greater Adelaide's urban and economic development. Many people will continue to use the road network to get to work, especially for cross-city trips that are difficult to service by public transport due to their dispersed origins and destinations. Industry will need a reliable road network to conduct business, deliver services and goods, and move freight to and from distribution centres and international gateways. Efficient road connections will become even more important to industries that need to move large volumes of freight, and businesses that spend a large part of their day travelling such as trades people, sales representatives and community service providers. We need to protect these connections so that they are available into the future. A smooth flowing road system is also important to the movement of fast, frequent and reliable on-road public transport to and from middle and outer Adelaide.

Key challenges for middle and outer Adelaide will nevertheless include the need to manage growth in a way that decreases the demand for longer car-based trips and provides more travel options for people without access to a car. Across the region, we need to make public transport a more attractive option for more people to increase patronage and enable us to offer more travel choices. We also need to encourage and enable more people to take up walking and cycling to boost the liveability, vibrancy and vitality of the suburban centres and improve our health and wellbeing.

To meet these challenges, we will have to capitalise on recent and ongoing investments in the train network and maximise the use of existing rail assets, making them work harder to deliver better connectivity and more reliable and more frequent services. We will also need to reinforce the bus network's core role, continuing to promote bus travel as a viable and positive choice for commuting to work and supporting the north-south backbone of the system in making trips to the CBD and across Adelaide.

Addressing accessibility and transport disadvantage, particularly in outer areas, requires better coordination of the components of the public transport system. We need to improve connections between the bus, train and O-Bahn networks, coordinating feeder services and upgrading interchanges to make changing between different types of travel as smooth as possible and cross-city journeys easier and faster. We will also need to ensure local streets provide direct and convenient connections to public transport stops and stations for cyclists and walkers, and park and ride as well as bike and ride facilities are provided to support those living in outlying areas.

Improving the road and rail networks will continue to be a priority to support business and jobs growth. *The 30-Year Plan for Greater Adelaide* reinforces western and northern Adelaide as the focus of industrial expansion in the metropolitan area. This focus is being supported by the rezoning of 1,550 hectares to employment land as part of the Playford Growth Project and substantial capital investment to improve transport connections to the Port of Adelaide, Adelaide Airport, national road and rail networks and the recently expanded Penfield intermodal facility.

Continuing improvements to the public transport system

A high quality train system can give a city a clear competitive edge in attracting skilled workers and investment. Since 2008, the South Australian Government, in partnership with the Australian Government, has been taking action to improve Greater Adelaide's public transport system. The improvements are designed to provide faster, more frequent, better connected public transport services, and upgrades to major stations and interchanges, as part of the north-south backbone of the public transport system.

The scope of this work is extensive and far-reaching and a necessary foundation for achieving the directions set out in *The 30-Year Plan for Greater Adelaide*.

Already, a great deal has been achieved in a relatively short time, including investment in the electrification of the train network, rebuilding of the train tracks, upgrades of major stations, more buses introduced, expanded bus services and increased frequencies particularly in outlying areas, an extension of the tram network and facilitating easier travel and transfers through the introduction of the Metrocard ticketing system.

These landmark modernising projects will continue, including the ongoing revitalisation of Greater Adelaide's train network. The train network provides access to the Adelaide city centre and other activity centres, particularly for people living in the outer suburbs, and the South Australian Government's major investments in the train network will put it on a strong footing for many years to come.

Future train corridors in outer growth areas will be defined and protected – Aldinga to the south, and to the north and east of Gawler. The consultation for the Seaford to Aldinga rail alignment is complete and we have defined the alignment. In the longer term, the potential electrification and extension of the Belair train corridor may be necessary. Looking further ahead, a city underground train link connecting the northern and southern lines would have the potential to free-up capacity on the train network by relieving the congestion caused by having to turn trains around at Adelaide Railway Station. Further investigations would need to occur before such a link could proceed. In the shorter term, our integrated approach to planning will ensure that the expansion and upgrade of Greater Adelaide's rail network does not preclude the development of an underground link into the future.

Improvements to the public transport system will be prioritised to boost economic and urban development, with a particular focus on the phased delivery of the land use outcomes identified in *The 30-Year Plan for Greater Adelaide* and the outcomes sought by the Government's *Economic Statement 2013*. Final options will be subject to more detailed planning.

These future directions aim to extract the maximum value from the Government's current and substantial investment in public transport improvements to ensure that high quality public transport services underpin the transformation of Greater Adelaide into a transit-focused and well-connected region.

Priority actions for the train network include:

- complete the electrification of the Gawler line, and in the longer term the Belair line
- upgrading more train stations, increasing car space capacity in park and rides, expanding bicycle storage capacity and progressively introducing public bike sharing opportunities operable through the Metrocard system and gated stations at stations with high patronage
- higher frequency services and longer trains to meet peak growth demand
- enabling real time passenger information through mobile devices and by taking advantage of developments in information technology
- making mode transfers easier through new timetables and route plans, simplified signage and maps, and improved wayfinding and walkability in and around stations for users of walking and cycling networks adjacent to train corridors
- addressing the conflicts between pedestrians, trains and road vehicles on the high frequency train network between Brighton Road and Elizabeth by replacing level crossings with grade separation and improving safety at other locations.

Boosting patronage and encouraging more people to use our trains is not only a matter of more reliable or providing more frequent services – people must also feel safe and comfortable when using the network and their experiences must be positive. Investment will continue to be directed towards improving the quality of more train stations and interchanges, with attention given to customer service, safety and security, lighting and seating, and the use of technology to provide accurate, up-to-date and easy to access information about services. The best form of security however, is having more and more people using trains more often.

A redesigned and modernised bus network

The bus network supports around 80 per cent of public transport journeys in Adelaide and will remain at the core of the city's public transport system. However, as the city's urban form and associated travel demands change, the Adelaide Metro bus network can no longer continue to expand through small incremental changes. The network must become simpler and focused on improving mobility across a growing, but more compact region.

A redesigned and modernised bus network will concentrate passenger flows onto core high capacity, high frequency corridors, supported by well-connected local feeder services that support mode interchange.

On-road priority for public transport vehicles along Currie and Grenfell streets has been highly effective in making bus travel times more reliable. Bus priority measures will be considered for other core roads, especially in the inner areas taking into account the impact upon general traffic. Glen Osmond Road will cater for buses and traffic from the Adelaide Hills. The construction of the North-South Corridor will encourage greater use of Cross Road by freight traffic to help achieve this. High frequency bus corridors will incorporate better opportunities for cross suburban travel and trips to the nearest major activity centre, while maintaining strong links to Adelaide's city centre. Bus feeder services will connect to the high frequency network, particularly the train and O-Bahn.

Making choices about public transport priority is not always straightforward. There are many different priorities and ideas about what is desirable or necessary. All three levels of government and community and business groups will have to work together to make choices about the levels and type of transport investment that will best meet future travel demand.

Priority actions for the bus network will include:

- develop high capacity, high frequency corridors in the inner areas, supported by on-road bus priority measures on core routes, and improve O-Bahn access to the city centre
- improve the frequency, connectivity and directness of bus services that focus on major activity centres, including a strengthening of cross suburban bus routes
- further improve, expand and promote feeder services to the high frequency network, particularly to train services and the O-Bahn
- develop new bus 'Super Stops' at strategic activity centres
- further develop park and ride car space and bike parking capacity at major interchanges in outer suburban areas
- provide better timetable coordination for convenient and rapid transfers to the train network
- in line with growth, extend Adelaide Metro services into new growth areas in Playford, Angle Vale, Buckland Park, Virginia, Mount Barker and Sellicks Beach.

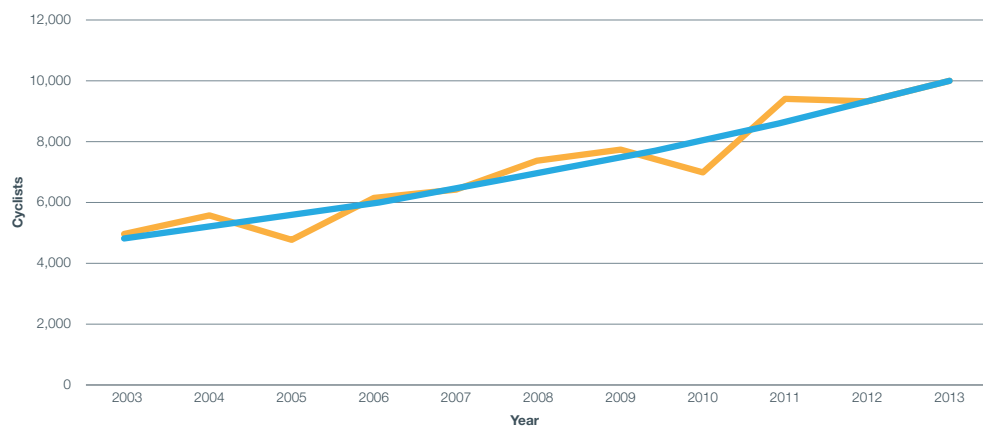
The location of 'Super Stops' will be developed in discussion with councils and key stakeholders. 'Super Stops' serve locations which have a very high level of passenger demand and where there are high frequency services and, along with improved amenities, are intended to cut boarding times and reduce queuing along major thoroughfares.

More cycling and walking

Enabling people to adopt cycling and walking for commuting and other transport purposes – as distinct from purely recreational reasons – is an important objective of our integrated transport and land use planning.

Cycling is now the fastest growing mode of travel in Adelaide. Most indicators show that across Greater Adelaide, more and more people are choosing to cycle to work, to shops, for exercise or as a weekend activity with family and friends. Figure 3-3 below shows the growth in cyclists counted entering and leaving the Adelaide CBD on an average weekday since 2003. Over the most recent ten year period (2003-13) the number of cyclists has increased by 78 per cent. The city's growing number of cyclists has been encouraged and boosted by recent improvements to the region's cycling routes and supporting infrastructure, including the Bikedirect and Greenways networks.

Figure 3-3 Change in the number of cyclists counted entering and leaving Adelaide CBD (average weekday 7am-7pm), 2003-13



Source: DPTI <http://www.sa.gov.au/subject/Transport%2C+travel+and+monitoring/Cycling/Cycling+facts>

Growth in the number of people riding has closely followed investment in cycling infrastructure, particularly Greenway routes such as the Mike Turtur Bikeway together with improvements to the Bikedirect network.

To enable more people to ride more often, we will provide physical separation between cyclists and motor vehicles on arterial roads where possible, extend the Greenway and Bikedirect networks, introduce a public bike share scheme and upgrade existing bike lanes to meet higher standards and extend through intersections.

More people are also turning to walking as an option for getting around Adelaide, especially for shorter trips or in combination with other modes of transport. While there is clearly some overlap between walking and cycling as active travel modes, it is recognised that there are some critical differences between them when planning for infrastructure and network improvements. Creating safe and convenient walkable environments is a key objective of The Plan since almost every journey will begin and end with a walking segment. Enabling more people to adopt walking for a greater proportion of their journeys also brings significant health and wellbeing benefits.

To make the most of the opportunities presented by a revitalised public transport system and a more compact and vibrant city, we will expand the catchment of stops and stations for walking and cycling. This will involve enhancing access to stops and stations by improving crossing opportunities on busy roads and providing a more comfortable walkable environment. We will also invest in better facilities for walkers and cyclists at public transport stations, such as secure bike parking, providing public bike sharing opportunities, better signage and wayfinding.

We will also introduce initiatives to expand walking and cycling catchments around key destinations such as shopping and service centres, main streets and schools. These initiatives will increase the vibrancy and liveability of these places, helping to enhance social connections, attract investment, support leisure and cultural activities, and promote healthy lifestyles. To do this, we will continue to work closely with local councils to design and develop local street networks and streetscapes that are conducive to cycling and walking and that offer direct, safe and attractive routes to key destinations.

The State Government currently supports the Way2Go program – one of a suite of community programs seeking to increase the adoption of active transport – that targets primary schools and local councils in identifying preferred routes for parents and children to travel to and from school.

Driver education and awareness programs will be reviewed to promote shared responsibility for road safety and help develop a culture that is considerate of cyclists and walkers as legitimate users on our road network. Other travel demand management initiatives (e.g. TravelSmart) will also be expanded to enable alternative travel choices.

A recent Citizens' Jury deliberated on the topic of cyclists and motorists sharing the roads safely. Implementing the Jury's recommendations will support a positive shift in the way people who use the roads relate to each other and will improve conditions for cycling in South Australia.

Opportunity exists to transform Adelaide into the most cycling-friendly city in Australia, where infrastructure is of a consistently high standard and where cycling and walking are attractive modes and a normal part of daily transport. This was explored at the Velo-City Adelaide Global 2014 Conference*.

Enhanced freight and road traffic corridors

Balancing the desire for a vibrant walking, cycling and public transport-friendly city with the critical need for efficient freight and traffic corridors to ensure business is connected to markets and people can move reliably by car is one of the key challenges for integrating transport and land use.

Across Adelaide, a number of our most important road network routes are showing increased levels of congestion, with many signalised intersections either approaching or at capacity. Along some key routes, traffic congestion is not only a problem for commuters during peak periods, but also for on-road public transport, businesses and freight traffic throughout the day.

Infrastructure Australia has recently released a national review of infrastructure needs. The *Australian Infrastructure Audit* considers future demands, and provides data for long term infrastructure planning. The report identifies that in 2011 the cost of delays on roads in the six largest capital cities was \$13.7 billion, and this is expected to grow to \$53.3 billion in 2031 without any improvement strategies. The cost of delay for Greater Adelaide was approximately \$1 billion in 2011, and is estimated to grow to \$4 billion in 2031 without any improvements.

Adelaide businesses need the certainty of reliable road routes to deliver goods and services around the city and operate successfully. Our major export industries need to be able to move freight quickly and efficiently to domestic markets and international gateways. The city's arterial road network must have the capacity to service these needs and meet future transport demand along major freight and traffic routes.

For Adelaide, there is no more important corridor for freight and business travel than the North-South Corridor.

The concentration of most of Adelaide's industry in the northern, north-western and western parts of the city has led to large scale freight route patterns that sweep from north to south and converge to the west of central and inner Adelaide to connect with the Port of Adelaide and the north-west.

* Velo-City Global 2014, the world's premier international cycling planning conference, was held in Adelaide in May 2014.

To concentrate this freight demand to avoid widespread heavy vehicle use across the Adelaide road network – and to ensure maximum efficiency of freight movements – the *Strategic Infrastructure Plan for South Australia* and *The 30-Year Plan for Greater Adelaide* identify the need for a designated, uninterrupted freight corridor stretching from Gawler to Old Noarlunga. Completing this uninterrupted link in conjunction with the existing Port River Expressway will create a free flowing freight ‘spine’ along the length of Greater Adelaide that connects expanding industrial areas in the north and south, supports higher freight transport productivity and improves access to freight gateways.

In addition to upgrades to the North-South Corridor, transport modelling analysis of the future road transport task shows that we need to improve the efficiency of our freight and major traffic corridors and their connections to freight gateways, including by progressively addressing congestion hotspots on strategic routes. Focused and strategic improvements to the road network will alleviate the need to make big changes in the short to medium term. Our priorities will be:

- upgrading the Inner and Outer Ring Routes to provide reliable cross-city travel without the need to pass through the central city, providing for both business travel and the movement of freight
- targeted intersection and road upgrades (e.g. duplication) where needed to improve efficiency and safety and address urban congestion along major traffic and freight routes in accordance with *A Functional Hierarchy for South Australia’s Land Transport Network*, thereby allowing other road corridors to be managed in a way to support their particular role, such as providing for public transport, cycling and walking in a manner conducive to the adjacent urban activity and development
- ongoing implementation of the Managed Motorway network, which will continue to be installed on the South Eastern Freeway, and will ultimately be rolled out along the North-South Corridor and the Port River Expressway in a network of high speed, free flowing roads that incorporate intelligent information, communication and control systems, such as lane use management
- using Intelligent Transport Systems technology to improve traffic flows along other major freight and traffic routes
- implementing Network Operating Plans and Road Management Plans to manage traffic flow and improve safety in accordance with *A Functional Hierarchy for South Australia’s Land Transport Network*, which will include the provision of more effective on-road parking controls (i.e. clearways), traffic coordination, management of turning traffic and property access

Figure 3–4 North-South Corridor



- implementing Better Use Strategies to enable more effective use of existing assets are considered in transport planning and investment decisions, such as traffic management, use of Intelligent Transport Systems (e.g. lane use management, contra-flow lanes, etc), incident response plans, demand management programs (e.g. TravelSmart), and better information (allowing more informed travel choices).

In its entirety, the uninterrupted 78 kilometre North-South Corridor will comprise:

- Northern Expressway from Gawler to Port Wakefield Road
- a proposed Northern Connector from Port Wakefield Road to the Port River Expressway
- South Road from Port River Expressway to the Southern Expressway
- Southern Expressway from Darlington to Old Noarlunga.

The Northern Expressway has been completed, the Southern Expressway has been duplicated, funding has been committed to the next sections of South Road between Torrens Road and the River Torrens, and at Darlington, and a proposal for the Northern Connector has been made to Infrastructure Australia. The State Government is working with the Australian Government to deliver the corridor, and a 10 Year Delivery Strategy for the corridor has been released that will guide investment and implementation program management strategies.

Rail freight corridors are also critical, particularly for intra-and inter-state freight bound for our export gateways. The Plan identifies the rail connection to the Port of Adelaide as a critical link to be completed as part of the Northern Connector to provide more efficient, freight-dedicated links from the north into the port.

Freight constraints have been addressed via the separation of freight and passenger rail at Goodwood Junction. This work has increased the capacity of the Adelaide-Melbourne rail corridor, and resolving the capacity constraint at Torrens Junction will provide for rail freight growth over the medium to long term. In the longer term, to improve the capacity of the line through the Adelaide Hills, further targeted upgrades of the track will be undertaken to improve performance and to assess the benefits that would be delivered by 'double-stacking' of containers on the route. 'Double-stacking' is already available to the north of Adelaide. The realignment of the rail freight corridor through Bolivar and Gillman as part of the Northern Connector project will reduce travel times for freight to Port Adelaide and Outer Harbor and reduce the requirement for freight trains to utilise the existing line through the northern suburbs, improving safety and amenity.

MANAGED MOTORWAYS

Managed motorways use Intelligent Transport Systems to improve access to urban motorways and the safe and efficient management of traffic flows along these roads.

Managed motorway measures include:

- **lane use management systems (LUMS)**, which manage lane use around incidents
- **hard shoulder running** – where emergency breakdown lanes are used as supplementary lanes
- **ramp metering** – where the coordinated use of traffic lights on motorway on-ramps controls the rate at which vehicles merge with the main motorway traffic stream
- **variable speed limits (VSL)** – where variable message signs are used to prevent the occurrence of further incidents after an initial crash, to improve safety during hard shoulder running and/or during extreme weather events
- **freight and public transport priority** applied typically at ramps in conjunction with ramp metering for general vehicles
- **incident detection** – using closed circuit television (CCTV) cameras, webcams, weather monitoring stations and emergency telephones
- **automatic number plate recognition** to monitor freight movements
- **traffic and traveller information services**, such as Variable Message Signs (VMS) with real-time advice about travel times and/or current speeds
- **speed enforcement** using speed cameras.

In South Australia, managed motorway techniques are already in operation along the Southern Expressway, the South Eastern Freeway out to Bridgewater and the Northern Expressway. The South Road Superway project and Southern Expressway duplication projects incorporate these smart technologies to support their efficient operation when opened and into the future.

In the short term, managed motorway techniques will be rolled out along the South Eastern Freeway, including implementing hard shoulder running between Stirling and Crafers.

In the longer term, South Australia's managed motorway network will comprise the South Eastern Freeway, Northern Expressway, Northern Connector, South Road (Wingfield to Darlington), the Southern Expressway, and the Port River Expressway.

3.3 OUR PLAN FOR REGIONAL AND REMOTE SOUTH AUSTRALIA

A state the size of South Australia, covering almost two million square kilometres, will always face transport and land use challenges. In many ways, these challenges are interconnected: the long distances over which we need to travel and move freight have a wear and tear effect on our roads, rail network and supporting infrastructure, while we place our state's fragile environment under constant pressure by expanding our land use into new and more distant areas.

Our land use and transport system must support our overall economic and social goals for South Australia by connecting our key industries and regional communities to jobs, services and markets. At the same time, we have to find ways to better manage the wear and tear on critical transport infrastructure and support healthy, safe and prosperous regional communities.

The vast distances and dispersed nature of our regional population and industry locations present many challenges in planning for future transport needs, especially with limited resources. But with a clear sense of priorities based on our economic strategy and our transport goals and objectives, it is possible to set out a plan for South Australia that will lay the foundation for sustained prosperity across the state.

How we travel around South Australia

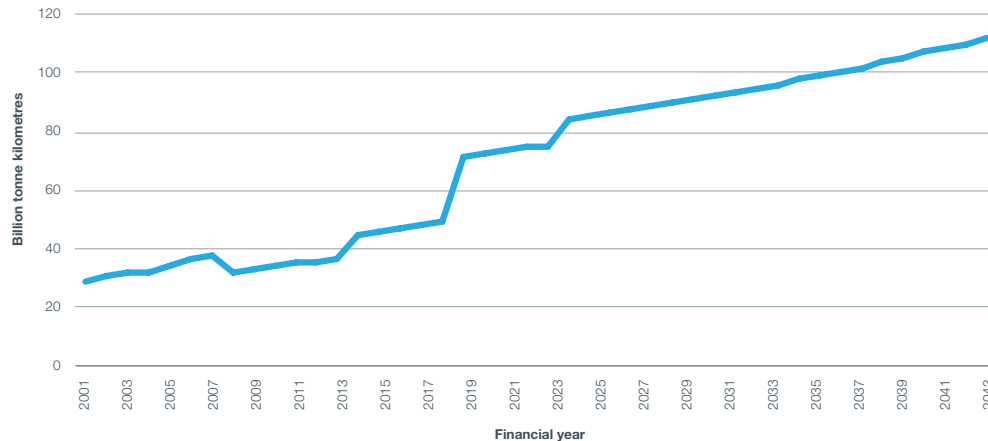
The overwhelming majority of travel in regional and remote South Australia is by private motor vehicle. Every day, an estimated 1.2 million trips are made by motor vehicles in our regions, compared to 1.4 million trips on the regional bus network over the course of a whole year. Regional aviation is becoming more and more important, with some 570,000 trips made in 2012 and growth expected at the rate of about 2.5 per cent per annum in the future.

Of course, car travel in regional and remote areas is very different to travel in Adelaide: trips to access services are much longer than in Adelaide and passenger transport simply isn't an option for the majority of journeys people need to make. This means that the regional road network is central to people's quality of life in the regions: it is essential to connecting people to jobs and services, to friends and family, and to Adelaide and other capital cities and major regional centres.

Moving freight

Approximately 53,000 freight and commercial trips are made on the regional road network every day and, while detailed data on regional use is not always available, the expected growth in our mining and agricultural industries points to a considerable increase in road and rail freight traffic in the years ahead.

Figure 3-5 Forecast total South Australian freight task



Source: DPTI analysis based on BITRE forecasts and *Regional Mining and Infrastructure Plan* forecasts

Historically, townships have developed along the busier road transport corridors and around export ports, leading to clashes between through traffic and local uses (such as shopping and walking) as traffic has grown. Anticipated growth in mining, tourism and agriculture will continue to place pressure on some of our busier towns, as well as highlighting gaps and mismatches in supply chains where cross-modal coordination is required.

Rail freight is largely confined to the interstate corridors linking Adelaide with Perth, Melbourne, Sydney and Darwin. The South Australian based Australian Rail Track Corporation manages this network, except for the Tarcoola-Alice Springs-Darwin route which is managed by the private company Genesee & Wyoming Australia. Rail lines on the Eyre Peninsula and Murray and Mallee regions are also owned by Genesee & Wyoming Australia.

South Australia's rail freight task has grown 106 per cent since 2000-01, compared with a national increase of approximately 36 per cent. This growth is being driven by the expanding mining sector, more freight being moved by rail on the east-west corridor and the completion of the Adelaide to Darwin Railway leading to significant growth in rail market share along this corridor. In the recently released *Australian Infrastructure Audit*, Infrastructure Australia has also estimated that the rail freight will double between South Australia and Western Australia between 2013 and 2030.

As the rail freight task continues to grow, we will need to increase the efficiency of our rail network, especially for moving minerals and grain. Issues that are likely to emerge include capacity constraints on a number of specific links (such as between Tarcoola and Crystal Brook) and the limitations imposed by the central and western Eyre Peninsula narrow gauge network.

South Australia's network of ten commercial ports handles 95 per cent of the state's international trade (by volume) and a third of the domestic freight task. These ports are operated by the private sector. Growth and diversification of bulk exports from the mining and agricultural sectors, as well as continued growth of containerised freight, will require increased capacity and efficiency at our ports. Landside connections (road, rail and/or pipeline) will need to be balanced with any expanded capacity of these critical gateways.

Recently, the Council of Australian Governments established single national regulators for heavy vehicles, rail safety and maritime safety; the National Heavy Vehicle Regulator, National Rail Safety Regulator and National Maritime Safety Regulator. South Australia has been party to these national reforms, particularly as the host of the National Rail Safety Regulator. These national regulatory regimes will improve the safety and efficiency of the freight and logistics sector and provide consistent regulatory frameworks and standards across state borders. In particular, they remove duplication of monitoring and inspection requirements.

Transport to support growing, competitive industries

Connecting businesses to markets is a core focus of The Plan. We need to build efficient supply chains for our most important strategic industries.

In determining economic goals for the state, the South Australian Government has set growth targets for our most important freight-related industries. This includes:

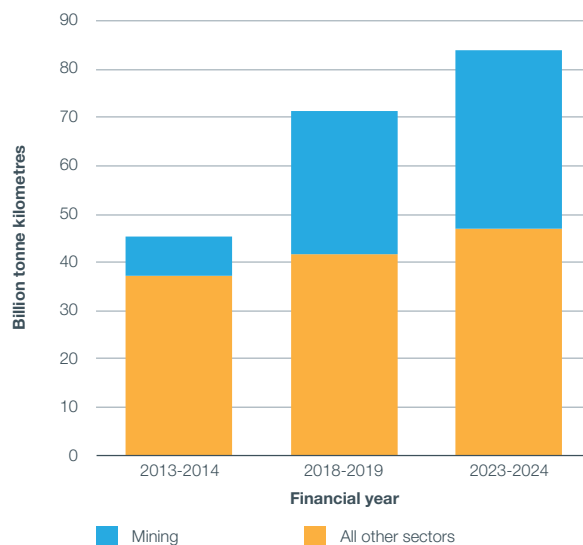
- growing the contribution made by our food industry to \$20 billion by 2020
- increasing the value of minerals production and processing by \$10 billion by 2020
- increasing the value of South Australia's export income to \$25 billion by 2020.

South Australia is an export-oriented economy that can gain great benefit from trading competitively across international and state borders. The challenge for our transport system is to ensure capacity and efficiency in end-to-end supply chains from our farms, mines and factories to our international air and sea gateways and state borders.

Supply chains are multi-modal. Minerals and agricultural products travel by road or rail to ports for export, where loading to ships needs to be timely and efficient. Supply chain capacity must be end-to-end, requiring coordination across modes, across different authorities and different investors and operators.

Mining output is set to grow strongly in South Australia, with growth in commodities such as iron ore and copper set to grow from seven million tonnes in 2010-11 to just under 100 million tonnes by 2023. This growth flows through to a significant increase in the mining freight task.

Figure 3-6 Mining's forecast contribution to the South Australian freight task



Source: DPTI analysis based on BITRE forecasts and *Regional Mining and Infrastructure Plan* forecasts

Mining, oil and gas growth will bring private investment and much of the new transport investment needed to support the industry will be privately funded. But with this growth will come multiple road, rail and port development projects across the state. Port capacity enhancements are likely to be needed in order to support forecast demand in the Central Eyre region, the Yorke and Mid-North/Braemar region and the Far North region.

In 2012/13 food, wine, fibre and other agricultural exports accounted for \$4.75 billion or 44 per cent of the state's total merchandise exports. As the world's population increases and the economies of developing nations grow, the global demand for food is expected to increase by 70 per cent to 2050 with the fastest growing markets in Asia*. As our food and wine industries grow, so too will the freight task in our regions and through to our ports. In particular, significant increases in freight traffic are likely to occur along connections between major viticulture regions and due to growth in moving onions and potatoes from the Murray and Mallee, citrus produce from the Riverland, livestock from the Mid North, grain from Limestone Coast, Murray and Mallee, Yorke and Mid North and the Eyre and Western regions and timber across the South East and from Kangaroo Island. A better understanding of the changing needs of these various supply chains is necessary to inform planning and investment decisions.

Supporting our tourism and business travel sector means keeping access open to all our key destinations. Over six million people visit South Australia each year, boosting our economy by \$5 billion. Visitors to South Australia travel to a wide variety of locations, making about 11 million trips and presenting a growing challenge to our transport system in popular places such as the Barossa Valley, Kangaroo Island and the Flinders Ranges.

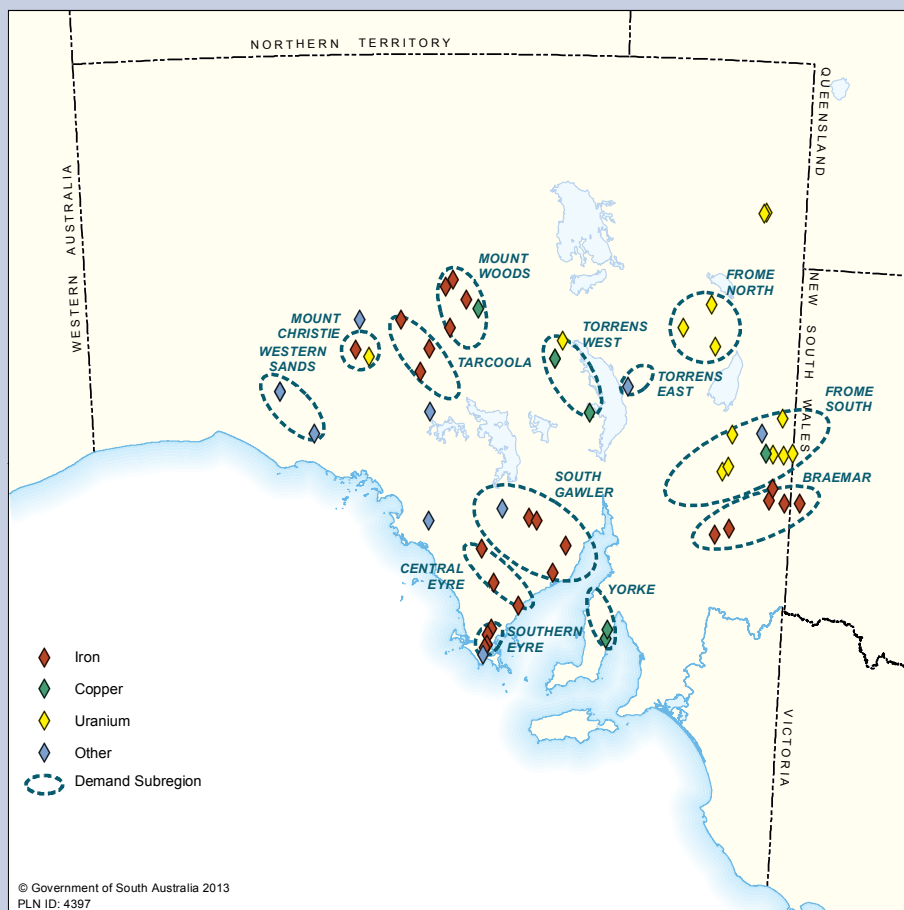
* Government of South Australia (2013) Premium Food and Wine from our Clean Environment, Primary Industries and Regions South Australia.

THE MINING BOOM – PLENTY LEFT TO COME

Projected increases in mining output in South Australia over the next twenty years are extremely significant. Estimates point to a massive increase in output volumes, with a medium growth scenario of just under 100 million tonnes by 2023 compared to less than 15 million tonnes today – placing great strain on our supply chains from pit to port. Indeed, projections show that within six to 10 years, several mining clusters will face severe capacity constraints in shifting mining output.

New port facilities will be needed with good rail and road connections if South Australia is to enjoy the fruits of this economic growth and export income. The map below shows where mining development is expected to occur. While this development will be led by the private sector, the scale of development will require good coordination between government and industry to enable assets to be shared, the potential for duplicated infrastructure eliminated and port development to be carried out sensitively and efficiently. Following the release of the *Regional Mining and Infrastructure Plan* a Resources Infrastructure Taskforce has been established to achieve this coordination.

Figure 3–7 Mining in South Australia



Connecting people and businesses – a high quality, well maintained road network

Maintaining a high quality, safe regional road network will continue to be a high priority. While each of South Australia's regions has different needs, they share a need for an increased focus on road maintenance. The main challenges that we need to address are:

- many rural highways have been constructed as narrow two-lane roads, often with no sealed shoulders. These roads do not meet modern road standards and do not match the needs of today's traffic mix
- one third of serious road crashes occur on regional roads and the safety of indigenous South Australians is a significant issue: Aboriginal people make up 1.7 per cent of the state's population but are three to five times more likely to be killed in a crash, and 1.5 to three times more likely to be seriously injured, than non-Aboriginal people
- growing numbers of freight vehicles, alongside increasing local and tourist vehicle traffic, are increasing the level of maintenance required for our regional roads
- the cost of maintaining remote outback roads is more than the cost needed for maintaining roads in metropolitan areas. Forecast strong mining growth means that we will need to re-assess the quality of these roads and examine ways for the resources sector to directly fund such upgrades
- there are growing conflicts between freight, tourism and local travel needs in our towns, especially in popular visitor destinations.

The Plan gives priority to addressing these challenges through measures such as targeted road duplications and town bypasses, increased maintenance investment and better management of our transport assets, road safety programs in the Anangu Pitjantjatjara Yankunytjatjara (APY) lands and the implementation of the *South Australian Road Safety Action Plan*.

Where freight and tourist networks cross government boundaries, we also have an opportunity to improve coordination and planning to avoid unforeseen uses, such as over-dimensional freight vehicles.

To better target and plan regional road network initiatives, the Department of Planning, Transport and Infrastructure is progressively developing detailed Regional Road Development Plans, Regional Road Management Plans and Regional Network Operating Plans to apply across the state. These plans will ensure a strategic approach to road upgrades, local road projects and safety initiatives as funds become available.

Connecting people and towns – passenger transport for regional communities

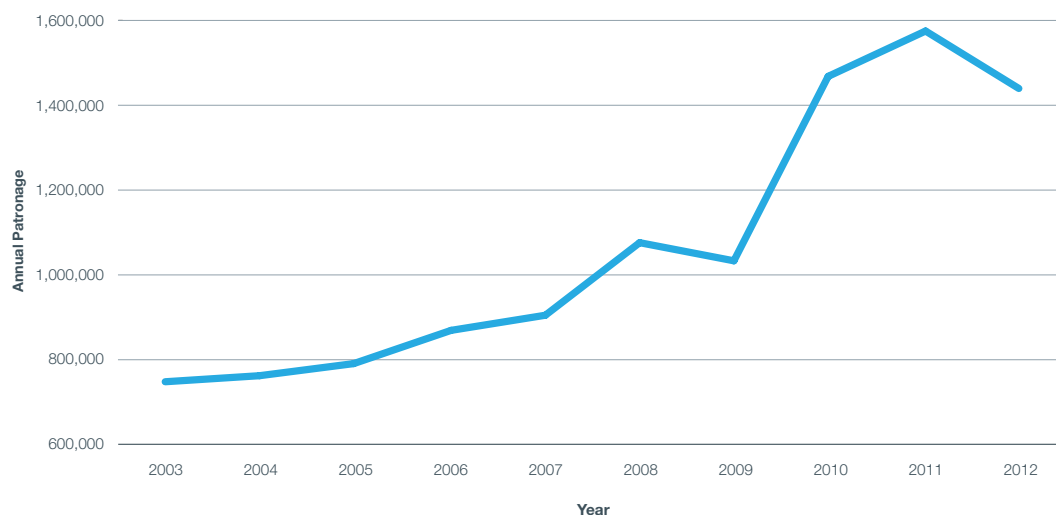
Patronage on regional passenger transport has grown considerably in recent years with the introduction of integrated passenger transport plans since 2002 successfully filling service gaps and enabling more efficient shared use of vehicles through pooling and cross-sector coordination and funding partnerships.

The State Government regulates and contributes to funding transport services in some regional areas and fosters regional transport initiatives that provide transport solutions identified through extensive community consultation and detailed transport studies.

While there will always be issues of affordability due to small, dispersed populations being served by such passenger services, the anticipated growth in tourism and mining communities will require investment in services to meet seasonal and fluctuating demands in specific locations. The State Government will continue to partner, support and invest in regional passenger services.

We will undertake a review of regional passenger transport to identify key needs, including service linkages between major regional centres and surrounding townships, and provide more innovative and targeted solutions for regional communities.

Figure 3–8 Overall regional passenger services patronage, 2003 to 2012



Source: DPTI Bus contracts patronage data 2003 – 2012

The State Government also supports a range of community programs in regional South Australia that promote safer, greener and active transport options using behavioural change techniques and grant funding – often partnering with local councils and schools. These programs have become increasingly important in recent years as people in regional towns seek to reduce localised congestion while improving their health.

Regional aviation is also growing – largely due to growth in fly-in-fly-out mining communities and tourism, but also due to the growth in general economic activity. Regional air links are also important for many regional and remote communities, providing critical connections in medical and other emergencies, bringing perishable goods to isolated towns and giving residents fast and direct access to Adelaide and major regional centres. There are over 400 aerodromes, airstrips and airports across the state, mostly privately owned. Eight key regional airports have connections to Adelaide and are mainly the responsibility of local government. Services are privately provided, with a limited regulatory role for the State Government.

With growth set to continue, it is important that airstrip maintenance, safety-related services and equipment, and overall capacity issues are addressed.

The South Australian Government will work with local councils to ensure key regional airports are fit-for-purpose and meet the demand for regional air services. The South Australian Government will also work with the Australian Government to provide, where feasible, a network of aerodromes suitable for 24-hour all weather access by emergency service providers, including emergency medical services provided by the Royal Flying Doctor Service (RFDS).

DELIVERING THE PLAN



**BUILDING A STRONGER
SOUTH AUSTRALIA**



SUCCESSFUL DELIVERY WILL DEPEND ON ALL LEVELS OF GOVERNMENT AND THE PRIVATE SECTOR WORKING TOGETHER

The successful delivery of The Plan requires a number of important elements to be in place:

- An understanding of the scale of funding required.
- Effective governance arrangements.
- The right regulatory framework.
- A schedule for monitoring, measuring and reporting progress along the way.

4.1 FUNDING THE PLAN

The ambitious range of initiatives that has been identified for delivery over the next 30 years will require significant funding. Initial estimates of initiatives included in The Plan indicate an overall capital funding requirement in the order of \$39 billion in 2013 dollars over this period. Of this total it is estimated that the capital projects for the State and/or Australian Governments to fund is in the order of \$29 billion (in 2013 dollars) over the next 30 years.

While these are undoubtedly very significant amounts, they must be seen in the context of what is already spent annually on transport, the fact that these costs will be spread over a 30-year period and the potential for investment in South Australia's transport network to be made by the Australian Government and the private sector.

Current funding arrangements

In South Australia, transport infrastructure and public transport services are delivered by the capital funds for designated capital programs.

Table 4–1 Delivery responsibilities and funding sources for transport services in South Australia

LEVEL OF GOVERNMENT	SERVICE DELIVERY RESPONSIBILITY	FUNDING SOURCES
Local Governments	Provision and maintenance of local roads, and local pedestrian and cycling facilities Maintenance of some jetties, wharves and regional airports Capital project delivery for these services Provision and maintenance of some bus stops Local community transport	Local rates State Government grants Australian Government funding grants
State Government	Adelaide Metro public transport services and train stations Provision and maintenance of arterial (non-local) roads, structures, ferries, marine, boating and non-commercial port facilities Provision of cycling and walking facilities associated with arterial roads, <i>Bikedirect</i> and Greenways networks and at public transport stations Capital project delivery for these services Regulation of parts of the transport system	Vehicle registration fees and vehicle licensing fees Public transport fares Australian Government capital programs General taxation revenue
Australian Government	Provision, operation and maintenance of interstate rail freight networks Capital funds for designated capital programs	
Private sector	Ownership and management of ports, rail and airports in South Australia Road and other infrastructure improvements associated with developments in accordance with the Development Act Provision, operation and maintenance of rail freight networks Capital funds for designated capital programs Provision of contract bus services to State Government	

DELIVERING THE PLAN

In 2014/15, the State Government will spend \$1,222 million on transport. Of this, \$687 million will be spent on maintenance and public transport service delivery and \$535 million on capital projects.

Figure 4–1 Use of funds for transport in State Government 2014/15

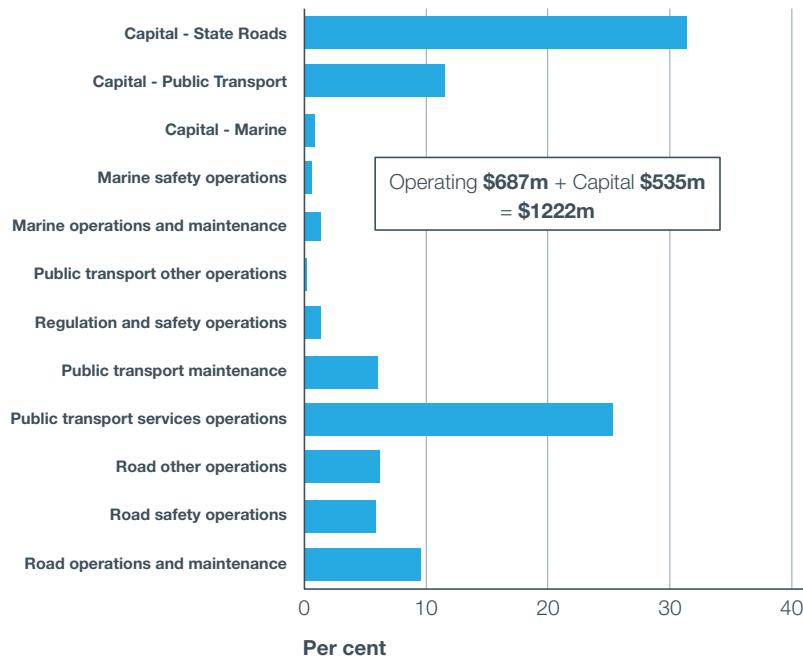
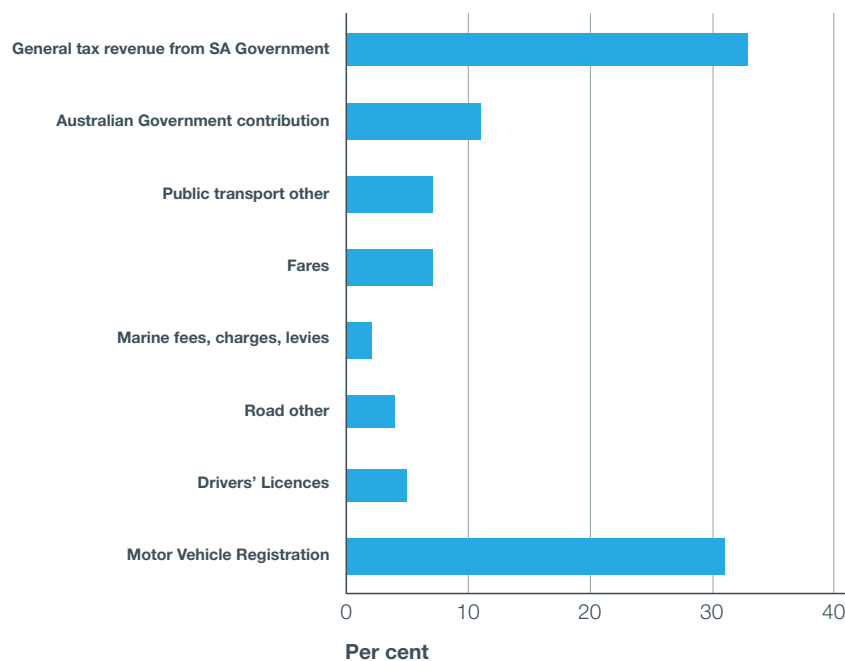


Figure 4–2 Source of funds for transport in State Government 2014/15



Since 2003 the State and Australian Governments have invested approximately \$6.6 billion into capital projects to improve the transport system across South Australia. There is a further \$2.2 billion already committed to transport projects within the Forward Estimates period from 2014/15 to 2017/18.

FUNDING VERSUS FINANCING

There is often confusion between the words 'funding' and 'financing'.

Funding refers to the **source of revenue** needed to underpin expenditure on a project or service. For transport, funding is provided either directly through the public transport fares or vehicle registration and driver licensing fees we pay as users, or indirectly through taxes.

Financing refers to the **mechanisms used to raise money in the capital markets** through, for example, borrowings that ultimately must be repaid to lenders. Such borrowings cannot be repaid without an underlying source of funding. When projects are delivered as Public-Private Partnerships (for example) they are usually privately financed and funded by the user or public sector. But the inclusion of private finance does not obviate the need for an underlying funding source.

Required funding

Recent years have seen record levels of transport expenditure. But even if our ability to invest in transport remained at these levels, we are likely to need increased funding in the years ahead to deliver all the initiatives nominated in The Plan.

Of the estimated \$39 billion of capital projects proposed for the next 30 years by The Plan, it is estimated that projects that may need to be funded by the State and Australian Governments are in the order of \$29 billion over the next 30 years in 2013 dollars. Based on the proportion of capital funding provided in recent years for transport projects from the overall capital budget for the state, with no allowance for future cost rises and indexation, we could expect available funding to be in the order of \$23 billion for transport capital projects over 30 years. This analysis assumes a consistent taxation revenue base, as well as an assumed ongoing contribution from the Australian Government.

However, this simple analysis almost certainly underestimates the funding challenge. Government funds will always be scarce. Rising service demands and costs in 'competing' areas such as health and education will place increasing pressure on governments to allocate funds. In addition, the initiatives in The Plan are not scheduled to be implemented evenly over the 30 year period. We need solutions to be implemented at the right time, when demand for projects requires us to make the investment.

Billions of dollars will nevertheless be committed to improving the transport system over the coming 30 years. This Plan provides us with a clear direction and a menu of transport projects to be delivered as funding becomes available and in accordance with priorities by the State and Australian Governments over those 30 years to achieve the outcomes for the land use and transport system across South Australia depicted in this Plan. And importantly this allocation of funding and the delivery of this Plan is based upon current funding arrangements.

Any discussion of funding transport improvements must be seen in the context of the role played by the private sector and local government. Many infrastructure investments in South Australia are made through private initiative and private ownership, not by the State Government. For example, ports in South Australia are privately owned so projects to develop additional port capacity have been and will continue to be privately initiated, not by the Government. Indeed, much of the expanded capacity needed in our ports, roads and rail links to service the expected increase in mining output will be through private investment.

Ultimately, The Plan will not be delivered by any one person or organisation. It will be implemented in the years ahead through the combination of thousands of decisions made by the community, commuters, homeowners, developers, local governments and State Government agencies every day about where we live, the buildings we design and the way we travel from place to place. Ultimately, The Plan will be delivered by all of us together.

Improving our processes

The effective planning, design and implementation processes that are already used to ensure value for money and timely delivery of projects need to continue.

Making better use of our existing transport assets

By making better use of the transport system we have, we can defer or avoid the need for new projects, thus easing the funding requirement year after year. The Plan identifies a number of initiatives that will increase the efficiency of our existing assets including:

- using intelligent transport systems to increase the traffic capacity of our roads
- focusing on moving people and goods rather than simply moving vehicles
- prioritising road space to ensure it is used most appropriately at any given location and time of day, including being clear about the relative priority of public transport, cyclists, walkers, cars and freight vehicles
- introducing community information programs to encourage different travel behaviour.

Increasing private sector participation

The private sector already plays a significant role in the provision of transport infrastructure and services. The State Government will create more opportunities for the private sector increasing this involvement by:

- considering whether there are any other opportunities for private sector participation that would produce a net gain for the state
- making greater use of outcome-based tendering (instead of using highly specified supply contracts) to find new approaches to service delivery and widen the potential bidder market
- identifying opportunities to attract private sector funding through the leveraging of budget funds – for example, catalysing private sector projects through targeted budget-funded seed funding, or sell government-funded stages of rail projects to the private sector to fund subsequent stages of infrastructure
- prioritising the provision of services where there would be a net gain to the state.

Improving the planning for delivery of the capital program

It is vital that large, complex capital projects are delivered on time and budget and in concert with the community to achieve maximum value for money. This can be done by:

- forward planning and funding to smooth out the project peaks and troughs to minimise costs and delivery inefficiencies
- adopting a whole-of-life approach to the procurement of assets in which their design, construction, commissioning and operation are embedded in the procurement process. This will shift the focus from the up-front construction of assets to their long-term service, reducing their whole-of-life costs and improving service delivery
- ensuring the best procurement strategy is adopted for each project. A range of approaches are available, including early contractor involvement, alliances, 'design and construct' contracts or public private partnerships
- building to fit-for-purpose standards and to promoting innovation in construction and efficiency improvement in the construction sector.

Improving strategic asset management practices

The sustainable long term management of our transport assets is an essential component of delivering the objectives of this Plan. This can be done by:

- producing strategic asset management plans that complement this Plan
- committing to service standards that meet the needs of the community
- increasing maintenance funding to meet growth in the asset base and increasing demand
- minimising the lifecycle cost of providing assets for the community
- ensuring efficient delivery of maintenance activities
- introducing asset sustainability indicators.

Working closely with the Australian Government

The Australian Government will continue to play a vital role in the funding of major transport initiatives in South Australia through national programs such as the Infrastructure Investment Programme. This makes it critical for South Australia to continue to work closely with the Australian Government on matters of transport funding.

This will require South Australia to continue to prepare high quality business cases to support state-based projects that impact on national productivity and to work with Infrastructure Australia and other key agencies to advance the case for strong investment in South Australia. We will continue to explore options to increase Australian Government funding of South Australian projects where the value uplift to the Australian Government can clearly be established.

GREEN TRIANGLE REGION FREIGHT ACTION PLAN – TRANSPORT PLANNING BEYOND STATE BORDERS

In April 2009, the South Australian and Victorian Governments jointly released the *Green Triangle Region Freight Action Plan*.

The Green Triangle Region has a diverse economic base with strong growth across a number of sectors, including timber, woodchip, mineral sands, dairy, meat processing, and electricity and gas production. The purpose of the *Green Triangle Region Freight Action Plan* is to ensure appropriate land transport infrastructure and an aligned regulatory environment is provided to cater for the forecast increase in the freight task associated with these industries.

The *Green Triangle Region Freight Action Plan* drew on extensive regional transport planning work completed in both states and, since its release, the South Australian and Victorian Governments have worked with local government and industry to implement this plan's recommendations. This cross-border co-operation culminated in a joint funding submission to the Australian Government through Infrastructure Australia.

Infrastructure Australia acknowledged the importance of unlocking the economic potential of this region through targeted transport investment by including the *Green Triangle Freight Transport Program* on its Infrastructure Priority List as a project with 'Real Potential'. The program remains on Infrastructure Australia's 2013 Infrastructure Priority List.

The South Australian and Victorian Governments remain committed to the delivery of infrastructure improvements identified in the *Green Triangle Region Freight Action Plan* and continue to seek Australian Government funding for its initiatives.

SOLUTIONS – FUNDING STRATEGY

Make better use of existing assets and making financially sustainable investment choices	<ul style="list-style-type: none"> • Use intelligent transport systems to increase the traffic capacity and reliability of travel along our roads. • Focus on moving people and goods rather than simply moving vehicles. • Prioritise road space based upon <i>A Functional Hierarchy for South Australia's Land Transport Network</i>. • Introduce initiatives to influence travel behaviour. • Include a whole-of-life cost assessment of all major infrastructure proposals.
Maximise private sector investment	<ul style="list-style-type: none"> • Increase use of outcome based tendering. • Identify where private sector participation (including ownership) can generate a net gain to South Australia. • Identify opportunities to use seed funding to leverage private sector investment. • Target prioritisation of services to where there is a net gain to South Australia.
Improve the planning for delivery of the capital program	<ul style="list-style-type: none"> • Adopt procurement strategies with a whole-of-life approach to assets. • Target selection of the optimum procurement strategy for each project.

4.2 THE RIGHT REGULATORY FRAMEWORK

Achieving alignment between our spatial visions for land use and our transport planning has been a major impetus for developing The Plan. The need to strengthen the alignment of government plans to address overlaps, conflict and ambiguity was identified during investigations by the Expert Panel on Planning Reform. This Plan exemplifies how planning and transport, as key enablers of growth and investment, may be brought together for more assured decision-making within both the public and private sectors.

The Expert Panel on Planning Reform

In February 2013, the Government initiated a major review of South Australia's planning system. Led by an independent expert panel, the review process involved some 2500 participants across the State consulting with key sectors, community groups and professional institutions in a wide variety of settings.

What We Have Heard, released in December 2013, reviewed issues and ideas about the planning system that the Panel had heard during its extensive round of consultations. In August 2014 the Panel provided its second progress report *Our Ideas for Reform* that highlighted reform ideas considered to hold most significance for the future of the planning system. Fresh consideration of the roles and responsibilities of decision-makers, and how to marshal and coordinate infrastructure were prominent amongst the Panel's ideas. The Expert Panel's review of the planning system culminated in its final report *The Planning System We Want* (December 2014).

Several recommendations resonate with the approach to preparing this report, including the integration and coordination of strategies and plans. Others include:

- a new legislative framework to govern the planning, integration, funding and delivery of infrastructure for urban development
- new mechanisms to schedule infrastructure needs and how they are triggered
- strong government oversight and coordination.

These are supported by several governance-related recommendations including:

- a single framework of 'state planning directions' to coordinate whole-of-government focus
- a network of regional boards to coordinate planning and drive policy integration
- harmonised regulatory context through a 'state planning and design code'
- fresh leadership in the form of a 'State Planning Commission'.

These recommendations have been considered by the State Government response delivered in March 2015 and the majority of reforms will be delivered through the enactment of new planning legislation. A number of the reforms are complex and a staged approach will be required with sustained effort necessary in implementation. Others need further consideration and will be considered in the context of the numerous initiatives detailed in this plan. The legislation is proposed to be considered by the South Australian Parliament in the third quarter of 2015.

SOLUTIONS – REGULATORY FRAMEWORK

Strengthen the land use and transport regulatory framework

- As part of the Planning Reform project, consider introducing legislation linking The Plan to strategic land use plans.
- Review transport and infrastructure legislation to provide the fit-for-purpose tools necessary to deliver The Plan.
- Align land use policies with *A Functional Hierarchy for South Australia's Land Transport Network*.
- Address any inconsistencies in the assessment process for transport projects.
- Identify opportunities for refining and better targeting referrals to the Commissioner of Highways under planning legislation to support delivery of The Plan.
- Ensure regulatory mechanisms provide the necessary protection for the operation of existing and future transport corridors (including for pipelines) and sites (e.g. ports, airports) of national, state and regional strategic importance as identified in The Plan, *A Functional Hierarchy for South Australia's Land Transport Network*, the *Regional Mining and Infrastructure Plan* and the forthcoming ports strategy and freight strategy.

4.3 EFFECTIVE GOVERNANCE

As outlined above, the successful delivery of The Plan will be achieved through the combined efforts and decisions of multiple bodies across different jurisdictions, across the public and private sectors, as well as the everyday decisions we all make as business people, homeowners, commuters and members of the community.

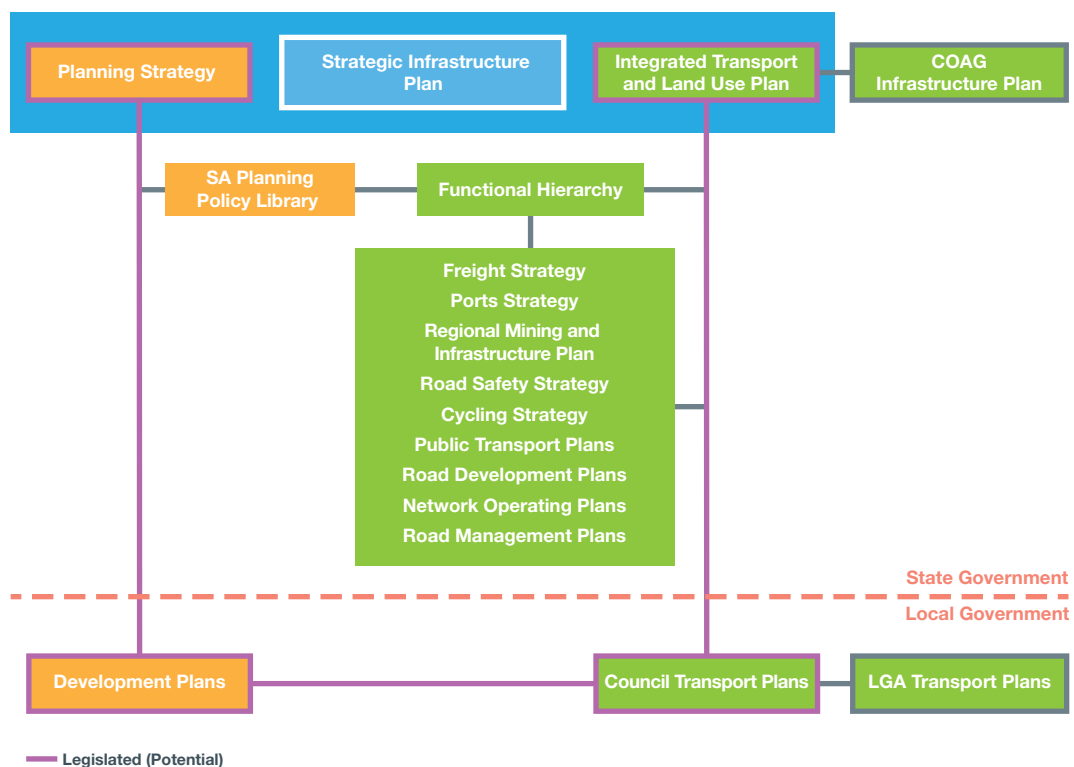
Land use and transport are overseen by numerous entities across South Australia. All three levels of government are directly involved, as are a number of bodies applying regulations and legislation governing land use and transport. This means that the key to effective governance is the alignment of each level of government, each regulatory or delivery agency, the private sector and community with the goals, objectives and initiatives outlined in The Plan.

Already, a number of government mechanisms have been altered to ensure better alignment, including the integration of transport and land use into a single agency (i.e. DPTI). Alignment across state borders and with the Australian Government is also vital, as South Australia's experience with the *Green Triangle Region Freight Action Plan* shows.

Private sector engagement is being enhanced through improved consultation on key challenges, such as meeting the challenge of the expansion of mining and the adoption of the South Australian Government case management framework involving the appointment of the Coordinator-General, which assists business to navigate project approval processes.

At the local government level, planning processes could be strengthened through the introduction of legislation requiring local councils to develop and/or review transport plans every five years that are aligned with The Plan and reflected in local Development Plans.

Figure 4-3 – Potential Governance structure



SOLUTIONS – EFFECTIVE GOVERNANCE	
Policy alignment with the transport plan	<ul style="list-style-type: none"> • Include The Plan as part of the suite of South Australian Government strategic plans so that each agency's planning and investment decisions related to land use and transport align with the Plan.
Alignment with local government plans and decisions	<ul style="list-style-type: none"> • Through the Planning Reform process, examine the potential for a requirement that local councils prepare and/or review transport plans that are aligned with The Plan and reflected in local Development Plans. • Work with local government to prepare and update transport plans for local road networks to enable strong integration of local road networks and the state and national strategic transport networks.
Alignment with the Australian Government and other state and territory governments	<ul style="list-style-type: none"> • Continue to work closely with the Australian Government, other states and territories, and other organisations involved in national transport to give effect to national policy and to support seamless connectivity between South Australia's transport system and the rest of Australia, as well as internationally. • Areas of cooperation include national land freight strategy, participation in the Transport and Infrastructure Council, cross-border solutions and the establishment of national regulatory bodies as part of the Council of Australian Governments' transport reforms. • Work with Infrastructure Australia and other government bodies to maintain and improve national guidelines for best practice in integrated transport and land use planning, and in project planning and evaluation.
Close engagement with local government, Regional Development Australia associations and the private sector	<ul style="list-style-type: none"> • Actively liaise with local government, Regional Development Australia associations and the private sector in: <ul style="list-style-type: none"> • Developing and finalising supporting action plans (particularly the ports strategy, the freight strategy and the <i>Cycling Strategy</i>). • Updating the Planning Strategy and Structure Plans. • Implementing The Plan. • Continue to use the SA Government Case Management framework to assist the private sector navigate government processes in obtaining project development approvals.

4.4 MONITORING, MEASURING, REPORTING AND REVIEW

Successful delivery of The Plan requires timely and transparent monitoring, measuring and reporting of progress as The Plan is rolled out. Transparent reporting keeps the community informed and inspires confidence and certainty that the strategy is being followed. Ongoing monitoring enables The Plan to be reviewed and adapted as conditions change.

As identified above, following the State Government's 2015 response to the Expert Panel final report on Planning Reform legislation is being prepared linking The Plan to strategic land use plans. This will address arrangements for the monitoring, measuring, reporting and future review of The Plan.

DPTI and private sector transport operators already carry out an established program of monitoring and public reporting on some aspects of transport system performance (as required under legislative and contractual arrangements). The program includes:

- DPTI Annual Report – public transport, aviation, disability and equal opportunity, reporting obligations under the *Highways Act*, *Public Transport Act* and *Air Transport Act*
- Bureau of Infrastructure Transport and Regional Economics Waterline indicators – stevedoring productivity, landside performance and other performance indicators
- Essential Services Commission of South Australia port and rail pricing and access monitoring

- *South Australia's Strategic Plan* targets
- targets in the South Australian Planning Strategy, including *The 30-Year Plan for Greater Adelaide* and Regional Plan targets
- quarterly public transport service reports on bus, train and tram operational performance
- Austroads National Performance Indicators (annually) – road safety, asset management, program/project assessment, travel speed, lane occupancy rate, congestion, user satisfaction.

These reports are expected to continue as part of normal business. To fully monitor The Plan, an expanded data collection and monitoring program may be required. Further consideration will be given to identifying any monitoring gaps that could prevent effective reporting and review of The Plan.

SOLUTIONS – MONITORING, MEASURING, REPORTING AND REVIEW

Transparent and timely reporting of progress by formalising reporting processes

- As part of the Planning Reform project, consider introducing legislation linking The Plan to strategic land use plans. These arrangements may include the same formal reporting requirements for The Plan as is required for volumes of the Planning Strategy.

Another key aspect of delivering The Plan will be the development of supporting action plans. Supporting action plans will provide the additional details required to deliver The Plan at project and program levels, and in specific locations.

Further detailed and shorter term action plans will be developed that align with the strategic directions and priorities of The Plan. Many of these have recently been prepared or are under development. Existing plans will be modified, and new plans prepared, to ensure they are fully aligned. This will be undertaken in consultation with key industry sectors, local government and local communities.

Supporting action plans include the *Regional Mining and Infrastructure Plan*, the freight and ports strategies, the *Cycling Strategy*, road development and network operating plans, asset management plans and regional passenger transport plans.

Well designed and integrated monitoring will enable The Plan to be reviewed and adapted as conditions change.

SOLUTIONS AND ACTIONS



**BUILDING A STRONGER
SOUTH AUSTRALIA**



Priorities for Greater Adelaide

- Continued improvements to the passenger train network.
- Improved O-Bahn access into the CBD.
- Bringing a network of trams, called AdeLINK, back to the CBD, inner and middle Adelaide to the northwest, east, west, north, south and a loop in the CBD.
- A redesigned and modernised bus network.
- Complete the North-South Corridor, upgrade the Inner and Outer Ring Routes, targeted improvements to many intersections and road sections.
- Duplicate Victor Harbor Road (Old Noarlunga to McLaren Vale), provide more overtaking lanes and shoulder sealing to Victor Harbor, and in the longer term, duplicate to Mount Compass.
- Duplicate Main South Road (Seaford to Aldinga), Beach Road and Dyson Road (Noarlunga), Commercial Road (Seaford), Richmond Road (Keswick), West Lakes Boulevard, Churchill Road (Devon Park), Montague Road (Modbury), Elder Smith Road (Mawson Lakes, including extension to Port Wakefield Road), Kings Road (Paralowie), Womma Road, Curtis Road (Munno Para West), Main North Road (Evanston Park), and additional lanes on Main North Road (Parafield).
- In the longer term – a potential underground rail link in the CBD, relocate the interstate passenger rail terminal at Keswick into Adelaide Railway Station, and protect the extension of train lines into growth areas to the north and south.
- Enabling cycling and walking as more sustainable and healthy travel choices.

Priorities for regional South Australia

- Seal the Strzelecki Track.
- Duplicate the Dukes Highway to Victoria.
- Targeted road widening, more overtaking lanes and rest areas across the network including the Augusta Highway to Port Augusta, Sturt Highway to the Riverland, Riddoch Highway to the South East, Eyre Highway to the west, Barrier Highway to NSW, Stuart Highway to the Far North, and Lincoln Highway – potential further capacity improvements including duplication of sections of the Augusta and Sturt Highways in the longer term.
- Town bypasses of Penola, Port Wakefield and Truro, and a potential bypass at Renmark and upgrading of Yorkey's Crossing at Port Augusta.
- Expand 'pit to port' capacity for the mining sector.
- Continue improvements to regional passenger transport, aviation and walking/cycling facilities.

Priorities for Freight and Ports

- Implement the *Regional Mining and Infrastructure Plan* and the *Green Triangle Freight Action Plan*.
- Expand the High Productivity Vehicle network, deliver regulatory reforms for freight transport, upgrade rail freight corridors and intermodal terminals, and improve access to Adelaide Airport.

State-wide priorities

- Increase maintenance funding to improve and sustain the performance of the transport network and make better use of our transport assets.
- Protect freight corridors and facilities.
- Make our transport system safer and deliver South Australia's *Road Safety Strategy*.
- Use smart technology to improve transport system outcomes.
- Support for tourism.
- Reduce environmental impacts and car dependency.
- Adapt to climate change and building our resilience to disasters.

The Plan identifies short, medium and long term actions for our state. Some of these actions apply to the broader networks that make up our transport system; others relate to specific locations along these networks or to particular issues that need to be addressed.

5.1 A FULL RANGE OF SOLUTIONS FOR THE TRANSPORT NETWORK

Providing the efficient and safe transport networks that South Australia needs into the future requires a range of complementary measures. These measures include better targeted investment in public transport and improvements in road, cycling and walking infrastructure, along with non-infrastructure solutions such as traffic and vehicle management, travel demand management initiatives (e.g. TravelSmart) and better land use and transport integration.

A critical component will be to sustain the useful life of our transport assets to get maximum value from our investment. This means maintaining these assets in good condition, reinforcing the financial sustainability of the system as a whole and – where possible – leveraging further investment in new transport infrastructure. We must also consider the impact of our transport use and systems on the environment and how we can make transport assets more resilient to climate change, extreme events and incidents.

The full range of solutions proposed allows flexibility in the future to respond to changes in development, the economy and environmental pressures.

Setting priorities

Over the last decade, approximately \$6.6 billion has been invested into the transport network in South Australia by the State Government and the Australian Government. This represents around 50 per cent of total South Australian Government capital investment and does not include significant investment in transport infrastructure by the private sector, particularly in mining, ports and landside infrastructure such as rail links, or by local government in local road networks, airports and community passenger transport. This Plan investigates the type and extent of investment that will be required over the next 30 years to deliver solutions to the transport challenges before us.

The Plan prioritises strategic investments to address South Australia's most pressing transport problems, while moving towards achieving our goals and objectives. Solutions are designed to align with the Government's other strategic plans and priorities, and to reflect land use and economic development plans for Adelaide and the state.

The Plan prioritises the investment to allow us to extract maximum value from our existing transport assets and provide new assets and services when and where they are needed, using the following time periods:

Short term	Next five years
Medium term	5-15 years
Long term	15 years and beyond

The Plan applies the following principles when setting priorities:

- Delivering upon the goals and targets within *South Australia's Strategic Plan*.
- Integrating solutions with the land use outcomes and priorities identified in the Planning Strategy.
- Delivering upon key outcomes within this Plan.
- Providing solutions as the need arises (e.g. when capacity is reached).
- Investigating better use of existing assets before committing to investment in new capacity.
- Enabling active travel options and how these can be promoted before committing to investment in new capacity.
- Demonstrating that transport solutions address multiple social, economic and sustainability objectives.
- Maximising benefits and providing value for money.
- Achieving an appropriate balance in expenditure over the 30 year period of the Plan.

The solutions

This chapter and the next outline the broad actions and solutions proposed to address current challenges and future needs. They also set a timeframe for the implementation of solutions over the short-term (next 5 years), medium-term (5-15 years) and long-term (15 years and beyond), subject to further investigations and the availability of funding.

The future of transport summarises the broad range of actions proposed for each transport network:

- The public transport network – outlines actions to position the public transport system in Greater Adelaide to meet our needs into the future, particularly in increasing public transport's share of journeys.
- The urban road network – outlines actions to enable the road system to cater for the growth in all modes – private car, business, freight travel, public transport, cycling and walking – expected on the road network in Greater Adelaide.
- The urban cycling and walking network – outlines actions that have been identified to enable more people to take up walking and cycling as preferred modes of travel.
- The regional networks – outlines actions that will address the transport requirements for connecting people and businesses in regional and remote South Australia, including solutions for the road, aviation and passenger transport networks, and walking and cycling.
- The freight and port networks – outlines actions for our freight networks and ports to be ready for the expected step-change growth in the mining sector and steady growth in the freight task, including ensuring consistent regulatory frameworks create the right environment for business in South Australia.
- Solutions for all of South Australia – outlines actions that are required to address challenges faced in all areas of the state, including asset management and maintenance, road safety, managing the impact of transport on the environment and reducing our car dependency.

What's happening when and where identifies key solutions in inner, middle and outer Adelaide and each of South Australia's regions. Maps and tables in this chapter show where and when these actions will be delivered, and identify areas where the South Australian, Australian and local governments can work together – with the private sector – to support seamless network connections.

5.2 PUBLIC TRANSPORT SOLUTIONS FOR GREATER ADELAIDE

Adelaide will continue to consolidate along its public transport spines, but with a sharper focus on supporting and facilitating medium density development in Adelaide's CBD, inner and middle suburbs.

Planning based around routes within *A Functional Hierarchy for South Australia's Land Transport Network* will deliver a high frequency, high capacity, multi-layered and more integrated public transport system. This network will offer faster, more reliable, more frequent, direct and comfortable services that connect major activity centres and areas of employment growth. The development of the network will be influenced by the spatial location of activities that generate the need for travel, such as density of population, the presence of jobs and services, and the location of major activity centres.

This marks a shift toward a mass transit system that focuses passenger movements onto high capacity, high frequency corridors, supported by bus feeder services that aim to reduce our reliance on car travel, especially in the CBD, inner and middle Adelaide.

Public transport solutions will focus on:

- Electrifying the Gawler train line to build upon the electrification of the Seaford and Tonsley train lines as the backbone of the public transport system, improving the amenity of stations, getting more electric trains, grade separated key pedestrian and level crossings, a focus on the use of technology to provide real time information about services, and in the longer term to electrify the Belair train line and have the potential to have an underground train link through the CBD.
- Bringing trams back to inner and middle Adelaide (*AdeLINK*) through progressive extensions of the tram network to support jobs and business growth, facilitating medium density mixed-use development, and help deliver the land use outcomes that build upon *The 30-Year Plan for Greater Adelaide*, including converting the Outer Harbor train line to deliver a new tram service to Outer Harbor, Port Adelaide and Grange and new tram lines to West Lakes and Semaphore.
- Improving access for the O-Bahn into the Adelaide city centre.
- Redesigning and modernising Adelaide's bus network to concentrate passenger flows onto the core high frequency corridors, supported by services and high quality interchanges, and strengthened cross-suburban bus services.
- Providing more park and rides at key locations.
- Defining and protecting future train corridors in the outer growth areas.
- Providing an integrated and customer-focused public transport system that offers easy and seamless journeys.

All future projects delivered and vehicles procured will give consideration for accessibility by all users and will be compliant with the *Disability Discrimination Act 1992* and the *Disability Standards for Accessible Public Transport*.

Infrastructure to support the community's use of public transport will be provided including construction of park and rides at key nodes where people access high frequency public transport services for the majority of their journey.

'Super Stops' will be located on specifically identified high-frequency priority corridors, particularly at points adjacent to an activity centre, such as a large shopping centre and dedicated corridors such as a train-bus interchange. They will be implemented at strategic locations to accommodate a large number of people/passengers and where good connectivity between services and modes is required. The design and location of these stops will be further explored in consultation with local councils.

In the medium to longer term, and subject to demand, cross suburban services will be improved by increasing frequency of buses available for people to access activity centres and key destinations. The current focus of cross suburban bus routes will be strengthened to provide more direct travel access between activity centres and key public transport interchange locations, improving service levels and thus connectivity.

In the outer suburbs bus services will be upgraded by improving access to the activity centres, such as from Craigmare, Davoren Park and Blakesview to Elizabeth, from Nairne, Hahndorf and Bridgewater to Mount Barker, and from Seaford, Hackham and Woodcroft to Noarlunga Centre. For example, an access between Elizabeth and Salisbury via the Lyell McEwin Hospital, will be upgraded to a Standard Frequency (Go-Zone) service level.

Mount Barker to the city bus services, via the hills townships of Hahndorf, Bridgewater and Stirling, will be upgraded to a high frequency service. Road improvements along Glen Osmond Road will improve the reliability of travel times for these services.

Bus services in the outer suburbs will feed into the larger capacity train lines – with a focus on Munno Para, Hillbank and Paralowie to connect to the Gawler train services, and Aldinga, McLaren Vale and Sheidow Park to the Seaford train services.

SOLUTIONS – PUBLIC TRANSPORT

<p>Continue the modernisation of Greater Adelaide's public transport system</p>	<p>Continue the current proposed landmark public transport improvements, including:</p> <ul style="list-style-type: none"> • The electrification of the Gawler line. • Introducing new electric trains as lines are electrified. • Increasing frequency of services. • Delivering the Darlington public transport project. • Increasing park and ride car spaces such as at Parafield and for the O-Bahn, and expand cycle storage capacity. • Delivering real time passenger information through smart technology and enhancing information at key stations and stops. • Continuing to improve accessibility for people with disabilities as part of the upgrade of major stations, interchanges and procurement of vehicles which comply with the <i>Disability Discrimination Act 1992</i> and relevant accessibility standards.
<p>Bring trams back to inner and middle Adelaide</p>	<p>Adelaide's tram-led revival will occur in several stages in line with the market for residential and commercial development, jobs and population growth, and as funding becomes available. The new lines in the AdelLINK network will include:</p> <ul style="list-style-type: none"> • PortLINK – a conversion of the Outer Harbor train line to deliver a new tram service to Outer Harbor, Port Adelaide and Grange, and construct new tram lines to West Lakes and Semaphore. • EastLINK – a tram line running along The Parade to Magill. • WestLINK – a tram line running along Henley Beach Road to Henley Square, with a branch line to Adelaide Airport. The existing tram line to Glenelg will also form part of WestLINK. • ProspectLINK – a tram line running from Grand Junction Road along Prospect Road and O'Connell Street. • UnleyLINK – a tram line running along Unley Road and Belair Road to Mitcham. • CityLINK – a tram running in a continuous loop at regular intervals along the Morphett Street, Sturt Street, Halifax Street and Frome Street corridors, with transfers available from other tram lines and railway stations. <p>The final location of routes will be subject to further investigations and consultation.</p>
<p>Redesign and modernise the bus network</p>	<p>Redesign and modernise the bus network through:</p> <ul style="list-style-type: none"> • Provide for improved O-Bahn access to the Adelaide city centre. • Simplified bus route numbering and directness of travel to key destinations. • Develop high capacity, high frequency corridors in the inner areas, supported by on-road bus priority measures on core routes. • Improve the frequency, coverage and directness of bus services that focus on major activity centres, tertiary education centres, hospitals and sports hubs. • Further improve, expand and promote feeder services to the high frequency network, particularly to the train services and the O-Bahn. • Strengthen cross suburban bus services, connected to the dedicated (rail and O-Bahn) and priority (bus) networks. • Develop new bus 'Super Stops' at strategic activity centres. • Expand services into new growth areas. • Provide community services at the local level where feasible.
<p>Further develop and, in the longer term, expand the train network</p>	<ul style="list-style-type: none"> • Construct and upgrade all train stations. • Continue to increase park and ride car spaces and provide more cycle storage capacity. • Introduce higher frequency services and longer trains to meet peak growth demand. • Address the conflicts between pedestrians, trains and road vehicles on the high frequency train line between Brighton Road and Elizabeth by replacing with grade separation at key locations and improving safety at other locations. • Improve accessibility and wayfinding to stations from walking/cycling networks adjacent to train corridors. • Potential electrification of the Belair line in the longer term. • Subject to further investigation and, in the longer term, develop an underground metropolitan passenger train link in the CBD providing more city stations and providing through linked services. This will also need to consider the capacity to manage platform congestion at Adelaide Station. • Define and protect future rail corridor extensions, to the north and east of Gawler, and to Aldinga. • Relocate the interstate passenger rail terminal at Keswick to the existing Adelaide Railway Station in the longer term.

PROVIDING USERS WITH EASY, WELL CONNECTED JOURNEYS

One of our key objectives is to ensure that public transport, walking and cycling are desired choices of travel for the majority of Greater Adelaide's population, in order to boost public transport patronage and active transport usage, reduce reliance on the car, enhance health outcomes and improve the city's liveability.

In addition to factors such as frequency, reliability and cost, Australian and international research shows that people will use the public transport system and active transport networks if they offer easy, comfortable and seamless journeys. People want to be able to plan journeys across modes easily and in real time. They want services that connect at key points, are predictable and have coordinated timetables to minimise waiting times; stations and other facilities that make switching between modes easy; and ticketing and fares that make switching hassle-free and penalty-free. Importantly, this is not just between public transport modes, but also how private modes – car, walking and cycling – interact through park and ride facilities, secure bike parking, clear signage and walkable environments for pedestrians.

In short, people want a truly coordinated and customer-focused transport system.

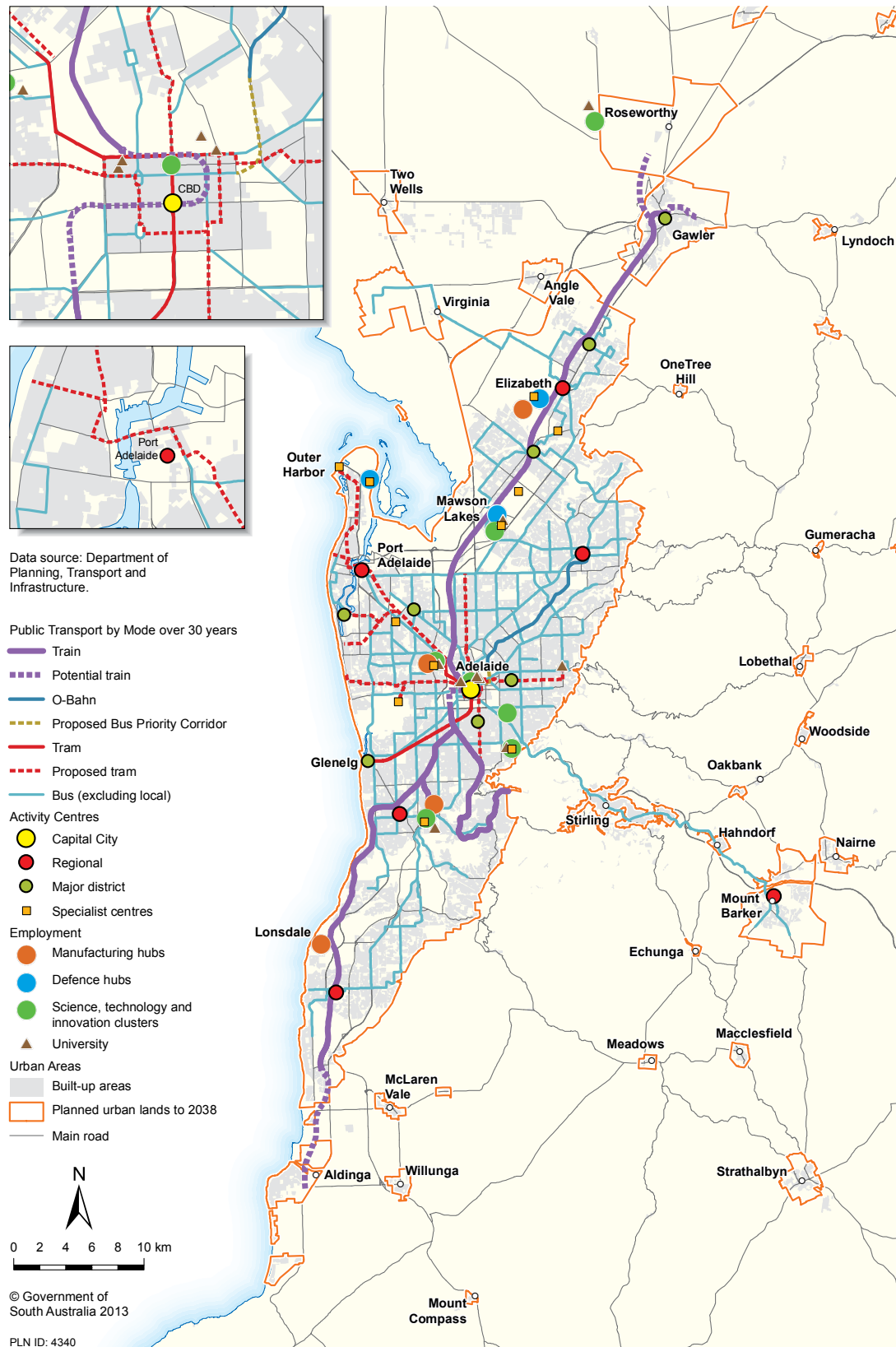
South Australia has already taken a number of important steps to create such a system. The new Metrocard provides a modern, electronic ticketing system that makes switching between modes simple and fast. Upgraded major train stations have improved amenities. Major stations have increased car space and cycle space capacity in park and rides, extending their catchment areas. Adelaide's tram network has been extended to Hindmarsh and the train network to Seaford. These are part of a series of projects that have been rolling out since 2008 and continue to unfold.

We will build on these steps to further improve people's travelling experience:

- **Provide co-ordinated services.** The transit system will have coordinated services – train services, inner city core on-road priority transit services (either bus or tram) and bus services – to better connect more people to more major activity centres to access jobs, services and shops. Bus route planning will strengthen cross suburban connections to major activity centres, supported by local bus feeder services. New bus route plans will include feeder services to the high frequency network, particularly the dedicated fast train services and the O-Bahn. This will be progressed within the framework of *A Functional Hierarchy for South Australia's Land Transport Network*, which introduces the new public transport hierarchy: the Strategic Mass Transit Network. Higher frequency public transport services means less waiting time and more people out and about, contributing to the vibrancy of local neighbourhoods.

- **Give users real time information.** We will facilitate data sharing so that mobile devices and developments in technology can offer new ways to provide public transport users with accurate, real time information about services. The new Metrocard's GPS tracking technology has facilitated the provision of Real-Time information for the first time. Software application developers will be able to develop new apps that give users access to service information in real time. Stations and stops will be progressively upgraded with screens showing Real-Time information.
- **Smoother transfers.** To make transfers between modes easy, stations and other interchanges need to be of good quality and to cater for all modes, including private vehicle users. More direct bus services that focus on major activity centres will enable the development of new, strategically located bus 'Super Stops' that will make transfers easier and more convenient and facilitate better timetable coordination between modes. We will continue to upgrade train stations, tram and bus stops, increase park and ride car spaces (such as at the O-Bahn, Mount Barker and other interchanges in outer suburban areas), expand secure cycle storage facilities and provide public bike sharing opportunities at key stations.
- **Create a simple and easily navigable physical network.** We will roll out actions to simplify the signs, maps and route numbering and naming that help users to physically navigate the system. We will invest in improved signage at interchanges, including looking at the potential for innovations in communications and visual technologies to improve wayfinding – as well as improving permanent, 'low tech' signage. We will adopt simpler, innovative route identification on buses to reduce complexity – helping new and occasional users – and we will progressively introduce new, simplified network maps.

Figure 5-1 Greater Adelaide's future public transport solutions



5.3 ROAD NETWORK SOLUTIONS FOR GREATER ADELAIDE

Adelaide's road network needs to cater for a diverse range of sometimes competing demands for travel, including private vehicles, business travellers, freight vehicles, pedestrians, cyclists and public transport services. The new *A Functional Hierarchy for South Australia's Land Transport Network* identifies the different functions of roads – based on their location and links within the broader transport network, the type and volume of users and the adjacent land use – to provide clear direction for future investment and operational management of the network.

Analysis of the road transport task and the growth expected in the next 30 years indicates that, with the exception of the North-South Corridor, there is little justification for fundamental changes to the road network – such as the building of new freeways – beyond that proposed for the North-South Corridor.

The critical function of the North-South Corridor means that a continued focus on this corridor will be required to provide a high standard, reliable and efficient traffic route through Adelaide.

In addition, we will focus on the other major corridors that primarily serve freight and business trips and dispersed employment across the urban area. In relation to road network efficiency, the strategic focus of The Plan will be the Inner and Outer Ring Routes that will enhance the performance of Adelaide's major metropolitan roads by:

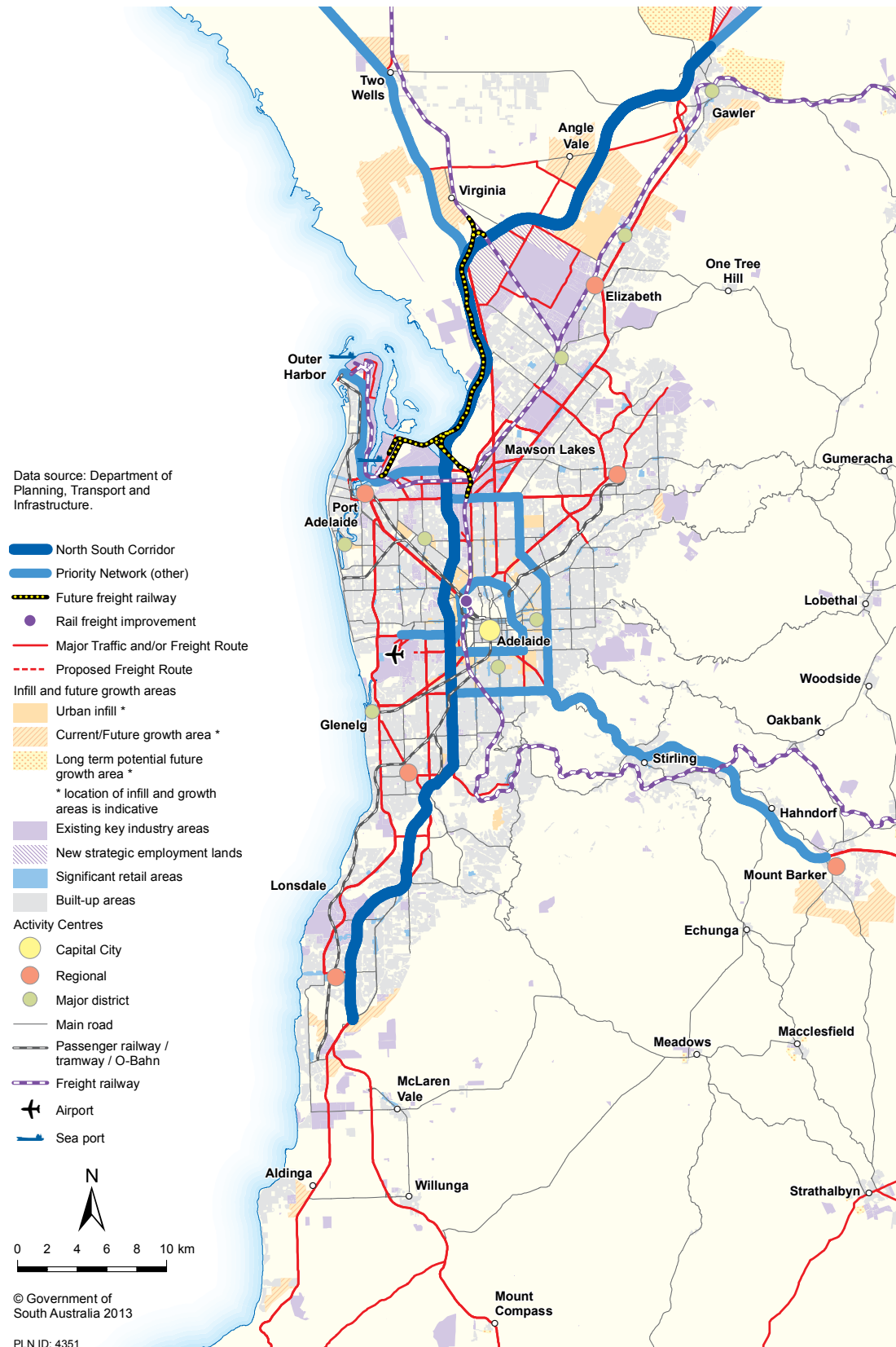
- increasing the efficiency of traffic flow
- improving safety for all road users including motorists, pedestrians, cyclists and businesses moving freight and delivering goods and services
- providing alternative, efficient connections for traffic travelling around the central city, which forms the basis for creating attractive main streets, streetscapes and pedestrian amenity in the CBD.

These corridors will be the primary focus for managing congestion and ensuring the reliability and efficiency of the road network, particularly for those trips that cannot be readily served by public transport, walking or cycling.

Targeted upgrades to other major traffic and freight routes, especially at intersections, will also be undertaken to relieve pinch points along the network and address safety issues.

SOLUTIONS – ROAD NETWORK EFFICIENCY	
Complete the North-South Corridor	<ul style="list-style-type: none"> Complete the 78km non-stop North-South Corridor to provide a high standard, non-stop transport connection for freight and business travel: <ul style="list-style-type: none"> Torrens Road to River Torrens Darlington Upgrade Project Regency Road to Darlington (remaining sections). Northern Connector (road and rail freight).
Target investment to improve capacity and reliability	<ul style="list-style-type: none"> Undertake targeted upgrades of the Inner and Outer Ring Routes. Provide new road and public transport infrastructure to support growth areas (eg Playford Projects). Duplicate Victor Harbor Road (Old Noarlunga to McLaren Vale), provide more overtaking lanes and shoulder sealing to Victor Harbor, and in the longer term duplicate to Mount Compass. Duplication of Main South Road (Seaford to Aldinga), Beach Road and Dyson Road (Noarlunga), Commercial Road (Seaford), Richmond Road (Keswick), West Lakes Boulevard, Churchill Road (Devon Park), Montague Road (Modbury), Elder Smith Road (Mawson Lakes, including extension to Port Wakefield Road), Kings Road (Paralowie), Womma Road, Curtis Road (Munno Para West), Main North Road (Evanston Park), and additional lanes on Main North Road (Parafield). Grade separate key rail crossings between Brighton and Elizabeth. Other targeted intersection and road section upgrades to improve efficiency and safety along major traffic routes.
Manage demand for car travel	<ul style="list-style-type: none"> Continue to roll out major public transport, walking and cycling initiatives. Implement travel demand programs. Promote, support and introduce bike and car-sharing schemes.
Actively manage the road network	<ul style="list-style-type: none"> In line with the new <i>A Functional Hierarchy for South Australia's Land Transport Network</i>: <ul style="list-style-type: none"> Implement Road Development Plans to manage and set priorities for future road investment. Prepare Network Operating Plans and Road Management Plans to identify and implement the operating requirements of major traffic and freight routes.
Make better use of existing road infrastructure	<ul style="list-style-type: none"> Continue to implement the Managed Motorway measures on non-stop routes. Develop a broad strategy for the implementation of Intelligent Transport Solutions across the transport network (all modes), with a focus on improved efficiency along freight routes and major traffic routes. Develop and roll out programs that reallocate road space during critical time periods of the day. Require a Better Use Strategy as part of transport-related business cases and the prioritisation of transport solutions.
Establish consistent networks across government boundaries	<ul style="list-style-type: none"> Support local councils in the Greater Adelaide region to prepare transport plans that reflect the strategic directions of The Plan and establish consistent road networks across government boundaries and integration of transport and land use at a local level.
Protect freight routes	<ul style="list-style-type: none"> Ensure that land use policies in the South Australian Planning Policy Library align with freight and major traffic routes identified in the new <i>A Functional Hierarchy for South Australia's Land Transport Network</i>.

Figure 5-2 Adelaide's Road and Rail Freight Solutions



5.4 CYCLING AND WALKING SOLUTIONS FOR GREATER ADELAIDE

Growing concerns about the environmental sustainability of our transport and land use systems and the health of South Australians mean that more people walking and cycling will play an increasingly important role in producing more liveable, sustainable and productive urban places.

Extending our cycling and walking networks and catchments, and improving the attractiveness and convenience of cycling/walking routes, are key ways to enable increased participation in active transport. More convenient and direct connections to public transport stops and stations, and the provision of secure bike parking facilities, public bike sharing opportunities and walkable environments at these stops and stations will contribute to greater patronage of our public transport services, as well as increase the vibrancy of local main streets and activity centres. In turn, creating lively, pleasant places that are pedestrian-friendly and cyclist-friendly will help bring new businesses and jobs to these centres.

Facilitating safe and convenient walking and cycling options along Adelaide's arterial road network is critical to enable more people to adopt active transport and this will be achieved by providing separated bike lanes and footpaths on key arterial roads. Such network improvements will be designed to incorporate pedestrian scale lighting, with good surfaces and connections to surrounding areas by allowing for safe access and egress.

A Citizens' Jury convened in 2014 to consider the issue of motorists and cyclists sharing the roads safely. The majority of the Jury's recommendations have been supported by Government for implementation. They include regulatory amendments, improving cycling infrastructure and facilities, information, education and a collaborative road safety campaign, awards to acknowledge best practice in cycling environment, and continuing high visibility initiatives.

The South Australian Government, through DPTI, will work closely with local councils to design and deliver cycling/walking infrastructure and networks that follow best practice standards to enable greater participation in cycling and walking.

Cycling and walking network improvements will focus on:

- completing the Gawler, Outer Harbor, Tonsley and Grange Greenways by 2025
- developing walkable main streets that are lively, pleasant places for pedestrians and cyclists that help bring new businesses and jobs to these places
- providing greater separation between bicycle, pedestrian and motor vehicle traffic on arterial roads
- increasing public transport mode share and station catchment areas by removing barriers to walk-up and ride-up patronage, providing secure bike storage and bike sharing opportunities at key stations
- introducing a public bike share scheme starting in the city
- ongoing extensions and improvements to the Bikedirect network
- improving local cycling and walking routes in partnership with local government and providing safe and convenient crossings of arterial roads.

These initiatives are designed to enable more people to take up cycling and walking for a greater number of journeys, preferring to switch modes, especially for shorter trips. They will also demonstrate the convenience of walking and cycling to a range of destinations, while promoting the health, social and economic benefits of choosing active transport modes.

Implementation of these initiatives will pay attention to the different design needs for walking and cycling, as well as the different types of walking and cycling activities and users. While consistent design principles need to be adopted for both cycling and walking, each situation will need to be considered on its own merits to achieve the desired outcome of an increased uptake of active travel modes.

SOLUTIONS – URBAN CYCLING AND WALKING NETWORKS	
Extend and improve cycling and walking networks	<ul style="list-style-type: none"> • Complete the Greenways Program (including the Gawler, Outer Harbor, Tonsley and Grange Greenways) by 2025. • Provide separated bike lanes and footpaths on key arterial roads. • Ensure major road and public transport upgrades provide walking and cycling infrastructure designed to best practice standards. • Upgrade the existing <i>Bikedirect</i> network, including retrofitting existing bike lanes to best practice standards and extending bike lanes through intersections. • Continue funding for cycling and walking improvements, including the Black Spot program, on local and arterial roads including upgrades to arterial road crossings. • Provide facilities for cycling tourism and sporting activity through the Barossa, Adelaide Hills and Fleurieu Peninsula, including sealed shoulders and shared paths where appropriate.
Expand walking/cycling catchments	<ul style="list-style-type: none"> • Increase accessibility of public transport stops and stations, activity centres, main streets and schools for cycling and walking. • Provide secure bike storage facilities and walkable environments in and around public transport hubs, centres and main streets. • Introduce a public bike sharing scheme for inner Adelaide and other urban centres to enable cycle use for short, local trips. • Increase Way2Go funding to encourage and enable walking and cycling amongst school children, improve safety and expand walking and cycling catchments of schools. • Support Main Street grant programs to improve the walking and cycling environment.
Incorporate cycling and walking options in planning	<ul style="list-style-type: none"> • Revise existing standards and guidelines to reflect best practice road design for cycling and walking using the Streets for People Compendium as a guide. • Enable cycling and walking to major events and provide bike parking facilities at these events. • Work with local councils across Greater Adelaide to create and maintain convenient, direct and attractive street networks conducive to walking and cycling, particularly at the land division stage of new housing developments. • Ensure all new housing and mixed-use developments incorporate attractive and convenient cycling routes and walkable environments that provide connectivity with local services and facilities. • Through the policies in the South Australian Planning Policy Library ensure: <ul style="list-style-type: none"> • Cycling and walking networks, facilities and connections to key centres are provided as part of all new developments. • Appropriate levels of bike parking and car parking at centres, main streets and public transport hubs are provided.
Improve driver education and awareness	<ul style="list-style-type: none"> • Revise driver education and awareness programs so that drivers look out for cyclists and pedestrians to reduce their vulnerability on the road.

Figure 5-3 Cycling solutions



5.5 REGIONAL SOUTH AUSTRALIA TRANSPORT SOLUTIONS

Actions have been identified to improve regional and remote transport networks to better connect people to their communities, jobs and critical services, and regional businesses to their suppliers and markets. The Plan's strong focus on supporting the mining, agriculture and advanced manufacturing industries is reflected in a range of solutions to improve the efficiency of our ports, freight routes and supply chains (discussed in the Freight and Ports section).

An ongoing focus will be to ensure that regional transport networks respond effectively to the wide range of needs served by the network including passenger transport, freight, business and private travel. To do this, The Plan will focus on:

- improving inter- and intra-state transport links, particularly the National Land Transport Network and major traffic, freight and tourist networks, where the growth in freight and general traffic is highest and the safety and efficiency of freight and private travel is being affected.
- upgrading key road freight routes to enable use of High Productivity Vehicles, particularly along inter- and intra-state links and connections to key export gateways, and working with local councils to improve 'last mile' access for these vehicles, such as those identified in *A Modern Transport System for Agriculture – A New Partnership Approach*.
- improving links to international and interstate gateways such as ports and airports (current and future) that support our mining, agriculture and tourism sectors.
- better understanding and more integrated service delivery responses to passenger transport needs within our regions.

Our country towns and communities are important contributors to the liveability and economy of regional South Australia. Larger regional centres and townships provide access to services, jobs and recreational activities for many people in regional and remote areas. The Plan will support the vibrancy of these regional centres and townships by targeting critical bypass routes and working with local councils to increase walking and cycling options.

SOLUTIONS – CONNECTING REGIONAL AND REMOTE SOUTH AUSTRALIA

Safe, efficient and connected road networks	<ul style="list-style-type: none"> • Seal the Strzelecki Track • Duplicate the Dukes Highway • Deliver regional road upgrades including extensive shoulder sealing, more overtaking lanes and rest areas across the network – such as the Augusta, Sturt, Riddoch, Eyre, Barrier, Stuart and Lincoln Highways – potential further capacity improvements including duplication of parts of the Augusta and Sturt Highways in the longer term. • In line with the new <i>A Functional Hierarchy for South Australia's Land Transport Network</i>: <ul style="list-style-type: none"> • Implement Road Development Plans to target the most effective road investment. • Prepare Network Operating Plans and Road Management Plans to identify and implement the operating requirements of major traffic, freight and tourist routes. • Work with local government to prepare or revise local transport plans that facilitate consistent road networks across local government boundaries in regional and remote South Australia, particularly for freight and tourist networks.
Continue to implement a whole of government approach to addressing regional passenger transport delivery	<ul style="list-style-type: none"> • Conduct a Regional Passenger Transport Review, leading to the development of regional passenger transport plans that will identify critical passenger transport needs in each region to assess changing demands and refresh opportunities. • Provide better information to regional bus passengers, including updating the regional bus network website. • Work with local government and private industry to promote the regional bus network. • Continue to support existing regional passenger bus services, integrated passenger services and community passenger networks. • Continue to work with other service agencies and State Government departments to coordinate resources and funding and better integrate services to ensure a holistic approach to service delivery to diverse regional communities.
Increase cycling and walking options	<ul style="list-style-type: none"> • Work with local government to develop strategic cycling and walking frameworks that will: <ul style="list-style-type: none"> • Target areas where cycling and walking can be promoted most effectively. • Deliver travel behaviour change programs to provide information about the benefits of active transport and demonstrate the convenience and increased connectivity that can be achieved by walking and cycling. • Facilitate the development of convenient and attractive street networks conducive to walking and cycling. • Expand walking and cycling catchments for schools, main streets and key activity centres. • Support and promote cycling tourism. • Provide and expand existing shared paths between key locations.
Preserve amenity for local communities	<ul style="list-style-type: none"> • Construct bypasses at Penola, Port Wakefield and Truro. • Investigate the longer term potential to bypass Renmark and upgrade Yorkey's Crossing at Port Augusta. • Work with local councils to identify alternative heavy vehicle local road bypass routes where full arterial bypasses cannot be economically justified.
Support regional aviation	<ul style="list-style-type: none"> • Provide guidance and assistance to local councils, outback communities and the Australian Government in their management of the regional aviation network including: <ul style="list-style-type: none"> • Working with the Australian Government to provide a network of 24 hour all weather aerodromes to provide access for emergency medical services provided by the RFDS. • Licensing regional air services, where required, to ensure the continuity of fragile air services. • Working with council planners to protect airports from inappropriate surrounding development.
Collect regional travel data	<ul style="list-style-type: none"> • Conduct targeted regional transport surveys that enables a better understanding of regional travel patterns, region-specific issues and regional transport disadvantage.

THE ROLE OF BUS SERVICES IN SERVING REGIONAL PASSENGER TRANSPORT NEEDS

The Government is committed to supporting public transport services in regional areas and in 2011/2012 provided over \$9.1 million (excluding GST) in operating subsidies and concession reimbursements to regional operators. A variety of complex and changing regional passenger transport needs is met by a wide range of services provided by private operators, and at the local and state government levels.

With around 14 to 16 percent of South Australia's population outside Greater Adelaide and spread over a vast area, providing efficient, cost effective passenger transport requires innovative solutions, including those that integrate the services provided by the different levels of service providers.

While trains are seen by some as a more attractive solution, the variability and breadth of passenger transport requirements in regional areas simply cannot be met by fixed rail services. The high capital and operational costs of rail infrastructure requires high use to justify investment and, with the considerable level of public subsidies that would be required to run such services, could only service a limited range of destinations and times.

Other Australian states have similar issues to South Australia in meeting the challenges of servicing regional and remote areas for passenger transport. Recently, Queensland announced a review of its regional passenger transport services, including a review of the value of some western train services where the cost to taxpayers is more than \$2000 for each passenger.

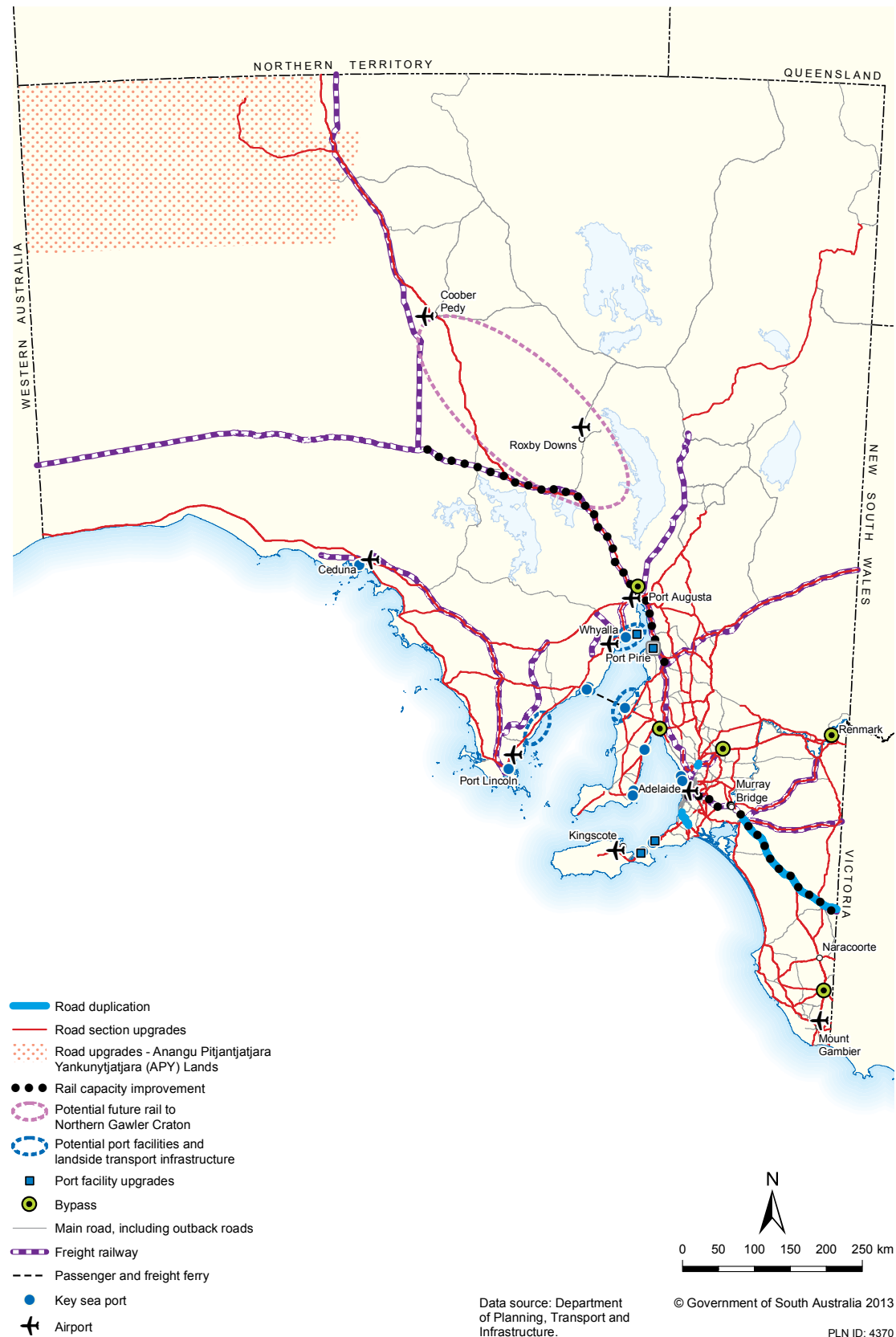
South Australia's integrated service approach in regional areas involves encouraging the coordination and integration of existing transport services and infrastructure, promoting more efficient use of government resources, and supporting private operators to deliver identified transport services. Importantly, it encourages strong community involvement in identifying the transport needs of the region and in developing strategies to address these needs.

At this time, the provision of regional passenger rail services is not being contemplated by the *Integrated Transport and Land Use Plan*. The wide range of passenger transport services required in regional areas can be more efficiently and effectively provided by the more innovative use of passenger transport services that use the road network. A key challenge for regional passenger networks in South Australia is to make them more efficient and attractive to deliver the level of patronage they need to become viable.

The key to success for regional passenger networks lies with integrating service delivery and tailoring services to meet the specific needs of communities – a partnership approach between state and local government, the private sector and the community.

SOLUTIONS AND ACTIONS

Figure 5-4 Regional and remote South Australian solutions



5.6 FREIGHT AND PORTS SOLUTIONS

South Australia's economic development is tied to our ability to connect businesses with each other and with their customers as efficiently, quickly and cost-effectively as possible. As our economy changes and grows, we will also need to move more goods around the state, to/from interstate and overseas markets. Efficient freight networks and ports are vital to our competitive edge and continued economic prosperity, particularly for the three globally competitive industries of advanced manufacturing and defence, mining and resources, and premium food and wine.

South Australia has significant private sector involvement in its ports and rail freight networks along with different levels of government involvement from local government access to freight facilities, State Government roads and Australian Government responsibilities for the National Land Transport Network. The Plan focuses on ensuring the continued efficiency of our ports and freight sector by:

- Taking action now to make sure South Australia is prepared for the coming step-change in growth in the mining sector and can act promptly to ensure critical infrastructure is provided when and where it is required (acknowledging that the types of infrastructure required – ports, rail, road and pipelines – can take long periods of time to plan, develop and construct and involve the input of multiple parties).
- Recognising that the general freight task is growing steadily and the need to use our existing assets more effectively to unlock additional capacity before identifying targeted and cost effective improvements and additions to our networks – with a focus on those networks and sites that are strategically important to South Australia.
- Recognising that changes in the nature of logistics and the general freight sector require more innovative management of our freight networks and a better understanding of supply chains to respond proactively to a more complex and evolving freight market.
- Giving priority to protecting existing and potential major freight routes and facilities, including ports, airports and intermodals.
- Working with the private sector and other levels of government to ensure the freight and port networks work together to provide efficient connections and that the right regulatory environment is in place to support economic growth.

The challenge associated with the growing mining task is being addressed through the Resources Infrastructure Taskforce. The taskforce has been created to build on the *Regional Mining and Infrastructure Plan* to further guide investment in infrastructure needed to realise our significant mining potential.

A 90 day Change@SA project investigating heavy vehicle access issues for the agriculture industry has identified over 180 opportunities to improve productivity for the industry. *A Modern Transport System for Agriculture – A New Partnership Approach* details these issues and the next steps for addressing specific initiatives.

In addition, and in line with the requirement of the Australian Government for all states, South Australia will produce a freight strategy and a ports strategy to address state-wide freight issues and support the *National Land Freight Strategy* and the *National Ports Strategy*.

SOLUTIONS – POSITION THE SOUTH AUSTRALIAN FREIGHT SYSTEM TO SUPPORT THE EXPANSION OF THE MINING SECTOR

Implement outcomes from the *Regional Mining and Infrastructure Plan*

- Initially focus on the development of high capacity ports, and associated land based links, on the Central Eyre Peninsula, Yorke and Mid North/ Braemar, and the Northern Eyre Peninsula. An early priority is to confirm the preferred commercial solutions to bulk mineral export infrastructure on Spencer Gulf.
- Provide a supportive regulatory framework for public and private investment, particularly with respect to protecting multi-use infrastructure corridors and efficient approvals processes.
- Provide leadership and coordination to facilitate mining-related infrastructure development.
- Develop business cases and funding applications under suitable Australian Government programs for infrastructure projects identified as part of the *Regional Mining and Infrastructure Plan*.

SOLUTIONS – MAINTAINING AND OPTIMISING THE CAPACITY AND EFFICIENCY OF FREIGHT NETWORKS

Target investment in infrastructure to improve the capacity and efficiency of strategic freight corridors

Road

- Complete the 78 kilometre non-stop North-South Corridor and make targeted upgrades to the Inner and Outer Ring Routes in Greater Adelaide.
- Make targeted upgrades of strategic regional freight roads to achieve High Productivity Vehicle (HPV) standards and improve the safety and consistency of interstate freight routes.
- Work with other levels of government and industry associations to appropriately grow the HPV network and address 'last mile' issues.
- Investigate and implement productivity improvements identified in the Change@SA project *A Modern Transport System for Agriculture – A New Partnership Approach*.

Rail

- Make improvements to the national rail network, including Tarcoola to Crystal Brook, between the Port of Adelaide and northern metropolitan Adelaide, and through the Adelaide Hills, including the resolution of freight capacity constraints at Torrens Junction.
- Investigate potential new rail lines to mines in the North Gawler Craton area.
- Provide for the development of a new rail line to Olympic Dam.
- Work with the private sector and Australian Rail Track Corporation (ARTC) to identify potential solutions to create a direct access link between Whyalla and the national rail corridor near Spencer Junction for trains travelling to the north and west of the State.
- Work with the private sector and industry groups to improve understanding of supply chain needs and identify solutions, including potential improvements and storage locations to support the grain industry on the Eyre Peninsula.

Multi-modal

- Continue to work with the Victorian and Australian Governments to implement the *Green Triangle Freight Action Plan*.
- Further expansion of intermodal terminals at Bowmans and Penfield and develop new intermodals.

Improve the capacity and efficiency of strategic ports and airports, including landside connections

Port of Adelaide

- Protect and improve road and rail access to the Port of Adelaide, including through the Northern Connector project.
- Improve rail infrastructure within the port.

Adelaide Airport

- Continue to support direct international aircraft calls to Adelaide Airport.
- Improve key intersections (such as Sir Donald Bradman Drive/Sir Richard Williams Drive) to maintain efficient freight access to the airport.
- Provide access from Richmond Road for commercial vehicles, taxis and buses.

SOLUTIONS – PREPARE A FREIGHT STRATEGY AND PORTS STRATEGY FOR SOUTH AUSTRALIA

<p>Deliver regulatory reforms and reduce red tape</p>	<ul style="list-style-type: none"> • In conjunction with the review of the planning system: <ul style="list-style-type: none"> • Identify opportunities to improve protection of strategic freight transport corridors and hubs. • Provide consistent and streamlined development assessment processes for freight transport infrastructure and facilities. • Identify opportunities to further improve the regulatory environment for freight transport and reduce red tape for business. <p>National Regulatory Reforms</p> <ul style="list-style-type: none"> • Continue to work with other jurisdictions to deliver nationally consistent and streamlined regulations for freight transport.
<p>Improve the quality of information on the freight transport system and supply chains to inform planning and delivery of infrastructure</p>	<ul style="list-style-type: none"> • Work with other jurisdictions as a part of national efforts to improve the reliability, accuracy, specificity and timeliness of freight transport data. • Work with the private sector and industry groups to improve understanding of supply chain needs and identify solutions, with initial priority being the grain industry.
<p>Provide for strategically located freight hubs and intermodal facilities</p> <p>Provide for freight deliveries in urban environments</p>	<ul style="list-style-type: none"> • Work with the transport sector and local councils to identify locations for freight hubs and enable a supply of well located and serviced land for freight generators and hubs. • Provide for the needs of freight vehicles and deliveries in the design of urban development, including flexibility in time of day delivery.
<p>Introduce a program to address potential traffic conflicts and safety issues</p>	<ul style="list-style-type: none"> • Prepare a rural bypass strategy to improve the safety and amenity of towns frequented by heavy vehicles. • Update and deliver a roadside rest area strategy and service centres policy to support fatigue management and improve heavy vehicle safety. • Implement <i>South Australia's Road Safety Strategy</i> and the <i>Road Safety Action Plan</i>. • Identify opportunities to further improve safety on the road, railways and at freight terminals.
<p>Work in partnership with the private sector, other levels of government, and Regional Development Australia Associations</p>	<ul style="list-style-type: none"> • Identify opportunities and approaches to further improve the capacity and reach of the freight system, including: <ul style="list-style-type: none"> • further develop and grow the identified freight network. • encourage greater use of High Productivity Vehicles. • adoption of intelligent transport systems. • Enhance the safety, sustainability and innovative capacity of the freight system, including sustaining a qualified and productive Transport and Logistics workforce and addressing a range of environmental and productivity factors.

REGIONAL MINING AND INFRASTRUCTURE PLAN

Achieving greater collaboration between the private sector and government – and positioning all levels of government to meet the challenge of mining expansion – led the South Australian Government to develop and release the *Regional Mining and Infrastructure Plan*.

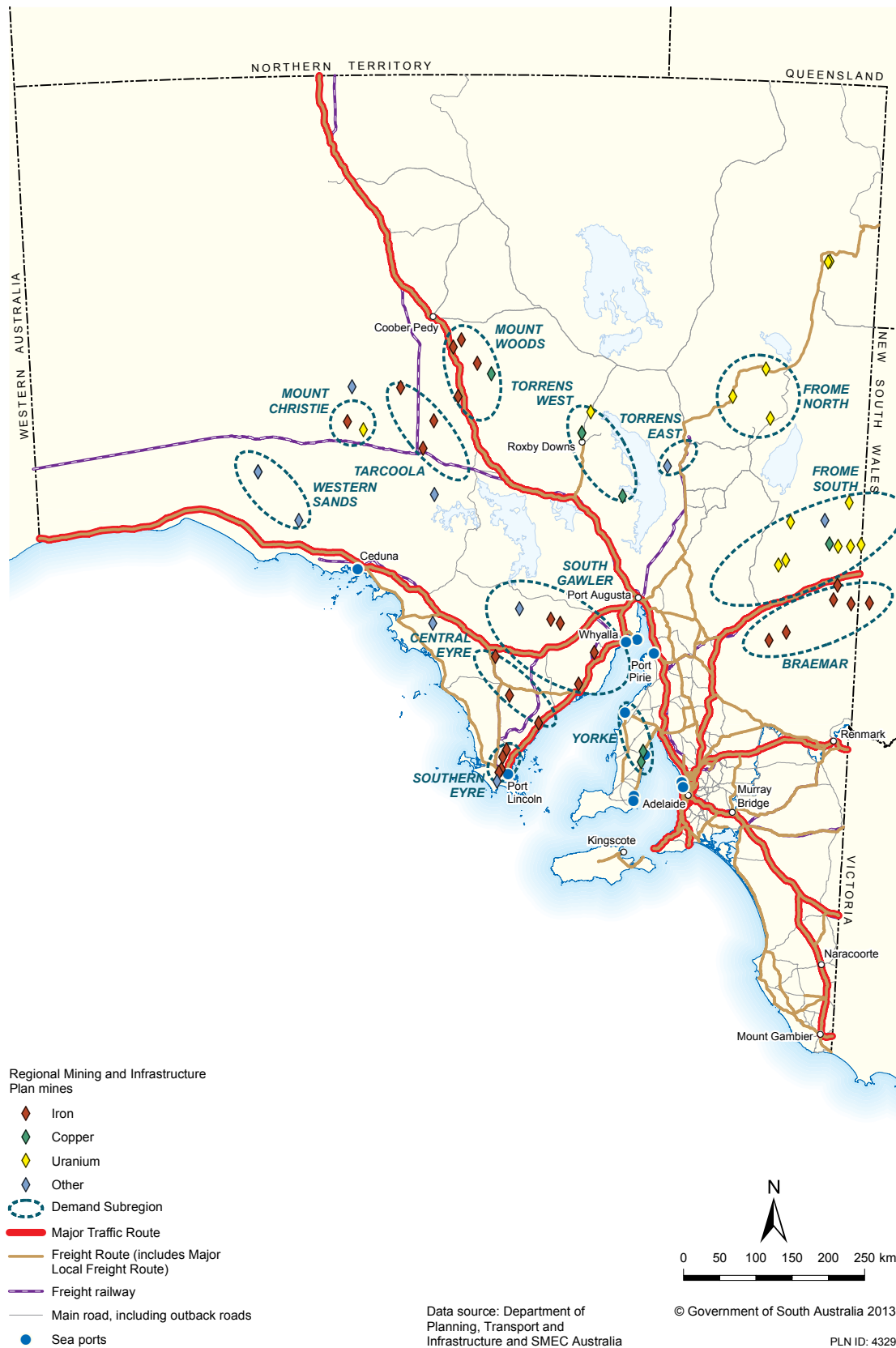
Delivered in partnership between the South Australian Government, the Australian Government and Regional Development Australia, the plan brings together information from across the mining sector and infrastructure providers to gain a more accurate understanding of the following freight and logistics issues:

- The future freight task likely to be generated from emerging mines.
- Port needs in terms of capacity, capability and location, and land transport connections to mines.
- The adequacy of existing freight transport facilities and infrastructure in meeting projected demand.

Planning has been undertaken for each of South Australia's three key mining regions: Far North, Eyre and Western, and Yorke and Mid North/Braemar. The planning identifies and prioritises transport solutions to meet the minerals freight challenge. The *Regional Mining and Infrastructure Plan* aims to promote development of mining related infrastructure to build upon the South Australian Government's Plan for Acceleration Exploration, and to advance mining exploration into operating mines.

The South Australian Government has established the Resources Infrastructure Taskforce to drive the implementation of the *Regional Mining and Infrastructure Plan*.

Figure 5-5 Mining in South Australia



THE ROLE OF ADELAIDE'S AIRPORTS AND THEIR LOCATION AS A COMPETITIVE ADVANTAGE

Adelaide Airport is Australia's fifth busiest airport serving over 7.5 million passengers in 2013 and is ideally situated to encourage growth in both tourism traffic and air freight to and from South Australia. More than 7,480 tonnes of freight was exported in 2013.

The current position of Adelaide Airport is one of South Australia's competitive advantages: it's easy to get to, has ample room for growth and is supported by a range of businesses and industries that have grown alongside it to benefit from the flow of passengers and freight in the area or to support activities at the airport. This proximity to Adelaide's metropolitan areas requires some compromises to protect community amenity, such as curfew arrangements and flight path procedures.

Parafield Airport is one of Australia's busiest General Aviation airports and also the location for Flight Training Adelaide, UniSA Aviation Academy and TAFE SA. The airport also provides pilot training for a number of domestic and foreign airlines. Similarly to Adelaide Airport, significant investment has been undertaken over time to entrench this airport in its current location (where it has been since 1927) and it supports significant industry and employment in the north of Adelaide.

Adelaide Airport and Parafield Airport are owned by the Australian Government and leased to private industry. Adelaide Airport Limited purchased the leases for both airports in May 1998. The initial 50 year lease expires in 2048 and there is an option to extend the lease period to 2097. In its 2009 *National Aviation Policy White Paper*, the Australian Government confirmed its commitment to the continued operation of these nationally important facilities and is working with all states and territories to ensure that these and all significant airports are protected from inappropriate surrounding development.

Landside links are currently satisfactory to support the needs of the airports and, with the future potential tram link to Adelaide Airport and upgrades to Sir Donald Bradman Drive, the airport's future transport requirements will be met.

ADELAIDE'S ROLE IN THE SOUTH AUSTRALIAN FREIGHT TASK

Adelaide itself is a significant attractor for freight vehicles, both road and rail. Key generators/destinations include the Port of Adelaide, Adelaide Airport and the city's growing domestic import/export industries – as goods for Adelaide residents and the products of Adelaide-based businesses often are imported or exported through the Port of Melbourne.

The existing rail alignment was opened in January 1887 through the largely unpopulated Adelaide Hills. Since that time, urban development surrounding the rail line has increased as has the number of trains using the line. This has led to increasing concern about the impacts of the rail freight line on the amenity of this area for local residents.

While alternative options have been considered that seek to bypass the Adelaide Hills area, these options are prohibitively expensive, with benefits that do not justify the costs associated with their implementation. Some of these options, particularly those that identify an alternative alignment to the north of Adelaide, also have other negative impacts on rail freight operations, including longer running distances for Melbourne to Adelaide movements, which may result in rail losing its market share to road freight on this corridor.

With respect to a road freight bypass of Adelaide, investigations have identified that a bypass route cannot be justified on economic grounds. This is primarily due to the limited number of vehicles that would use such a bypass and the longer distances and travel times associated with alternative route options.

There are existing alternative routes that allow heavy vehicles (including B-Doubles) to travel between the South Eastern Freeway and Adelaide's northern suburbs or the mid north of the State to the east of the Adelaide Hills. A B-Double route exists via Murray Bridge and Sedan to the Sturt Highway and then into Adelaide along the Northern Expressway to Adelaide. Depending on the destination and transport task being undertaken, further options are available for travel to/from the mid north.

Traffic counts suggest that only approximately 10-15% of heavy vehicles on the Princes Highway to the east of Murray Bridge use these existing roads to bypass Adelaide. The relatively low use of this route is due to the high proportion of heavy vehicles having an origin or destination within Adelaide, and therefore use the South Eastern Freeway. The data further suggests that approximately half of the heavy vehicles using the section between Crafers and the Portrush Road / Glen Osmond Road / Cross Road intersection have origins or destinations within the Adelaide Hills area. This section of the freeway therefore provides important access for businesses within the Adelaide Hills. This data confirms the importance of Adelaide being a significant attractor for freight.

The *Integrated Transport and Land Use Plan* concentrates on ensuring that freight routes through Adelaide are efficient and that freight vehicles are concentrated on the freight routes identified in the new *A Functional Hierarchy for South Australia's Land Transport Network*. This minimises their travel on routes where land use and condition are unsuitable.

5.7 SOLUTIONS FOR ALL OF SOUTH AUSTRALIA

Many transport and land use issues are not specific to any one location or corridor: they are important for all of South Australia. These issues include the sustainable management of our transport infrastructure assets, addressing road safety issues, and managing the ecological footprint of our transport network and travel demand.

Managing and maintaining our transport assets

The risks of not performing appropriate maintenance on our transport assets range from safety risks associated with the use of the asset, and in some cases loss of availability of the asset due to failure, through to increased replacement and repair costs and greater inefficiency. The Plan includes actions to minimise these risks and make sure that our transport assets continue to make a major contribution to the state's economy, connectivity and liveability.

SOLUTIONS – MANAGING AND MAINTAINING OUR TRANSPORT ASSETS	
Increased maintenance	<ul style="list-style-type: none"> Increased maintenance funding to improve and sustain the performance (safe and efficient operations) of the transport network. Continue to ensure State Government asset management practices provide the best mix of maintenance solutions.
Maintain our road network	<ul style="list-style-type: none"> Establish and fund minimum service levels for roads, consistent with <i>A Functional Hierarchy for South Australia's Land Transport Network</i>, to improve and sustain the performance of the state's arterial road and bridge networks. Update asset management plans for the state and national road and bridge networks consistent with the <i>A Functional Hierarchy for South Australia's Land Transport Network</i>. Expand the use of the Pavement Asset Management System. Continuously review maintenance practices and procurement and delivery models to ensure value for money from investment in the road network. Purchase five new replacement ferries for the River Murray. Work with local councils to improve road maintenance delivery in regional areas. Continue to use the <i>Road Classification Guidelines in South Australia</i> to distinguish between arterial and local roads.
Maintain our public transport networks	<p>State Assets</p> <ul style="list-style-type: none"> Prepare and work to a new asset management plan to optimise the life of our rail and tram assets and manage performance and operating costs. Incorporate all new rail and tram network assets into our Asset Management System for effective lifecycle management. Undertake a rail network bridge upgrade program. Continue to maintain the public transport rolling stock – train, tram and bus – to enable delivery of efficient services. <p>Private Sector assets</p> <ul style="list-style-type: none"> Encourage maintenance strategies appropriate to required safety and performance targets.
Maintain our marine assets	<ul style="list-style-type: none"> Ensure asset management plans are consistent with other transport asset management plans. Continuously review maintenance practices and procurement and delivery models to ensure we get value for money from investment in marine assets. Ensure boat ramps at North Haven, West Beach and O'Sullivan Beach continue to provide unrestricted access for public use. Develop strategic boat ramp sites along the state's coastline such that they provide a network of safe havens for vessels. Enhance visitor experiences of jetties.
Maintain our aviation assets	<ul style="list-style-type: none"> Continue to actively support local councils and airport owners in maintaining regional and remote aviation assets.

Making our transport system safer

No death or serious injury on our roads is acceptable or inevitable, and all South Australians share the responsibility to address the trauma caused by everyday road use.

Over the last 30 years, South Australia has achieved a significant reduction in the number of deaths and serious injuries due to road crashes – despite a 20 per cent growth in population and a 47 per cent increase in registered motor vehicles. But the total cost of road crashes to the South Australian community remains high: over \$1 billion each year, together with a great amount of personal grief, suffering and loss.

As well as continuing with approaches that have proved successful, we will take further action to reduce the personal and community costs of road crashes and make our transport system safer.

Towards Zero Together – South Australia's Road Safety Strategy 2020 sets the direction for reducing serious casualty crashes during the decade by at least 30 per cent to less than 80 fatalities and less than 800 serious injuries per year by 2020. The strategy is supported with action plans that set out priority actions for achieving the targets. Key performance indicators allow the regular assessment of progress of the actions in different areas. The *Road Safety Action Plan 2013-2016* highlights 66 actions to be undertaken over the next three years.

SOLUTIONS – MAKING OUR TRANSPORT SYSTEM SAFER	
Promote a shared responsibility for road safety	<ul style="list-style-type: none"> • Work closely with the community to implement the <i>Road Safety Strategy</i> and the <i>Road Safety Action Plan</i>. • Build community understanding of road safety through safety information and education.
Invest in safer roads	<ul style="list-style-type: none"> • Undertake targeted road upgrades and infrastructure programs, regular safety assessments and audits of the network.
Create safer communities and neighbourhoods	<ul style="list-style-type: none"> • Cater for and enable more walking and cycling, and create more vibrant, better connected and healthier communities.
Encourage safer behaviours	<ul style="list-style-type: none"> • Work towards greater compliance with road rules, speed limits, drink and drug driving laws, heavy vehicle driver fatigue and seatbelt laws.
Continuously improve the licensing system	<ul style="list-style-type: none"> • Help all South Australians to develop the necessary knowledge, skills and experience to be safe, compliant road users.
Apply new technology	<ul style="list-style-type: none"> • Promote and encourage the uptake of emerging vehicle safety and speed enforcement technologies. • Legislate for driverless vehicles. • Continue to work with other Australian jurisdictions and the private sector to support and roll out emerging Cooperative ITS technologies that include vehicle to infrastructure (V2I) and vehicle to vehicle (V2V) communications.

Using smart technology to improve transport system outcomes

Electronic communications and other advanced technologies will increasingly enable a wide range of transport system outcomes to be achieved more efficiently and effectively across all modes. This will involve adapting our infrastructure as progressively smarter vehicles come to South Australian roads.

We will work in collaboration with industry, universities and all levels of government to research, develop and implement a range of advanced technologies designed to achieve safer vehicles and roads, improved traveller information, network efficiency and congestion management, freight industry efficiency as well as supporting local industry development in the emerging areas of technology.

There is significant global interest in the development of driverless vehicles. Driverless cars could deliver significant societal benefits for improved safety, reduced congestion, better road-space utilisation and amenity, and reduced emissions. The State Government will legislate for driverless vehicles which will revolutionise transportation in South Australia.

CONNECTSAFE ADELAIDE – BRINGING SMARTER VEHICLES TO SOUTH AUSTRALIAN ROADS

In 2011, the South Australian Government and the South Australian Motor Accident Commission commissioned Australia's first field trial of vehicle-to-infrastructure technologies. The ConnectSafe Adelaide trial was conducted by the University of South Australia and Cohda Wireless, an Adelaide company recognised as a global leader in the development of connected vehicle technologies. The trial used ten vehicles equipped with dedicated short range communications (DSRC), also known as Cooperative Intelligent Transport Systems (C-ITS) that allow vehicles to communicate to other vehicles (V2V) and to infrastructure (V2I). Data was uploaded via roadside equipment to the DPTI Traffic Management Centre, providing valuable information about road conditions and traffic flow, congestion, road safety 'black spots', intersection queue lengths and travel times. On-road demonstrations also gave participants first-hand experience of co-operative safety applications including intersection collision warning, emergency electronic brake light and roadworker alerts.

C-ITS technologies have been hailed as the next innovation to deliver road safety improvements, similar to those provided by seat belts and airbags. A recent Austroads report² found that the adoption of V2V and V2I technologies could reduce serious road crashes by 25-35 per cent. Researchers have also developed systems that communicate with mobile devices such as smart phones to enable vehicles to be aware of pedestrians or cyclists.

2 Austroads 2013, *Austroads Research Report – Vehicle Positioning for C-ITS in Australia (Background Document)*.

HOW INTELLIGENT TRANSPORT SYSTEMS CAN IMPROVE TRANSPORT SYSTEM OUTCOMES

Intelligent transport systems (ITS) are technologies that enable information to flow between vehicles, infrastructure and transport users. A number of ITS technologies underpin South Australia's transport system.

- The state-of-the-art Traffic Management Centre (TMC) to enable management of one of the most sophisticated traffic signal systems in the world, and is responsible for the smooth flow of traffic through more than 850 sets of coordinated traffic lights and pedestrian crossings, as well as on expressways and the South Eastern Freeway.
- The TMC is central to managing traffic impacts from roadworks, incidents and planned on-road events, using 500 closed circuit television (CCTV) cameras, and electronic road signs, such as variable speed limits along the South Eastern Freeway and managed motorway technology on the South Road Superway which includes lane use management signs.
- Real-time public transport information from Adelaide Metro.
- Traffic SA website showing real-time roadworks, incidents and planned events.
- 45 remotely controlled outback road condition signs across the Far North of the state.
- Reversible lanes along Flagstaff Hill Road.
- Automated and/or remotely controlled road signs, such as the variable speed limits along the South Eastern Freeway as part of a Managed Motorway system.
- The Safe-T-Cam system for enforcement of heavy vehicle driving hours.
- In-vehicle technologies such as navigation systems, electronic stability control, adaptive cruise control, intelligent speed assist, tyre pressure monitoring, etc.

Road and rail freight operators are also embracing ITS to improve the competitiveness, safety and environmental performance of their fleets, including Advanced Train Management Systems, National Intelligent Access Program, and freight terminal management.

Cooperative ITS (C-ITS) is seen as the next wave of ITS development that could fundamentally affect the way we travel. C-ITS offers significant safety, efficiency/ congestion and environmental benefits through a range of applications combining wireless communications and GPS. This allows vehicles to communicate their position, speed, braking and other information to nearby vehicles (V2V) and also between vehicles and roadside infrastructure (V2I). Examples include:

- **Safety** – collision warning, collision avoidance, incident warning, intersection assistance, signal violation warning, rail crossing warning, lane departure warning, emergency brake light, speed limit notification, roadworks warning, and road weather warning.
- **Efficiency and environment** – traffic information services, enhanced route guidance, road access warning, in-vehicle signage, traffic light advisory, green wave, eco-driving systems, loading and parking management and vehicle fleet movement data to enable optimised traffic management.

SOLUTIONS – USING SMART TECHNOLOGY TO IMPROVE TRANSPORT SYSTEM OUTCOMES	
Priority for cycling and walking	<ul style="list-style-type: none"> • Incorporate intersections and pedestrian crossings that allow priority for cyclists and people walking where appropriate.
The modernisation of Greater Adelaide's public transport system	<ul style="list-style-type: none"> • Deliver real-time information at key stations and stops as well as enhanced passenger information through data sharing on mobile devices using apps. • Apply smart public transport priority measures at ramps and intersections.
Build the open data foundations for transport in the digital age	<ul style="list-style-type: none"> • Provide real-time and background data feeds of transport and traffic information. • Work with the transport and traffic information industry to continuously improve the standardisation, accuracy and timeliness of information. • Establish a resilient ITS backbone across Greater Adelaide using road and rail corridors. • Review legislation and regulatory frameworks to ensure transport and traffic management is prepared for the evolution of ITS.
Implement managed motorway techniques	<ul style="list-style-type: none"> • Implement treatments and techniques along the South Eastern Freeway including: <ul style="list-style-type: none"> • Hard shoulder running between Stirling and Crafers in the short term, and extending further out towards Mount Barker when required. • Extending the traffic management system (incident detection, CCTVs, variable speed limit signs and variable message boards) from Bridgewater to Mount Barker. • Expand South Australia's managed motorway network to include the South Eastern Freeway, Northern Expressway, Northern Connector, South Road (Wingfield to Darlington), the Southern Expressway and the Port River Expressway.
Improving freight productivity, safety and compliance	<ul style="list-style-type: none"> • Continue to work with other Australian jurisdictions and the private sector to support and roll out advanced freight management systems, for example Intelligent Access Programs for optimising intermodal freight. • Apply smart freight priority measures at ramps and intersections as part of the managed motorway network.
Adapt to new technologies to improve road safety and efficiency outcomes	<ul style="list-style-type: none"> • Increase the use of point-to-point speed enforcement. • Legislate for driverless vehicles. • Continue to work with other Australian jurisdictions and the private sector to support and roll out emerging technologies that include V2I and V2V communications.

Supporting tourism

Transport plays a critical role in supporting tourism: an easy to use transport system allows tourists to move around Adelaide, visit attractions close to Adelaide such as the Barossa Valley, Adelaide Hills, Victor Harbor and Kangaroo Island and explore regional South Australia and the more remote parts of the State.

The South Australian and Australian Governments, local councils, Regional Development Australia associations and the private sector all have roles to play in supporting and growing the State's tourism industry. Solutions proposed through The Plan focus on addressing specific transport issues that will improve visitors' experiences in Adelaide and South Australia and contribute to the industry's growth.

SOLUTIONS – SUPPORTING OUR TOURISM INDUSTRY	
Helping tourists to move around	<ul style="list-style-type: none"> • Improve signage along tourist routes (on and off road) and to particular points of tourism interest (including for cyclists and walkers). • Improve roadside rest areas to provide greater amenity and cater for larger tourist vehicles to support safer driver behaviour. • Upgrade existing and provide additional walking and cycling facilities to support active tourism and connect tourist attractions in our cities and towns. • Improve the information available on regional bus services. • Maintain and improve the outback road network. • Sustain regional air access and secure new air charter opportunities.
Increase the number of direct international connections and enhance gateways to South Australia	<ul style="list-style-type: none"> • Develop more cruise ship opportunities. • Attract more international air services to Adelaide. • Relocate the interstate passenger rail terminal at Keswick to the existing Adelaide Railway Station. • Continued investment in passenger facilities and amenity improvements at ports called on by cruise ships.

Reducing transport's environmental impacts

Approximately 17-20% of South Australia's greenhouse gas emissions are attributable to the transport sector. The construction and operation of transport infrastructure can also adversely impact aspects of the natural environment. Air toxic emissions, such as particulate matter and nitrous oxides, and noise from transport operations can have deleterious health effects, particularly in urban environments. While existing levels are very good by international standards, it is important that they are maintained or improved as the transport task grows and the population is further concentrated in urban centres.

There is a need to reduce the state's emissions, and the State Government has recently announced the intention to establish a carbon-neutral Adelaide Green Zone for the city centre. To achieve these goals, net greenhouse gas emissions from transport will need to be reduced over time. Within a decade, electric and hybrid vehicles will be the preferred form of transport within Adelaide's Central Business District.

To better manage and reduce the environmental impacts of our transport sector, we will need to re-think how we travel, the kinds of vehicles and fuels we use and the way we design and construct our cities, towns and transport infrastructure. In addition to measures adopted in this Plan to better integrate transport and land use and encourage people to shift to more sustainable transport modes, we will pursue initiatives designed to have a direct impact on reducing transport energy use and emissions. New technologies such as electric and/or hydrogen fuel cell vehicles may also emerge as cost effective ways to reduce net or local emissions.

SOLUTIONS – REDUCING ENVIRONMENTAL IMPACTS	
Reduce greenhouse gases in line with State Government targets, as well as other air emissions from the vehicle fleet	<ul style="list-style-type: none"> • Monitor the emissions profile of the transport sector and develop strategies to contribute to the State's emission targets and the achievement of the carbon-neutral Green Adelaide Zone. • Encourage shifts in both passenger and freight transport to lower emission modes. • Improve local air quality by making the shift to electric trains (electrification also allows for potential future benefits of increased renewable energy). • Encourage and adopt new technologies and practices in infrastructure design, construction and maintenance which reduce greenhouse gas and other emissions from transport. • Encourage early replacement of ageing transport fleets (all modes) • Implement strategies within <i>South Australia's Low Emissions Vehicle Strategy</i>, including: <ul style="list-style-type: none"> • Promote fuel efficient vehicles and encourage maintenance programs for optimum performance. • Facilitate increased use of renewable and low emission fuels in South Australia. • Remove information, policy and market barriers to electric vehicles. • Provide the community with tools and authoritative information about ways to reduce vehicle emissions. • Support research, development and commercialisation opportunities for South Australia relating to low emission vehicles and fuels.
Reduce noise emissions and their impacts	<ul style="list-style-type: none"> • Reduce the noise profile of the transport sector. • Deploy the Minister's Noise Specification for new housing developments adjacent tram lines, train lines and major traffic routes. • Undertake noise mitigation when constructing new or substantially upgraded roads or railways adjacent to areas that are sensitive to noise. • Participate in national policy forums to reduce noise and air emissions from vehicles including, for example, improving Australian Design Rules for vehicles.
Improve environmental design, resource use and procurement practices	<ul style="list-style-type: none"> • Minimise transport and land use effects and enhance the natural environment by using appropriate sustainable design principles, guidelines and targets for projects • Adopt energy saving, low emission technologies as they become available. • Develop an environmental procurement policy
Build relationships	<ul style="list-style-type: none"> • Find innovative ways to collaborate with environmental groups and the community.

Reducing our car dependency

This Plan supports a social and cultural shift in which people move increasingly towards choosing active travel modes, public transport and using their cars more efficiently. This supports healthier, stronger, more resilient communities who use local goods, services and facilities, decreasing their need to travel longer distances. It also enables significant emission reductions from within the transport sector.

Medium density mixed-use development will increase access to the number and variety of services that are within walkable and cycling distances. Busier public spaces will encourage people to walk through an area, as well as providing a sense of security. Better public transport, walking and cycling links between and within mixed-use activity centres (that provide bike parking facilities) will enable people to move around easily and safely without using their cars.

While this shift will make public and active transport options more attractive, large scale and sustainable changes in individual and household travel choices and behaviours will require a range of interventions. Programs delivered will encourage individuals and organisations to consider their travel options: to substitute car trips with another mode; reduce the distance travelled by car; or even eliminate the need for some journeys.

SOLUTIONS – REDUCING OUR CAR DEPENDENCY	
Make public transport, walking and cycling more attractive travel choices	<ul style="list-style-type: none"> • Encourage medium density mixed-use development to increase access to the number and variety of services that are within active travel distances. • Give South Australians more travel choices through more frequent, faster and better connected public transport services. • Continue to support public transport service innovations for carnival events (e.g. Clipsal 500 and free tram travel vouchers for City-Bay Fun Run). • Actively promote the social, economic, environmental and health benefits of cycling and walking.
Change our travel choices and behaviour	<ul style="list-style-type: none"> • Deliver targeted travel behaviour change programs that are designed to shift people's travel patterns and reduce car dependency. • Consider including carpooling schemes in future travel behaviour programs (following the trial of the Adelaide Car Pool initiative). • Introduce car sharing and public bike sharing schemes. • Take advantage of information and communication technology to reduce the need for physical travel.
Embed travel behaviour change approaches into planning	<ul style="list-style-type: none"> • Ensure that travel behaviour change initiatives and approaches are built into transport and land use planning processes.

Adapting to climate change and building our resilience to disasters

With the likelihood of more frequent and more extreme weather events occurring as a result of climate change, we need a transport system that is capable of operating during more extreme events with minimum disruption. The system also needs to be resilient in the event of localised incidents and disasters.

The range of potential impacts from climate change that could affect South Australia's transport system includes: higher average temperatures; more extreme hot days; greater risk of bushfires; increased solar radiation (UV); increased concentration of CO₂; sea level rises or storm surges; reduced annual rainfall; more intense rainfall events and frequency of flooding; and increased frequency of storms. These impacts are likely to vary in their frequency and severity across different regions of the State. Figure 5-6 shows projected change in total annual rainfall and mean surface temperature based on a moderate global warming scenario.

To protect the environment and ensure continuity of services, vital transport assets and services, our future infrastructure investment and service provision will need to identify and assess the potential risks from these impacts and manage them appropriately.

In addition to continuing to find ways to reduce CO₂ emissions from transport, we need to start planning now to adapt our infrastructure and business processes over time to build a resilient transport system that includes:

- the capacity to provide alternative routes in the event of incidents or disasters, or planned events
- quick responses to incidents on the network and emergency situations
- a comprehensive hazard identification and risk management approach that is integrated into transport planning, infrastructure design and service provision.

We will deliver a comprehensive Climate Change Adaptation Plan for state-owned transport assets that enables the government to:

- systematically develop and implement responses to the challenges of climate change
- provide leadership and strategic direction for increasing the resilience of roads and other transport infrastructure
- provide operational responses that are based on the best scientific and technical knowledge³ and include comparison of the financial costs of various adaptation options.

We will also work in partnership with other regional and sectoral adaptation plans to ensure that the possible effects of climate change on the environment, our transport assets and our processes are better understood and addressed.

Effective adaptation will enable informed decision-making, help to avoid potential economic and community disruption, and reduce the risk of legal liabilities associated with climate impacts.

We will adopt an all hazards approach for emergency and disaster management in line with the State Emergency Management Plan. This will cover prevention, preparedness, response and recovery. We will coordinate the protection, restoration and maintenance of transport infrastructure during major incidents, emergencies and disasters. This will occur in partnership with South Australia Police, emergency service organisations and other stakeholders to deliver an inclusive and fully coordinated state-wide response.

SOLUTIONS – ADAPTING TO CLIMATE CHANGE

Building a resilient transport system

- Deliver a comprehensive Climate Change Adaptation Plan for state-owned transport assets.

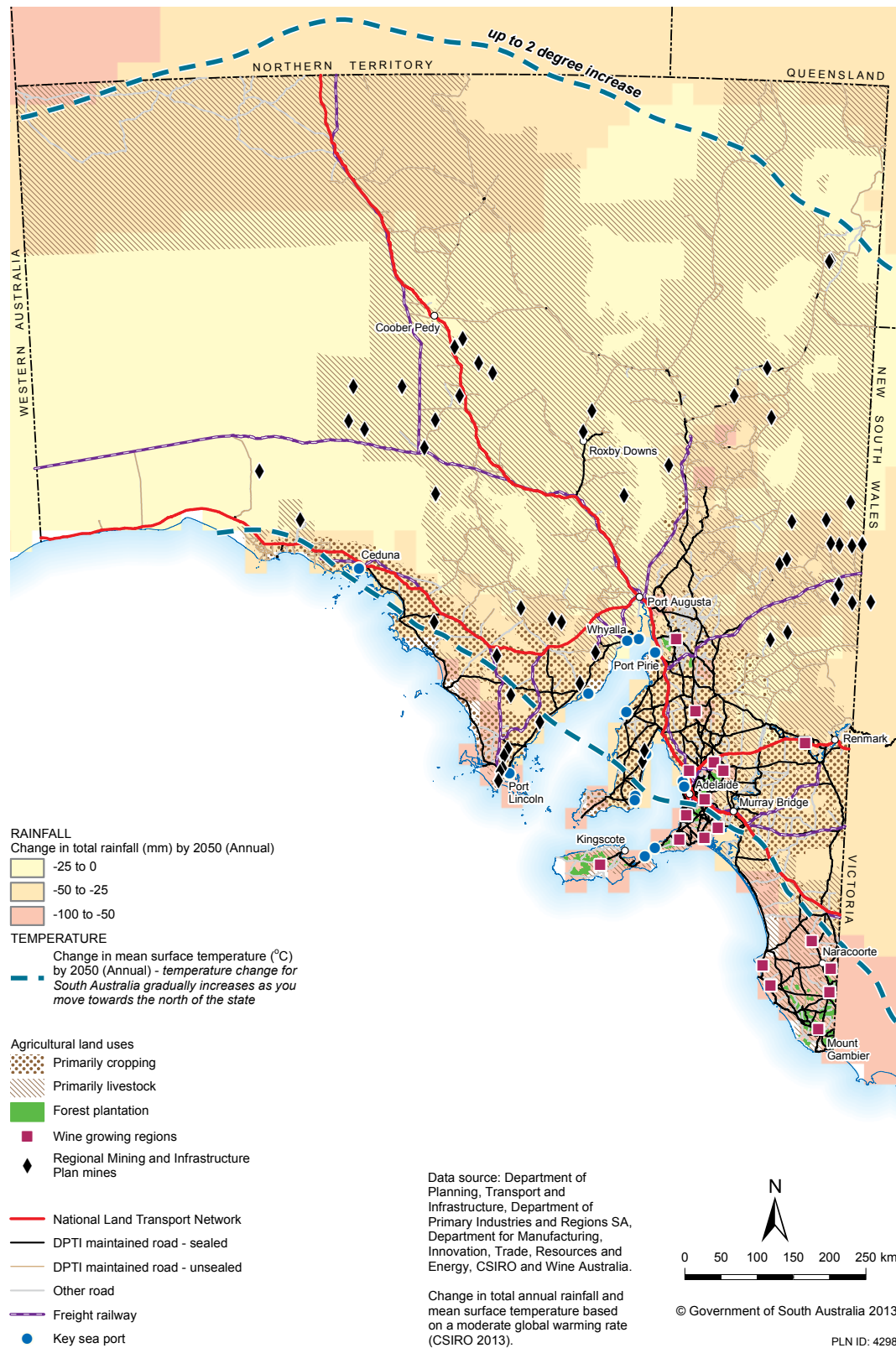
Improving our management of emergencies and disasters

- Adopt an all hazards approach for emergency and disaster management that covers prevention, preparedness, response and recovery.

³ Leonello B (June 2011), "Climate Change Adaptation Decision Framework for Maintenance of Road Infrastructure", University of Adelaide.

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Figure 5-6 Projected climate change impacts



5.8 WHAT WILL HAPPEN WHEN AND WHERE

Inner Adelaide

The largest numbers of workers in South Australia are concentrated in inner Adelaide, with over 10,000 new jobs created in the city centre between 2006 and 2011. This trend will continue, especially given the changes in land use policy for the city centre introduced in 2012, which are expected to deliver an additional 80,000 jobs – depending on market circumstances – over the next 30 years. A more compact and accessible urban form will be needed to support this growth.

The Adelaide Capital City Development Plan Amendment and the Inner Metropolitan Growth Project have relaxed building heights and development constraints within the city centre and the inner metropolitan area suburbs. These changes provide the framework for the intensification of residential, commercial and retail activity in the inner city. The intention to achieve a carbon-neutral Green Adelaide Zone within the city centre will also require a stronger focus on low carbon transport services, such as active and public transport and possibly electric vehicles, both within the city centre and for people travelling to the city centre.

Revitalisation of the Riverbank Precinct – connecting the Bowden Urban Village, the new Royal Adelaide Hospital, the Health and Biomedical Precinct, Convention Centre, Festival Centre, the redeveloped Adelaide Oval and footbridge across the River Torrens, the two universities and the old Royal Adelaide Hospital site – will deliver additional facilities and attractions that residents and visitors will want to access. Connecting the Riverbank with the business ‘heart’ of the city through to a revitalised Victoria Square via people-friendly streets where cycling, walking and public transport are prioritised will provide further impetus for the development of vibrant, lively places and successful businesses.

This progressive concentration of development will see a significant increase in people living in the city centre. They will be supported by a street network amenable to cycling and walking, an extended inner city tram network and a new CBD tram loop connecting residents to workplaces, services, shops and leisure activities. In the longer term, an underground train line may provide additional stations and connections through the CBD, as well as connecting with the middle and outer northern and southern suburbs. As a result of these initiatives, moving around the city centre will be much easier and more convenient, opening up new opportunities for business and residential expansion.

The neighbouring inner suburbs will also be the focus for additional growth over the next 30 years. Residents and businesses in these inner areas will be supported by an improved mass transit network that delivers faster and more frequent bus, train and tram services including along dedicated corridors which prioritise buses on some core roads and allow for significantly reduced travel times.

New tram lines will provide additional opportunities to connect people to employment and services across the city centre and neighbouring suburbs. The permanency provided by an extended tram network will stimulate development along these transit corridors and enable surrounding areas to evolve into attractive, vibrant and walkable places where people will want to live, visit and build their businesses.

Making the most of the connectivity and accessibility provided by the O-Bahn between the inner city and the north-eastern suburbs will also be a priority. Buses will connect to the O-Bahn more efficiently, improving travel times and reducing on-road delays between Hackney and the city centre.

Improvements and extensions to cycling and walking networks along key access roads into the inner city area will also make it easier for people to access jobs and services in the CBD from the inner and middle suburbs, and to choose active travel modes for all or part of their daily journeys.

Road improvements will be undertaken across the inner city to cater for diverse and often competing travel needs. The Inner Ring Route will be upgraded to provide more efficient traffic movements around the city, improving access to different parts of the inner city and reducing the need for cars and trucks to travel through the CBD. An efficient Inner Ring Route will support businesses in the inner suburbs surrounding the Park Lands, such as the science, technology and innovation clusters in Thebarton and the various industrial, commercial and bulky goods establishments located along the Ring Route, providing further opportunities for residential and business expansion in the inner city.

South Road will remain the principal north-south route for freight and business, freeing up parts of the network to allow for better east-west connectivity and efficient movement to key locations such as Adelaide Airport and the Port of Adelaide. Improvements to intersection 'pinch points' along Sir Donald Bradman Drive – the key access route from the Adelaide CBD to the airport – will further enhance the efficiency of traffic movements to and from the airport.

Similar treatments to the Outer Ring Route will also provide more efficient road links for freight, helping to keep freight traffic out of the inner city. This will improve safety, reduce congestion and enhance the amenity, liveability and vibrancy of residential and mixed-use environments throughout the inner city area.

Together, these initiatives will support and facilitate people moving to the CBD and inner Adelaide, enabling us to reach our goal of a more compact, well-connected and highly liveable city more quickly.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport			
1. PortLINK– conversion of the Outer Harbor train line to deliver a new tram service to Outer Harbor and Grange and construct a new tram line to West Lakes and Semaphore			
2. WestLINK and EastLINK – extend trams along the east-west corridor from Henley Square, Henley Beach Road, through the city and along the Parade turning north to Magill Campus, with an extension to Adelaide Airport			
3. ProspectLINK and UnleyLINK – trams along Prospect Road from Grand Junction Road, O'Connell Street, through the City to Unley Road and Belair Road to Mitcham			
4. CityLINK – continuous tram loop around the CBD, connecting other tram lines and key activity zones			
5. Gawler line – complete the electrification of the entire line, increase service frequency, staged upgrade of stations			
6. Improve O-Bahn access to the Adelaide city centre			
7. Construct bus 'Super Stops' in the City, along Glen Osmond Road and other key bus routes			
8. Glenelg tram line – increase service frequencies and increase tram size and tram fleet			
9. Possible Adelaide city centre underground train link between the northern and southern train lines, providing four city stations at key activity zones			
10. Relocation of the interstate passenger rail terminal at Keswick to Adelaide Railway Station			
Area-wide solutions			
• Restructure bus services and improve bus service frequencies			
• On-road bus priority measures on core routes			
• Rationalise and improve protection for pedestrians at at-grade railway crossings			
Roads			
Progressively upgrade South Road as part of a strategy to develop the non-stop North-South Corridor, including grade separation with key east-west arterial routes and provision of at-grade service roads, any interim works and detour works during construction: (refer 11 and 12)			
11. North-South Corridor – Torrens Road to River Torrens			
12. North-South Corridor – Regency Road to Southern Expressway (excluding Torrens Road to River Torrens and Darlington)			
13. Improve the efficiency and safety of the Inner Ring Route, including intersection and mid block upgrades, and duplication of Richmond Road (Keswick)			
14. Improve the efficiency and safety of the Outer Ring Route, including intersection and mid block upgrades			
15. Upgrade intersections along Sir Donald Bradman Drive to reduce congestion and improve reliability of travel times to the airport			
Area-wide road solutions			
• Targeted upgrades of key intersections and sections of road to improve efficiency and safety performance			
• Grade separate road crossings of the rail line at key locations, such as Torrens Road, and potentially of the Glenelg and PortLINK tram lines at key locations			
• Preserve and construct when necessary potential future road duplications such as Churchill Road (Prospect)			

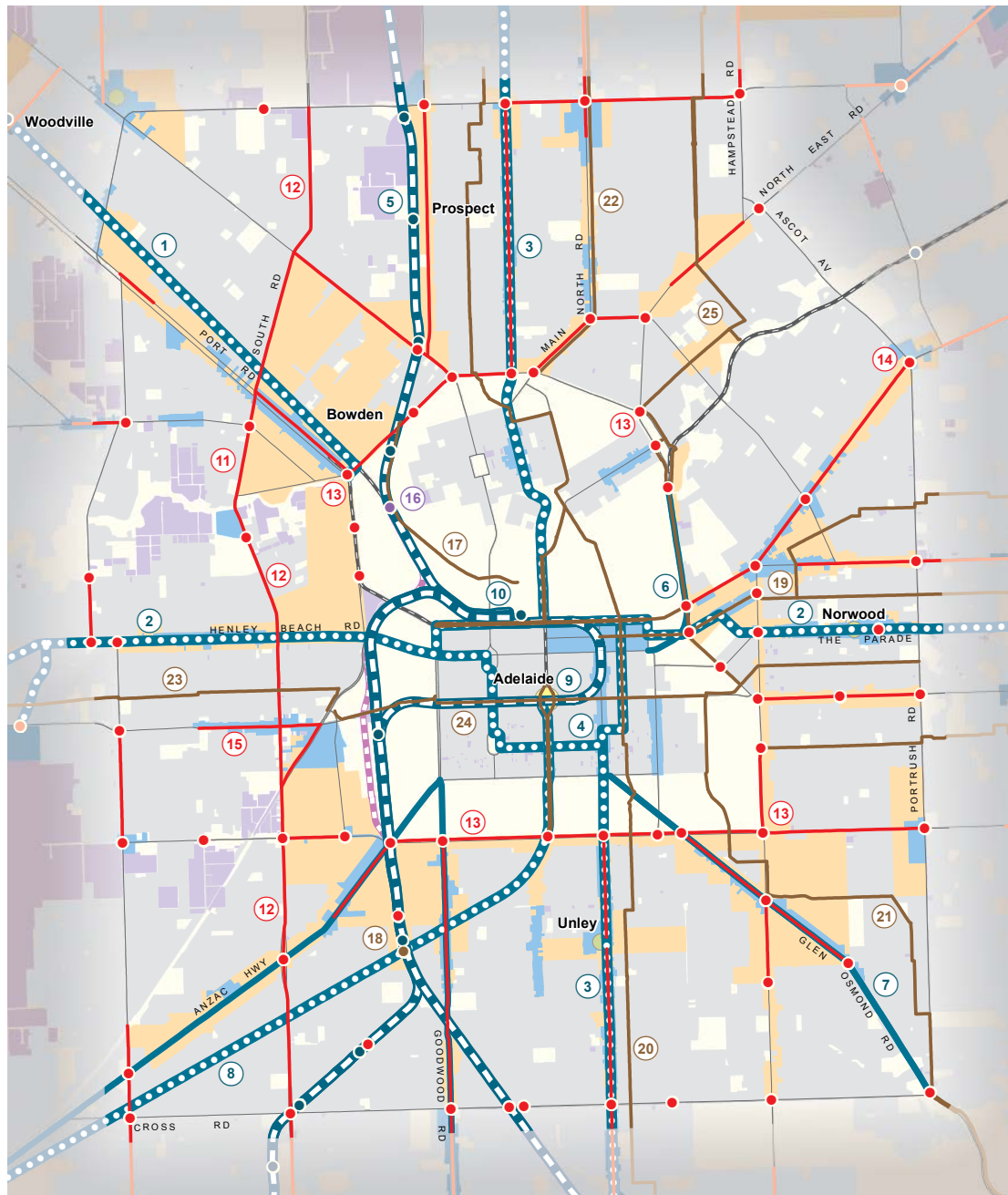
<ul style="list-style-type: none"> Actively manage the operation and performance of the road network to give priority to movements along key freight and major traffic corridors 			
<ul style="list-style-type: none"> Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets 			
<ul style="list-style-type: none"> Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations 			
Ports, rail freight, airports and intermodals			
16. Resolve freight capacity constraints at Torrens Junction where the passenger and freight lines intersect			
Cycling and walking			
17. Partner with Adelaide City Council to complete the Gawler Greenway alignment following War Memorial Drive			
18. Mike Turtur Bikeway, construct Goodwood overpass			
19. Partner with local councils to complete the Bicycle Boulevard Program			
20. Partner with local councils to complete the Belair–City Bikeway, including crossings of arterial roads			
21. Partner with local councils to extend the Crafers Bikeway from the Tollgate to the City, including crossings of arterial roads			
22. Complete provision of bicycle lanes on Main North Road between Munno Para and the City			
23. Partner with local councils to complete the Airport Bikeway, including crossings of arterial roads			
24. Partner with Adelaide City Council to complete North-South and East-West Bikeways through the City			
25. Partner with local councils to upgrade the Levels–City Bikeway from Regency Road to the City			
Area-wide solutions			
<ul style="list-style-type: none"> Improve walking and cycling facilities in catchment areas for schools, public transport stations, activity centres and main streets 			
<ul style="list-style-type: none"> Create safe and convenient walkable environments in and around public transport stations, activity centres, main streets and schools 			
<ul style="list-style-type: none"> Develop and introduce Metrocard operated public bike sharing schemes for inner Adelaide and at key public transport hubs 			
<ul style="list-style-type: none"> Extend bicycle lanes to intersections on key routes 			
<ul style="list-style-type: none"> Improve cycling access to city, walk accessibility to parklands 			
<ul style="list-style-type: none"> Provide safe crossings of arterial roads 			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement the land use directions of local Development Plans, with a focus on accessible neighbourhoods, integration with public transport, cycling and walking networks and state freight/major traffic routes: 			
<ul style="list-style-type: none"> Providing alternative routes for traffic passing through the CBD, allowing for more cycling and walking initiatives Supporting the implementation of Adelaide City Council's <i>Smart Move</i> transport and movement strategy Create safe and convenient walkable neighbourhoods Integrating public transport requirements with local requirements relating to walking, cycling and public access to provide a more efficient public transport system 			

* These proposed actions will be subject to further investigations and availability of funding.

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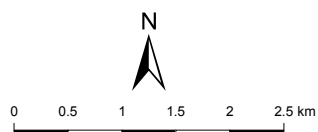
Inner Adelaide

Figure 5-7 Inner Adelaide Solutions



Data source: Department of Planning, Transport and Infrastructure.

Solutions identified on this map may be subject to further intensive investigations and may vary as a result.



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PLN ID: 4335

- Road improvements
- Rail freight, ports, airports and intermodal improvements
- Passenger Transport improvements
- Active travel improvements
- Active travel improvements
- Road improvements
- Rail Transport improvements
- Tram Transport improvements
- Tram Transport improvements - subject to further investigations
- Bus Transport improvements
- Urban infill (location indicative)
- Activity Centres
- Capital City
- Major district
- Existing key industry areas
- Significant retail areas
- Built-up areas
- Main road
- Passenger railway / tramway / O-Bahn
- Freight railway

Middle Adelaide

While development intensity in middle Adelaide will typically be less than in the inner city, initiatives to increase infill and urban renewal of key sites along transit corridors will contribute to a significant shift in the pattern of suburban growth. Major centres within this region – Port Adelaide, West Lakes, Modbury and Marion – have been earmarked for concentrated mixed-use development of residential, business and service activities to capitalise on existing infrastructure investment at these locations. Other sites along transit corridors traversing the region will be developed to encourage greater public transport use and stimulate medium density, mixed-use development to support a more compact Greater Adelaide.

A revitalised Port Adelaide and redeveloped West Lakes and Woodville West will generate a significant population increase in the north-west. A new tram service will service these areas along with Outer Harbor, Grange and Semaphore, and provide efficient access to jobs and services in the inner city and along the route (including the Queen Elizabeth Hospital) stimulating further development opportunities at these sites.

To the west, providing tram services along Henley Beach Road with a branch line to Adelaide Airport and through to The Parade and Magill will dramatically improve east-west connectivity, reduce travel times to and from the CBD and enhance access to Adelaide Airport. Similarly, the proposed tram line running north-south along Prospect Road, through to Unley Road and further to Mitcham will connect people in middle Adelaide suburbs to jobs and services in the inner city.

The tram corridors will boost cross-suburban public transport connections and intensify development along the corridors as access improves and centres evolve into medium density, more lively and attractive places.

Electrification of the Gawler train line, upgraded stations and cycling/walking routes along the corridor will stimulate mixed-use development at key sites and allow for higher densities to be achieved.

In the east, the O-Bahn and linear park cycle route will continue to provide rapid access to hubs of Klemzig, Paradise and Modbury. These initiatives will be supported by road network improvements facilitating efficient traffic movement to and from the city centre, public transport hubs and across the middle and inner city areas.

Glen Osmond Road, the key access route to and from the South-Eastern Freeway, will become a Priority Corridor for a faster, more frequent and reliable bus service, giving commuters from Mount Barker and the hills an efficient public transport alternative. A 'Super Stop' will be installed at the key activity centre at Fullarton/Glen Osmond roads, allowing people to connect with buses servicing areas other than the CBD.

Improvements to the Outer Ring Route will provide more efficient freight and commercial traffic movement through middle Adelaide, while Glen Osmond and Greenhill roads will facilitate the efficient movement of vehicular traffic accessing the CBD and inner city area.

SOLUTIONS AND ACTIONS

Middle Adelaide

The North-South Corridor upgrade works will be critical in ensuring the efficient connectivity of north-south freight and business movements through the middle of Adelaide. In addition to the upgrade of the North-South Corridor, the expansion of the use of Intelligent Transport Systems along both the North-South Corridor and the South Eastern Freeway will assist in more efficient traffic flows.

Science, technology and innovation clusters at Technology Park (Mawson Lakes), Bedford Park (Flinders University/Medical Centre), Osborne (Techport Australia), Urrbrae (CSIRO/Waite) and Tonsley Park (clean tech) are important employment generators and will be accessible by a choice of modes. Improvements to the Outer Ring Route and major traffic routes will be important to achieve reliable and efficient access to these clusters and other employment sites that are difficult to service by public transport, walking or cycling.

Access for cyclists across the middle suburbs will be enhanced by ongoing extensions and upgrades to the Bikedirect and Greenways networks, enabling better access to employment and services in the inner city and CBD. Cyclists and walkers will also enjoy more convenient access to public transport hubs via people-friendly street networks that improve the amenity of surrounding residential areas and facilitate the development of well-connected, accessible and walkable local places.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport			
1. PortLINK – conversion of the Outer Harbor train line to deliver a new tram service to Outer Harbor and Grange and construct new tram lines to West Lakes and Semaphore			
2. WestLINK and EastLINK – extend trams along the east-west corridor from Henley Square, Henley Beach Road, with an extension to Adelaide Airport, through the city and along the Parade turning north to Magill Campus			
3. ProspectLINK and UnleyLINK – trams along Prospect Road from Grand Junction Road, O'Connell Street, through the City to Unley Road and Belair Road to Mitcham			
4. Convert the Grange train line to tram as part of the West Lakes tram line work (PortLINK)			
5. Tonsley line – increase service frequencies, and rebuild station			
6. Provide bus interchange at Darlington			
7. Gawler line – complete the electrification of the entire line, increase service frequency, staged upgrade of stations, and grade separations of rail crossing at key locations such as Torrens Road			
8. Expand the O-Bahn park and ride facilities			
9. Glenelg tram line – increase service frequencies and increase tram size and acquire more trams			
10. Electrify the Belair train line, with new electric trains – increase service frequencies			
Area-wide solutions			
• Re-structure bus services and over time improve the bus service frequencies to feed into Gawler train line at Mawson Lakes			
• Rationalise and improve protection for pedestrians at at-grade railway crossings			
• Re-structure bus services to feed into the Belair train line, and improve bus service frequencies			
• Supply of additional and expanded Park and Rides at key nodal points on the train, tram and bus networks			

Roads			
Progressively upgrade South Road as part of a strategy to develop the non-stop North-South Corridor, including grade separation with key east-west arterial routes and provision of at-grade service roads, any interim works and detour works during construction: (refer 11, 12 and 13)			
11. North-South Corridor – Darlington			
12. Complete the North-South Corridor – Northern Connector, road connection to the Port			
13. Complete the North-South Corridor – Anzac Highway to Darlington			
14. Upgrade intersections along Sir Donald Bradman Drive to reduce congestion and improve reliability of travel times to the airport, and provide upgrades for taxi, commercial vehicle and bus access via Richmond Road. Retain the potential for a local road connection between Richmond Road and Morphett Road in the longer term.			
15. Improve the efficiency and safety of the Outer Ring Route, including intersection and mid block upgrades			
16. Targeted upgrades to Main North Road, including 3 lanes each way between Montague Road and The Grove Way			
17. Targeted upgrades to North East Road			
18. Elder Smith Road duplication and extension through to Port Wakefield Road			
19. Parafield Airport industrial and commercial development			
• Upgrade the Main North Road/Kesters Road intersection			
• Other arterial and local road upgrades			
Area-wide road solutions			
• Targeted upgrades of key intersections and sections of road to improve efficiency and safety performance			
• Grade separate road crossings of the passenger rail line at key locations between Brighton and Elizabeth (including the adjacent freight rail line in the north) such as at Brighton and Oaklands, the rail line at Cross Road, and potentially of the Glenelg and PortLINK tram lines at key locations. Preserve the potential for further grade separations to the north of Elizabeth			
• Preserve and construct when necessary potential future road duplications such as Montague Road (Modbury), West Lakes Boulevard (Woodville West)			
• Actively manage the operation and performance of the road network to give priority to movements along key freight and major traffic corridors			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety hotspot and higher risk locations			
Ports, rail freight, airports and intermodals			
20. Improve the rail connection through northern Adelaide into the Port – as part of the North-South Corridor			
Area-wide road solutions			
• Ensure boat ramps at North Haven, West Beach and O'Sullivan Beach continue to provide unrestricted access for public use			
• Enhance the visitor experience of jetties			
• Work with the Australian Government in reviews of master plans for Adelaide and Parafield Airports to provide effective access			
Cycling and walking			
21. Partner with local councils to complete the Gawler Greenway from Salisbury to Grand Junction Road			
22. Partner with Port Adelaide Enfield Council to complete the Outer Harbor Greenway from Semaphore Road to North Haven			
23. Partner with Marion Council to complete the Tonsley Greenway from Clovelly Park to connect with the Patrick Jonker Bikeway at Darlington			

SOLUTIONS AND ACTIONS

Middle Adelaide

24. Partner with local councils to complete the Dry Creek Trail from Golden Grove to Mawson Lakes			
25. Partner with Mitcham Council to complete the Belair–City Bikeway, including crossings of arterial roads			
26. Extend the Crafers Bikeway across the intersection of Glen Osmond and Portrush Roads, including a crossing of the South Eastern Freeway			
27. Partner with Salisbury Council to complete the Little Para River Creek Trail and expand cycling and walking catchment of Salisbury Centre			
28. Partner with Charles Sturt Council to extend the Grange Greenway from Woodville West to Grange			
29. Complete provision of bicycle lanes on Main North Road between Munno Para and the City			
30. Partner with West Torrens Council to complete the Airport Bikeway, including crossings of arterial roads			
31. Partner with local councils to upgrade the Levels–City Bikeway from Mawson Lakes to Regency Road			
Area-wide solutions			
<ul style="list-style-type: none"> Improve walking and cycling facilities in catchment areas for schools, public transport stations, activity centres and main streets 			
<ul style="list-style-type: none"> Create safe and convenient walkable environments in and around public transport stations, activity centres, main streets and schools 			
<ul style="list-style-type: none"> Develop and introduce Metrocard operated public bike sharing schemes at key public transport hubs 			
<ul style="list-style-type: none"> Implement bicycle lanes on selected arterial roads 			
<ul style="list-style-type: none"> Provide safe crossings of arterial roads 			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on accessible neighbourhoods, integration with public transport, cycling and walking networks and state freight/major traffic routes: 			
<ul style="list-style-type: none"> Provide attractive and convenient pedestrian and cycling connections to public transport stops and stations, including along the revitalised northern and southern rail corridors and O-Bahn Create safe and convenient walkable neighbourhoods Development of shared use linear paths along waterways, coast and public transport corridors Clearways and kerbside and off-street parking provisions, particularly on high streets and along bike routes Access to sporting, entertainment and leisure hubs, such as Bailey Reserve, Highbury Recreation Centre, Warriparinga Wetlands Local road, pedestrian and cycle networks to reflect and guide precinct planning for areas being revitalised Local access from state freight routes to industrial hubs and freight facilities, including Regency Park, Lonsdale and Greater Edinburgh Parks Work with Local Government to implement the National Airport Safeguarding Framework within council Development Plans to ensure the future of Adelaide, Edinburgh and Parafield Airports. 			

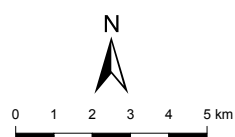
* These proposed actions will be subject to further investigations and availability of funding.

Figure 5–8 Middle Adelaide Solutions



Data source: Department of Planning, Transport and Infrastructure.

Solutions identified on this map may be subject to further intensive investigations and may vary as a result.



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PLN ID: 4336

- Road improvements
 - Passenger Transport improvements
 - Active travel improvements
 - Road improvements
 - Rail freight, ports, airports and intermodal improvements
 - Rail Transport improvements
 - Tram Transport improvements - subject to further investigations
 - Bus Transport improvements
- Infill and future growth areas
 - Urban infill *
 - Current/Future growth area *
 - * location of infill and growth areas is indicative
 - Activity Centres
 - Capital City
 - Regional
 - Major district
- Existing key industry areas
 - Significant retail areas
 - Built-up areas
 - Main road
 - Passenger railway / tramway / O-Bahn
 - Freight railway
 - ✈ Airport
 - Sea port

Outer Adelaide

Much of the growth in the outer suburbs of Greater Adelaide will be concentrated in the northern region. This area currently accounts for the majority of residential and employment land supply within Greater Adelaide, with the recently released Playford Growth Area Structure Plan providing for an additional 100,000 people and a significant increase in jobs spread over 3,550 hectares of new residential and employment lands.

Greater Edinburgh Parks – the location for most of the employment growth in the north – will be well-served by a revitalised Adelaide to Gawler train line that will deliver more frequent and more reliable connections for workers from outer suburbs as well as the inner areas of Adelaide. These employment lands, which have expanded to over 4,000 hectares, are strategically located on the existing Adelaide to Darwin and Perth railway line and the Northern Expressway, providing direct road and rail connections to interstate and international markets.

Housing growth at Angle Vale, Playford North, Virginia and Buckland Park will be supported by bus services to these areas which feed into key activity centres on the electrified Gawler train line at Elizabeth, Salisbury and Munno Para, facilitating more intensive development at these centres (especially at Elizabeth). The highly patronised Salisbury station interchange will be upgraded for this purpose. Planning for this growth has also required a slight change to the existing freight route to protect the amenity of new residential environments and allow for more people to cycle and walk to nearby centres and railway stations.

Growth is also envisaged to occur in the southern suburbs. Planning is underway to concentrate mixed-use development around key stations and centres along the Seaford train line. Electrification of this line will allow higher service frequencies and faster travel, as well as upgrades to major train stations (including the provision of secure bike parking). Bus service frequencies from outer suburbs to key major centres such as to Noarlunga Centre, will be improved. Bus services will feed into the larger capacity train lines, with the Aldinga, McLaren Vale and Sheidow Park service connecting to the Seaford train services. With more frequent bus services feeding into major stations along this line, people will be able to more easily access employment and services in inner and middle Adelaide, providing further impetus for development uplift and the creation of centres along the corridor that offer more jobs, services and facilities.

Significant redevelopment of the Noarlunga Regional Centre and Noarlunga Railway Station is envisaged. An additional 10,000 people will be living and working in the vicinity of the centre, generating further opportunities for residential and business expansion in the south.

The duplication of the Southern Expressway complements these initiatives, providing efficient and reliable access to employment and services in the city from areas that are difficult to service by public transport, walking or cycling. The progressive upgrade of the North-South Corridor, including grade separation of key east-west arterial roads, intersection improvements and links to the Outer and Inner Ring Routes, will enhance the efficiency and safety of freight movements into Adelaide Airport, Keswick and Islington intermodal terminals and Port Adelaide and support the growth of industry (including primary industry) and business across the southern region.

Further south, targeted upgrades to the Noarlunga to Victor Harbor and Noarlunga to Cape Jervis Roads (incorporating road widening, shoulder sealing and overtaking lanes) will improve the safety and reliability of travel for all road users travelling to and from the Southern Fleurieu Peninsula.

The concentration of growth at Mount Barker, designed to prevent incremental, ad hoc and unplanned urban development across the important agricultural/horticultural lands and water protection areas of the Mount Lofty Ranges, is being supported by a number of improvements to the mass transit network, including the new park and ride facility expanding the catchment area and potential improvements along Glen Osmond Road for faster travel times.

A new freeway interchange at Bald Hills Road is being built to increase the efficiency of vehicle movements into and out of the city.

More frequent public transport services will respond to demand from people living within Nairne and the new growth areas of Mount Barker to travel to the Mount Barker regional centre. The trunk line service connecting Mount Barker to the city is to be upgraded which will improve services to Hahndorf, Bridgewater and Stirling. The improved interconnecting bus services and park and ride facilities at Mount Barker will also improve access between Adelaide Metro bus services at Mount Barker and the regional passenger services undertaken by private bus operators serving for example, Murray Bridge and Strathalbyn. Road improvements along Glen Osmond Road will provide reliable travel times for these services.

Potential extensions of train lines to serve new growth areas on the fringe of Greater Adelaide will be protected for the future should the level of investment be justified by growth and demand.

Cycling and walking access across the outer suburbs will focus on extensions and upgrades to the *Bikedirect* and Greenways networks and ongoing improvements to the walkability of neighbourhoods. These initiatives will better connect cyclists and walkers to railway stations, interchanges and mixed-use centres to improve access to employment and services in inner and middle Adelaide. Network and route enhancements will also expand the walking and cycling catchments of schools, shops and other important destinations to enable more people to choose active, healthier travel options.

Murray Bridge forms part of *The 30-Year Plan for Greater Adelaide*, and transport improvements in and around Murray Bridge will support residential and employment growth in this area. This includes a potential upgrade to the interchange on the South Eastern Freeway at Adelaide Road (refer to the Murray and Mallee Region section for further details).

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport			
1. Seaford line – increase service frequencies, review, upgrade and extend train stations and platforms			
2. Gawler line – complete the electrification of the entire line, increase service frequency, staged upgrade of stations over, including an upgrade of the Salisbury station interchange			
3. Expand the park and ride capacity at Mount Barker			
4. Define and preserve future train corridors to the north and east of Gawler and from Seaford to Aldinga			

SOLUTIONS AND ACTIONS

Outer Adelaide

Area-wide solutions			
<ul style="list-style-type: none"> In line with growth and demand, extend bus services as required to service growth areas of Buckland Park, Playford North, Angle Vale, Mount Barker, Virginia/Virginia North and Two Wells 			
<ul style="list-style-type: none"> Re-structure bus services and over time improve bus service frequencies to feed into Gawler train line at Gawler, Elizabeth, Salisbury and Munno Para 			
<ul style="list-style-type: none"> Rationalise and improve protection for pedestrians at at-grade railway crossings 			
<ul style="list-style-type: none"> Restructure bus services with bus priority on Glen Osmond Road (route to Hills/Mount Barker), and improve bus service frequencies 			
<ul style="list-style-type: none"> Regional Passenger Transport Plans for Barossa and Fleurieu 			
<ul style="list-style-type: none"> Supply of additional park and rides at key nodal points on the train, tram and bus networks 			
Roads			
5. Implement Motorway Management System on the South Eastern Freeway, including allowing hard shoulder running			
6. Complete the North-South Corridor – Northern Connector road connection to the Port			
7. Victor Harbor Road duplication – Old Noarlunga to McLaren Vale			
8. Targeted upgrades along Main North Road			
9. Main South Road duplication – Seaford to Aldinga			
10. Mount Barker growth area transport infrastructure			
<ul style="list-style-type: none"> Upgrade the existing Mount Barker interchange 			
<ul style="list-style-type: none"> Provide a new interchange on the South Eastern Freeway at Mount Barker (Bald Hills Road) 			
<ul style="list-style-type: none"> Implementation of local ring road 			
<ul style="list-style-type: none"> Other arterial and local road upgrades, including Adelaide Road/Hawthorn Road and Adelaide Road/Wellington Road/Flaxley Road intersections 			
11. Gawler growth area transport infrastructure			
<ul style="list-style-type: none"> Gawler East local link road 			
<ul style="list-style-type: none"> Adelaide Road/Potts Road/Para Road intersection upgrade 			
<ul style="list-style-type: none"> Duplication of Main North Road between Potts Road and Gawler bypass 			
<ul style="list-style-type: none"> North east bypass road of Gawler, subject to future urban development 			
<ul style="list-style-type: none"> Other arterial and local road upgrades, including intersection and midblock improvements 			
12. Angle Vale growth area transport infrastructure (part of the Playford growth project)			
<ul style="list-style-type: none"> Angle Vale Road – intersection and road section upgrades 			
<ul style="list-style-type: none"> Heaslip Road – intersection and road section upgrades 			
<ul style="list-style-type: none"> Implementation of new and upgrade of existing local roads to support growth area 			
13. Playford North Extension growth area transport infrastructure (part of the Playford growth project)			
<ul style="list-style-type: none"> Curtis Road – duplication, installation of a new junction to facilitate new access roads into Playford North, and upgrade the intersection with Andrews Road and connection with the Northern Expressway 			
<ul style="list-style-type: none"> Andrews Road – intersection and midblock upgrades 			
<ul style="list-style-type: none"> Implementation of local road network to support growth area 			

14. Virginia growth area transport infrastructure (part of the Playford growth project)			
• Penfield Road/Old Port Wakefield Road intersection upgrade			
• Penfield Road and Old Port Wakefield road upgrades			
• Implementation of local road network to support growth area			
• Other arterial and local road upgrades, including intersection and midblock improvements			
15. Greater Edinburgh Parks growth area transport infrastructure (part of the Playford growth project)			
• Womma Road rail crossing upgrade			
• Northern Expressway/Womma Road/Heaslip Road interchange arrangement upgrade			
• Other arterial and local road upgrades, including intersection and midblock improvements, to facilitate safe and efficient movement of large heavy vehicles			
16. Two Wells growth area transport infrastructure			
• Upgrade the Old Port Wakefield Road/Mallala Road intersection			
• Install new junction to facilitate new access road with Port Wakefield Road			
• Upgrade the Port Wakefield Road/Mallala Road intersection			
• Other arterial and local road upgrades, including intersection and midblock improvements			
17. Buckland Park growth area transport infrastructure			
• Port Wakefield Road/Angle Vale Road intersection upgrade – staged			
• Implementation of local road network to support growth area			
18. Roseworthy township expansion improvements			
19. Noarlunga to Victor Harbor Road – road widening, shoulder sealing and overtaking lanes, and in the longer term duplicate to Mount Compass when required			
20. Main South Road (Noarlunga to Cape Jervis) – road widening, shoulder sealing and overtaking lanes			
21. Mount Barker to Strathalbyn Road – road widening, shoulder sealing and overtaking lanes			
22. Barossa Valley Way – road widening, shoulder sealing, intersection upgrades and overtaking lanes			
23. Victor Harbor to Goolwa – installation of overtaking lanes			
Area-wide road solutions			
• Targeted upgrades of key intersections and sections of road to improve efficiency and safety performance			
• Grade separate road crossings of the passenger rail line at key locations between Brighton and Elizabeth (including the freight rail line in the north) such as at Salisbury and Kings Road. Preserve the potential for further grade separations to the north of Elizabeth			
• Preserve and construct when necessary potential future road duplications such as Beach Road (Noarlunga), Dyson Road (Noarlunga), Kings Road (Paralowie), Commercial Road (Seaford), Womma Road and Curtis Road			
• Actively manage the operation and performance of the road network to give priority to movements along key freight and major traffic corridors			
• Road widening and shoulder sealing targeted at freight and major traffic routes in outer areas			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			

SOLUTIONS AND ACTIONS

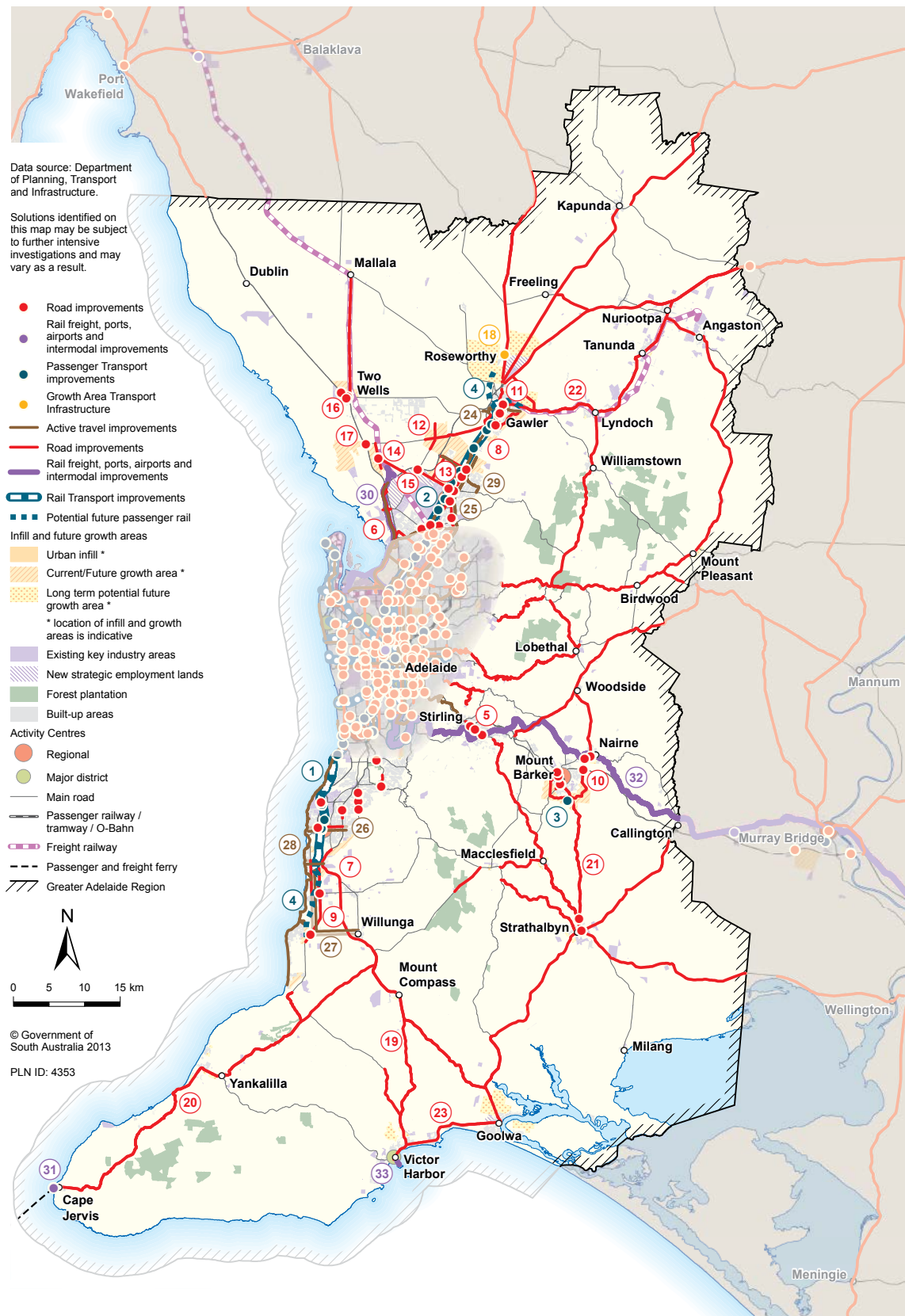
Outer Adelaide

Cycling and walking			
24. Partner with local councils to complete the Gawler Greenway from Salisbury to Gawler			
25. Complete provision of bicycle lanes on Main North Road between Munno Para and the City			
26. Expand cycling and walking catchment for the Noarlunga area around the Regional Centre, including Beach Road			
27. Seaford, Aldinga, McLaren Vale and Willunga, shoulder sealing to improve conditions for cyclists			
28. Partner with local councils to complete Coast Park from Brighton to Sellicks Beach			
29. Partner with Playford Council to construct the Smith Creek Trail, expand cycling and walking catchment of Munno Para			
Area-wide solutions			
<ul style="list-style-type: none"> Improve walking and cycling facilities in catchment areas for schools, public transport stations, activity centres and main streets 			
<ul style="list-style-type: none"> Create safe and convenient walkable environments in and around public transport stations, activity centres, main streets and schools 			
<ul style="list-style-type: none"> Develop and introduce Metrocard operated public bike sharing schemes at key public transport hubs 			
<ul style="list-style-type: none"> Implement and extend separated bicycle lanes on selected arterial roads 			
<ul style="list-style-type: none"> Provide safe crossings of arterial roads 			
Ports, rail freight, airports and intermodals			
30. Complete the North-South Corridor – including rail connections to the port			
31. Cape Jervis – ferry berth upgrade works and jetty refurbishment			
32. Improvements to Adelaide-Melbourne rail corridor through Adelaide Hills to allow for double stacking			
33. Redevelopment of the Granite Island Causeway			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on accessible neighbourhoods, integration with public transport, cycling and walking networks and state freight/major traffic networks: 			
<ul style="list-style-type: none"> Local road, pedestrian and cycling networks to support Gawler, Mount Barker and Playford Projects Growth Areas and improve access in major townships and centres Create safe and convenient walkable neighbourhoods Options for local heavy vehicle bypass of affected towns Regional and township cycling networks, including in the Barossa, Hills and Fleurieu Attractive and convenient pedestrian and cycling connections to public transport stops and stations, and local road access to park and ride facilities Local freight networks to provide for safe and reliable heavy vehicle movements, including last mile access, east-west movements between Port Wakefield Road and Barossa/Main North Road and across the Fleurieu Clearways and kerbside and off-street parking provisions, particularly on high streets and in town centres such as Victor Harbor and Tanunda Work with Local Government to implement the National Airport Safeguarding Framework within council Development Plans to ensure the future of Edinburgh and Parafield Airports and regionally significant aerodromes (e.g. Gawler, Goolwa) 			

* These proposed actions will be subject to further investigations and availability of funding.

Growth area infrastructure may be subject to timing of urban development.

Figure 5-9 Outer Adelaide solutions



Far North Region

Major regional centre: Port Augusta

Covering more than half of South Australia's land area, the Far North region is sparsely populated with long distances between settlements. The region's population is anticipated to grow from its current base of 29,170 people to around 37,100 people by 2036 (one per cent per annum).

The region's economy is based on its significant mining, mineral and energy resource potential as well as grazing, defence and aerospace activities. Tourism assets include the Flinders Ranges and spectacular and diverse outback landscapes. The Far North region also includes the extensive Anangu Pitjantjatjara Yankunytjatjara (APY) Lands.

Initiatives in the Far North will focus on supporting growth in the mining and tourism industries. Targeted upgrades to the Stuart, Eyre, Augusta and Barrier Highways and the Strzelecki Track will improve the efficiency and safety of truck and tourist vehicle movements through the region and create a consistent network standard for national and state road networks.

Similar road upgrades are planned for the APY Lands, and these will be supplemented with programs aimed at improving safety outcomes for remote Aboriginal communities, such as increased access to driver licensing and training.

For the Far North the *Regional Mining and Infrastructure Plan* identifies that the majority of mining infrastructure demand is in the South Gawler and Mount Woods sub-regions. This demand is driven by iron ore mining and is generally being met by existing infrastructure, including by recent private sector investments.

The government will work closely with local councils, the Outback Communities Authority and remote communities to develop local transport strategies that align with land use policy objectives to enhance the safe movement of freight and tourist traffic. For the Far North, this will include consideration of an upgrade to Yorkey's Crossing in Port Augusta. The Government will also work with the private sector and the ARTC to improve sections of the national rail network to increase freight efficiency through the region.

Regional passenger transport services will be improved through better provision of information about services and the State Government will work closely with local councils to facilitate a review of strategically located regional passenger transport services.

In addition, aerodromes in the Far North provide access for emergency medical services by the RFDS. Upgrades to aerodromes in the Far North (with funding provided by the Australian Government's Remote Airstrip Upgrade Program to which the state contributes matching funding) are focused on upgrades to improve the 24 hour all weather capability of these aerodromes for RFDS operations.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Continued support for regional bus services e.g. Port Augusta Provincial City Bus Service			
Roads			
1. Road improvements in the Anangu Pitjantjatjara Yankunytjatjara Lands			
2. Stuart Highway road widening, shoulder sealing and rest areas			
3. Augusta Highway – road widening, shoulder sealing and implementation of priority treatments in the Port Augusta Road Management Plan			
4. Strzelecki Track – upgrade and sealing			
5. Barrier Highway – road and bridge widening to improve safety and efficiency for High Productivity Vehicles			
6. Hesso – grade separation of the Stuart Highway and interstate rail line			
7. Eyre Highway – road widening, shoulder sealing, overtaking lanes and rest areas			
8. Duplication of the Joy Baluch AM Bridge			
9. Work with local council to develop options for upgrade of Yorkey's Crossing			
Area-wide road solutions			
• Road widening, shoulder sealing and intersection improvements targeted at major freight and traffic routes			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets, including outback roads			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			
Cycling and walking – Area-wide solutions			
• State Bicycle Fund – work with local councils to develop and implement a regional cycling and walking strategy and provide cycling/walking facilities in key locations			

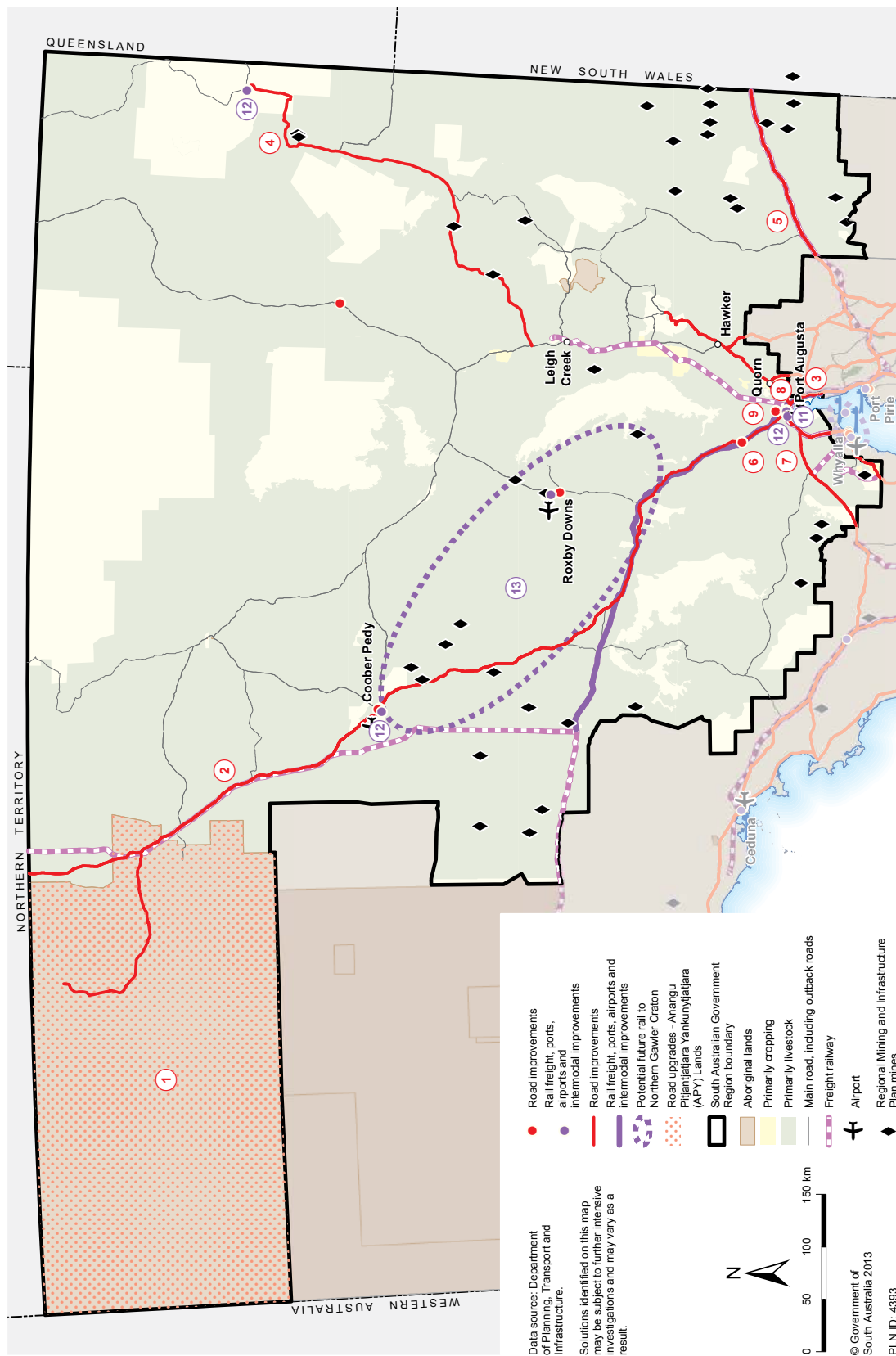
SOLUTIONS AND ACTIONS

Far North Region

Ports, rail freight, airports and intermodals			
10. Work with the private sector and ARTC to implement capacity improvements on the Adelaide to Perth rail line between Tarcoola and Port Augusta			
11. Work with the private sector and ARTC to investigate the impact of a potential rail bypass of Port Augusta, including the potential relocation of Spencer Junction and development of a new intermodal site			
12. Work with local councils and the Outback Communities Authority to identify upgrades of strategically important local airports and airstrips, including Port Augusta, Coober Pedy, Olympic Dam and Innamincka airports and airstrips at Quorn, Hawker and in the APY Lands			
13. Potential future rail to Northern Gawler Craton			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on freight movements, tourism and accessible townships: 			
<ul style="list-style-type: none"> Options for upgrading of Yorkey's Crossing Road, pedestrian and cycling networks in Port Augusta to support urban growth, including rail level crossings on local roads where applicable and repair the Great Western Bridge to support walking and cycling Upgrades to support safe and reliable heavy vehicle movements, including last mile access and in association with the <i>Regional Mining and Infrastructure Plan</i> Create safe and convenient walkable neighbourhoods Safe and reliable road and cycling networks to support tourism and local travel, and improved access to key tourism sites Work with local councils to implement the National Airport Safeguarding Framework for Port Augusta airport 			

* These proposed actions will be subject to further investigations and availability of funding.

Figure 5–10 Far North solutions



Eyre and Western Region

Major regional centres: Whyalla and Port Lincoln

The population of the Eyre and Western Region is projected to increase from around 57,700 in 2011 to 61,600 by 2036 (0.3 per cent per annum).

The region produces around 30 per cent of the state's grain harvest and nearly 90 per cent of its seafood. Growth in the agriculture, aquaculture, mining and tourism industries will stimulate development, particularly in the major centres of Whyalla and Port Lincoln, but also in towns accommodating workers for mining activities on the Eyre Peninsula, such as Tumby Bay and Wudinna. The Eyre and Western Region also includes the Maralinga Tjarutja Lands and the Yalata Indigenous Protected Area.

Road improvements to support the mining and grain industries will be targeted along the Lincoln, Eyre, Flinders and Tod Highways, as well as other important freight and traffic routes across the region. These initiatives will improve the safety, capacity and performance of the road network at a time when increases in freight movements and tourist traffic are putting pressure on existing routes. Rail improvements to support the grain task will also be investigated.

For the Eyre and Western Region the *Regional Mining and Infrastructure Plan* identifies a need for suitable bulk commodities export port facilities for the Central and Southern Eyre mine clusters. These facilities, driven by demand from iron ore mining, will also need to be supported in the medium term by landside heavy vehicle transport links. An early priority is to confirm the preferred commercial solutions to bulk mineral export infrastructure on Spencer Gulf.

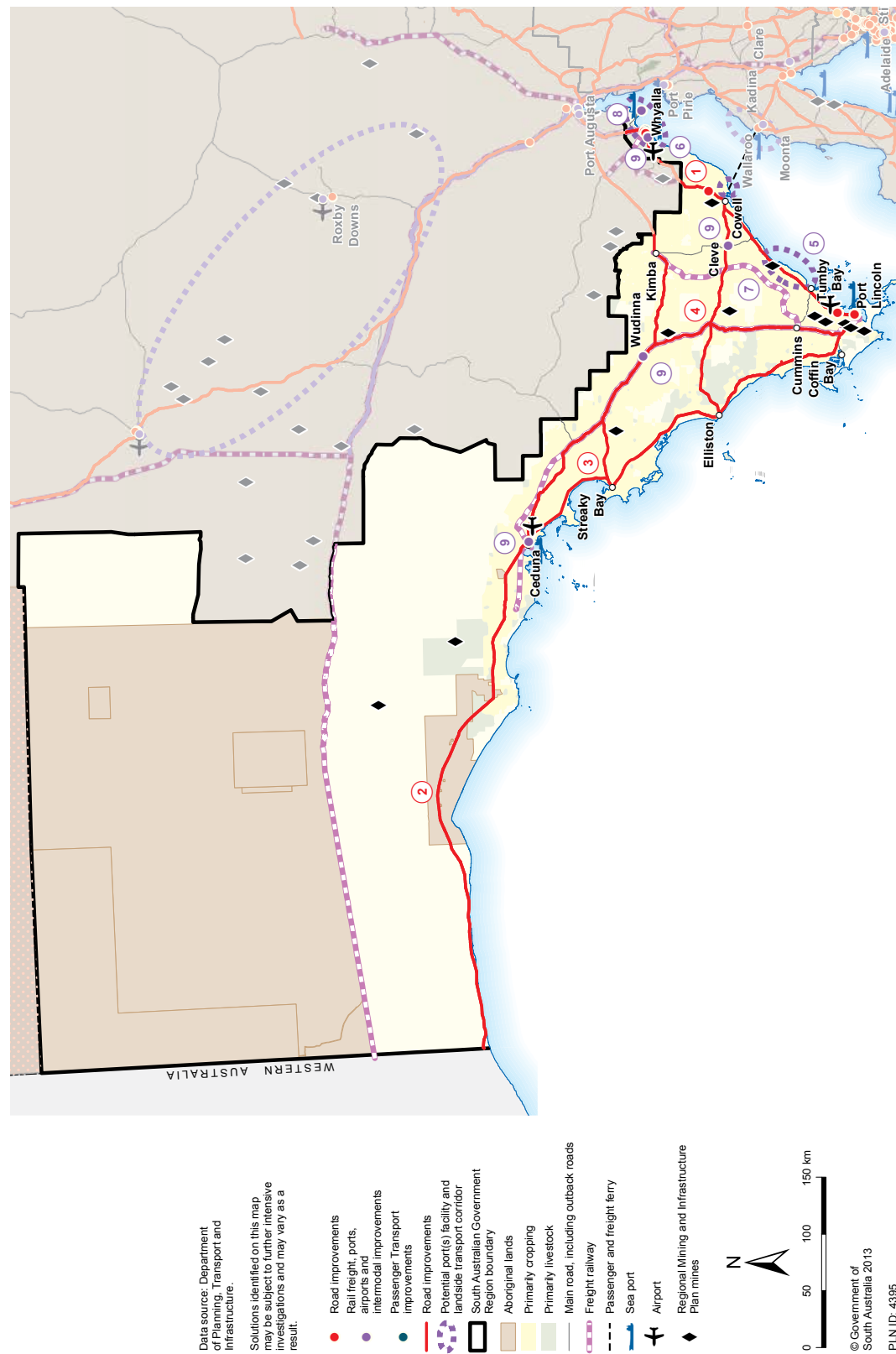
Regional passenger transport services will be improved through better provision of information about services and the State Government will work closely with local councils to facilitate delivery of strategically located regional passenger transport services.

The Government will also work with local councils to facilitate the delivery of improvements to strategically located airports and aerodromes, cycling/walking facilities and local transport strategies to capitalise on the economic growth of the region and to improve accessibility to jobs and services across the region.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Continued support for regional bus services, e.g. Port Lincoln Provincial City Bus Service and Whyalla Provincial City Bus Service			
Roads			
1. Lincoln Highway – road widening, shoulder sealing, rest areas, overtaking lanes, widening of bridges and intersection upgrades, including intersections in Port Lincoln and Whyalla			
2. Eyre Highway – road widening, shoulder sealing and rest areas			
3. Flinders Highway – road widening, shoulder sealing and rest areas			
4. Tod Highway – road widening, shoulder sealing and rest areas			
Area-wide solutions			
• Road widening, shoulder sealing and intersection improvements targeted at major freight and traffic routes			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			
Cycling and walking – Area-wide solutions			
• State Bicycle Fund – work with local councils to develop and implement a regional cycling and walking strategy and provide cycling/walking facilities in key locations			
Ports, rail freight, airports and intermodals			
Work with the private sector to ensure port and port developments on the Eyre Peninsula provide for competitive exports and efficient landside connections, with a focus on: (refer 5 and 6)			
5. Central Eyre and associated road infrastructure			
6. Far North Eyre and associated road and rail infrastructure			
7. Investigate Eyre Peninsula rail improvements to support the grain task			
8. Upgrade state owned port facilities at Port Bonython, including jetty, mooring facilities and navigation aids			
9. Work with local councils to identify upgrades of strategically important local airports and aerodromes, including Ceduna and Whyalla airports and Wudinna and Cleve aerodromes			
Local Government			
• Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on freight movements, tourism and accessible townships:			
<ul style="list-style-type: none"> Options for local heavy vehicle bypass of affected towns Road, pedestrian and cycling networks in Port Lincoln and Whyalla to support urban growth, including rail level crossings on local roads where applicable Regional cycling networks and facilities to support tourism Create safe and convenient walkable neighbourhoods Upgrades to support safe and reliable heavy vehicle movements, including last mile access, access to ports and freight facilities, and truck parking facilities, including access to Lucky Bay Reflect findings of the <i>Regional Mining and Infrastructure Plan</i> Airport master plan – Port Lincoln, Whyalla, Ceduna Safe and reliable road and cycling networks to support tourism and local travel Identify and investigate upgrades of strategic boat ramp sites to provide a safe haven for vessels – particularly on the far west coast between Mount Dutton Bay and Streaky Bay Work with local councils to implement the National Airport Safeguarding Framework for Port Lincoln, Ceduna, Whyalla, Cleve and Wudinna airports 			

* These proposed actions will be subject to further investigations and availability of funding.

Figure 5–11 Eyre and Western Solutions



Yorke and Mid North Region

Major regional centre: Port Pirie

Population growth in the Yorke and Mid North Region is forecast to increase from 74,400 people in 2011 to around 80,900 people by 2036 (0.3 per cent per annum). However, the region will continue to experience substantial increases in population at particular times of the year as a result of tourism and seasonal employment opportunities.

Growth in the region's agriculture (including horticulture and viticulture), mining, processing and tourism industries will drive future economic development, requiring a responsive transport network that caters for increased freight, tourist and passenger traffic accessing Adelaide and regions to the north and east.

Road network improvements are earmarked for the Augusta and Barrier Highways, as well as the Mid North freight route, Horrocks Highway, Copper Coast Highway and Yorke Highway (including upgrade of the Copper Coast Highway intersection) and St Vincent Highway. Targeted upgrades to other major freight and traffic routes will also be undertaken to support the transfer of grain and mining products, particularly the Spencer Highway (Wallaroo-Maitland-Minlaton). The potential development of slurry pipelines from mines in the Braemar region (towards Broken Hill) in the far north of South Australia to deep-sea loading facilities on the northern Yorke Peninsula may also trigger substantial investment in the region.

For this region, the *Regional Mining and Infrastructure Plan* identifies a need for access to a bulk commodity export port for the mines in the Braemar sub region and provision of suitable mine-to-port bulk transport links. In the shorter term, investigations are being undertaken to determine opportunities to use facilities at the Port Pirie port to support export and potentially imports arising from the mining sector. These investigations will complement Nyrstar's significant investment to transform the Port Pirie smelter into an advanced poly-metallic processing and recovery facility, delivering a step change reduction in emissions and expanding the range of metals that can be processed at the facility."

A proposal to double the size of the existing intermodal facility at Bowmans (near Port Wakefield) to support the movement and transfer of freight traffic to export markets via Port Adelaide has been approved. This will stimulate development in and around Bowmans, providing additional jobs for local residents. Enabling access for High Productivity Vehicles from the National Highway to Bowmans has been important to fully realise the opportunities provided by the expansion.

The State Government will continue to work with ARTC and private sector rail owner/operators to ensure continued investment in the national rail network, including capacity improvements between Crystal Brook and Tarcoola and realignment of the rail line near Port Pirie.

Regional passenger transport services will be improved through better provision of information about services and the State Government will work closely with local councils to facilitate a review of strategically located regional passenger transport services.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Continued support for regional bus services, e.g. Port Pirie Provincial Bus Services and integrated passenger services			
Roads			
1. Augusta Highway – road widening, shoulder sealing and overtaking lanes, and potential further capacity improvements including duplication of sections in the longer term			
2. Port Wakefield Bypass			
3. Barrier Highway – shoulder sealing and road widening			
4. Horrocks Highway – road widening, shoulder sealing, intersection upgrades and rest areas (including upgrading of Laura to Gladstone)			
5. Copper Coast Highway – road widening, shoulder sealing, overtaking lanes and intersection upgrades			
6. Yorke Highway – road widening and an upgrade of the junction with the Copper Coast Highway will facilitate the movement of A-Double vehicles			
7. Mid North freight route – road widening and shoulder sealing			
Area-wide solutions			
• Road widening, shoulder sealing and intersection improvements targeted at major freight and traffic routes (including upgrading of Bute to Kulpara)			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			
Cycling and walking – Area-wide solutions			
• State Bicycle Fund – work with local councils to develop and implement a regional cycling and walking strategy and provide cycling/walking facilities in key locations			

Ports, rail freight and airports			
8. Expansion of the inter-modal facility at Bowmans (between Balaklava and Port Wakefield) and work with private sector to identify last-mile issues for High Productivity Vehicles to access this site			
9. Work with private industry to identify deep water port and associated land infrastructure solutions			
10. Work with private industry to investigate upgrade of Port Pirie port			
11. Work with local council to identify upgrades of strategically important local airstrips such as Kadina airstrip			
12. Work with the private sector and ARTC to identify capacity improvements on the Adelaide to Perth rail line between Port Augusta and Crystal Brook			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on freight movements, tourism and accessible townships: 			
<ul style="list-style-type: none"> Road, pedestrian and cycling networks in Port Pirie, Copper Coast townships and other major towns, including rail level crossings on local roads where applicable Create safe and convenient walkable neighbourhoods Options for local heavy vehicle bypass of affected towns Upgrades to support safe and reliable heavy vehicle movements, including last mile access, access to ports, intermodal terminals and freight facilities Upgrade of regionally significant roads to support freight, tourism and domestic travel, including completion of a tourist ring route for the Peninsula Reflect the findings of the <i>Regional Mining and Infrastructure Plan</i> Airport master plan – Port Pirie Upgrades of boat ramps, jetties and wharfs including improvements of existing facilities at Marion Bay to provide a safe haven for vessels and an upgrade of the Port Hughes boat ramp facility Regional cycling networks and facilities to support tourism Safe and reliable road and cycling networks to support tourism and local travel Work with local councils to implement the National Airport Safeguarding Framework for Port Pirie airport 			

* These proposed actions will be subject to further investigations and availability of funding.

SOLUTIONS AND ACTIONS

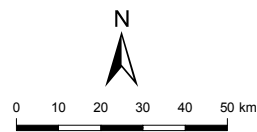
Yorke and Mid North Region

Figure 5–12 Yorke and Mid North Solutions

Data source: Department of Planning, Transport and Infrastructure.

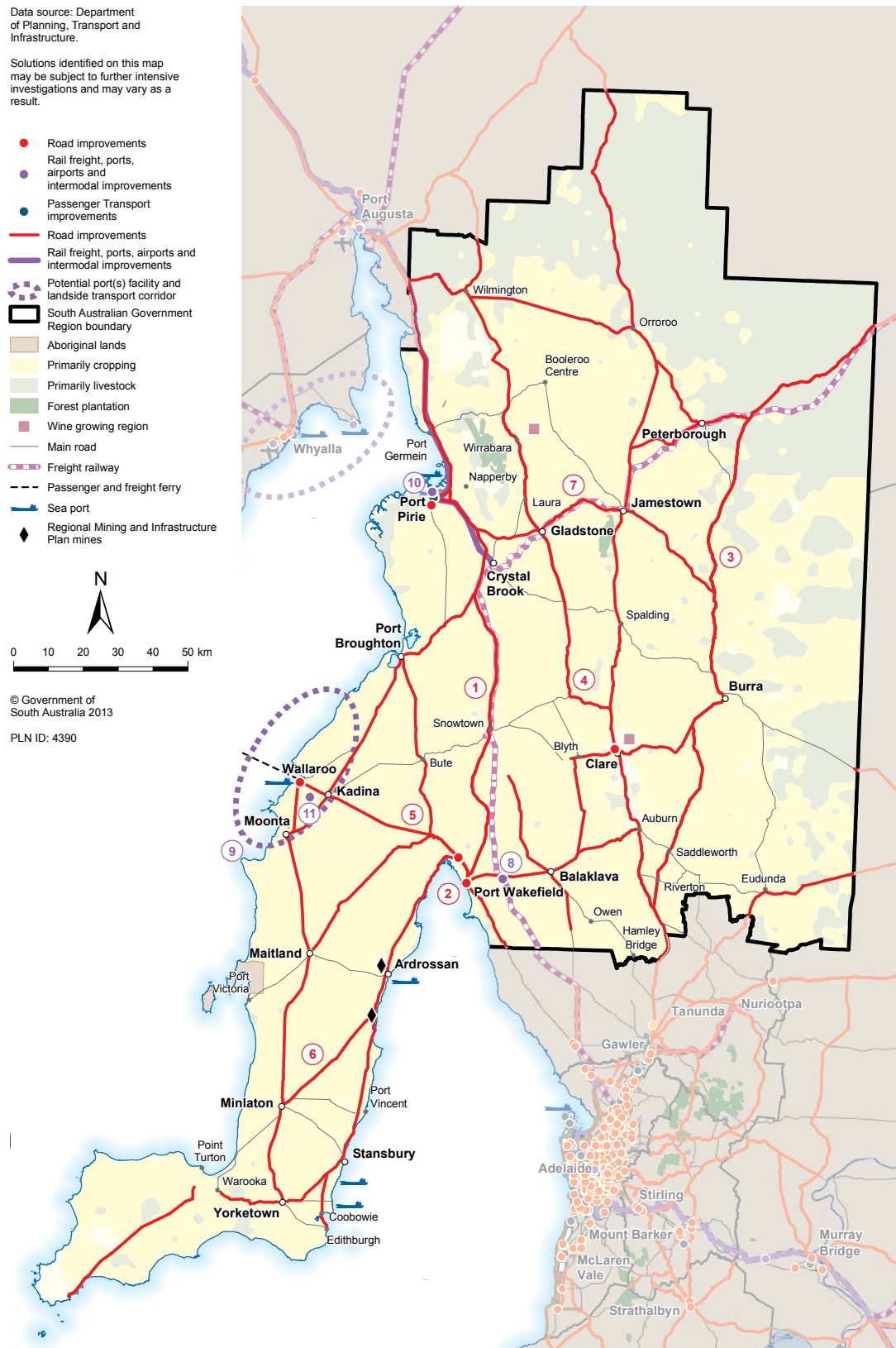
Solutions identified on this map may be subject to further intensive investigations and may vary as a result.

- Road improvements
- Rail freight, ports, airports and intermodal improvements
- Passenger Transport improvements
- Road improvements
- Rail freight, ports, airports and intermodal improvements
- Potential port(s) facility and landside transport corridor
- South Australian Government Region boundary
- Aboriginal lands
- Primarily cropping
- Primarily livestock
- Forest plantation
- Wine growing region
- Main road
- Freight railway
- Passenger and freight ferry
- Sea port
- ◆ Regional Mining and Infrastructure Plan mines



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PLN ID: 4390



Kangaroo Island

Major regional centre: Kingscote

The population of Kangaroo Island was just over 4,520 in 2011 and is expected to grow relatively quickly compared to other regions in the state to 5,930 people in 2036 (1.1 per cent per annum).

Kangaroo Island is characterised by its 'clean and green' image based on extensive areas of conservation, natural habitats and coastal and scenic landscapes, all of which underpin the island's success as a premier tourist destination. In addition to tourism, the island's economy is dominated by diverse primary production activities and associated value-adding industries.

The South Australian Government manages and maintains just three roads on Kangaroo Island: the Kingscote to Penneshaw Road, the Playford Highway from Parndana to Kingscote, and the road accessing American River. Both the Playford Highway and the Kingscote to Penneshaw Road will undergo road widening and shoulder sealing to enhance capacity and improve safety for freight and tourist movements, including for cyclists. A \$2 million per annum grant was provided to Kangaroo Island Council from 2011-12 to 2014-15 to contribute towards the maintenance of 1,360 kilometres of local roads, of which 237 kilometres are sealed. This grant has supported the growing local, tourist and freight traffic across the island.

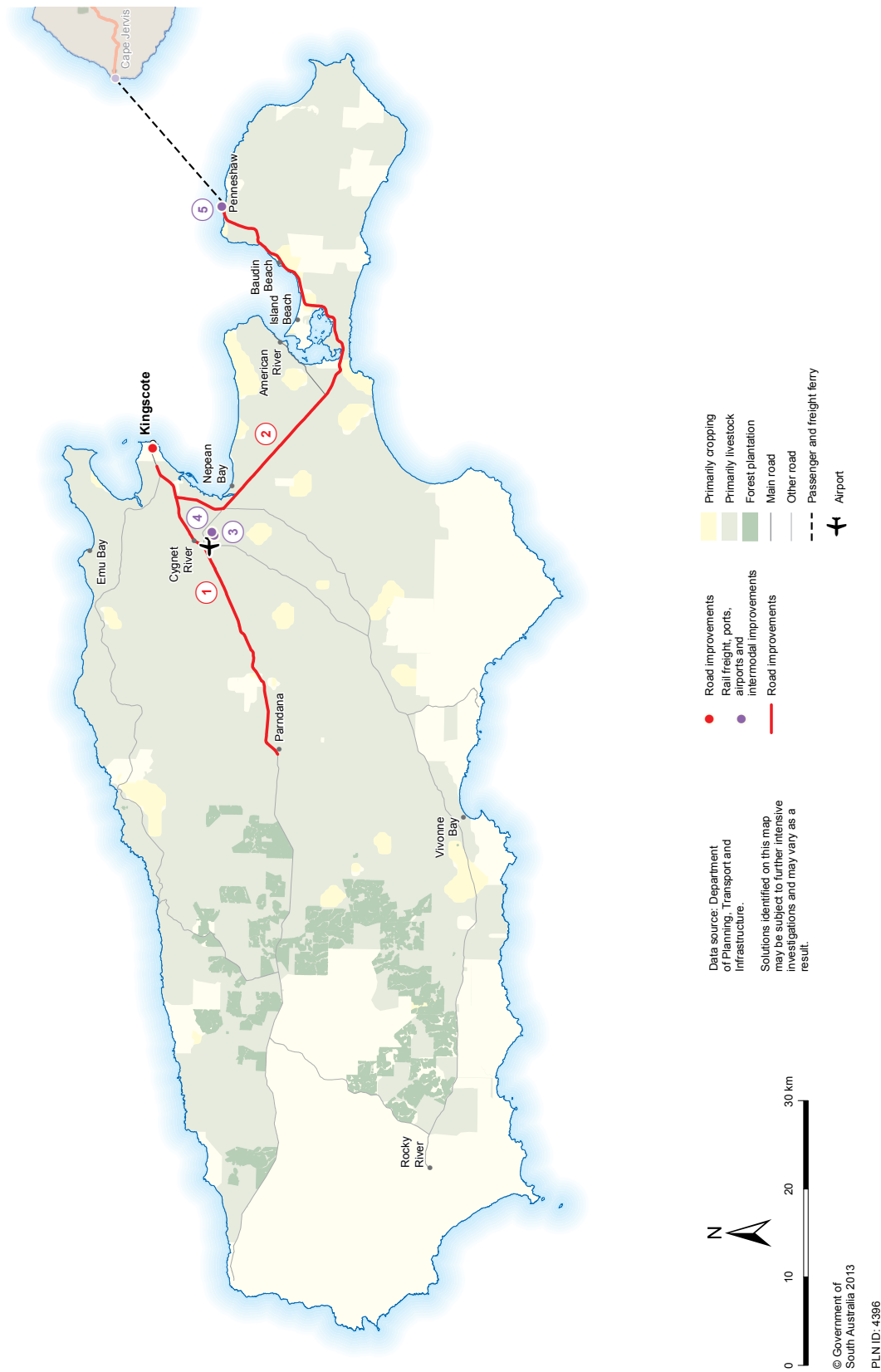
Significant improvements are earmarked for the Penneshaw port, including an upgrade to the ferry terminal and a new landing point for small vessels. A business case and funding submission for an extension and upgrade to the runway and terminal at Kangaroo Island airport are being pursued with the Australian Government. Both initiatives will support growth of the island's tourism and primary production industries.

Regional passenger transport services will be improved through better provision of information about services and the State Government will work closely with council to develop an Integrated Transport Plan for Kangaroo Island to improve access across the island, and to and from the mainland for freight and tourist (including cycling) traffic.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Support for the development of integrated passenger services			
Roads			
1. Playford Highway – road widening and shoulder sealing			
2. Kingscote to Penneshaw Road (Hog Bay Road) – road widening and shoulder sealing			
Area-wide solutions			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			
Cycling and walking – Area-wide solutions			
• State Bicycle Fund – work with Kangaroo Island Council to develop and implement a cycling and walking strategy and provide cycling/walking facilities in key locations			
Ports, rail freight and airports			
3. Work with Kangaroo Island Council to identify upgrades for Kingscote Airport for operations of larger air services			
4. Kangaroo Island Airport: business case and funding submission for airport extension and upgrade with the Australian Government			
5. Penneshaw harbour – ferry berth upgrade works and redesign and implementation of traffic management initiatives including heavy vehicle parking and transshipping requirements			
Area-wide solutions			
• Investigate bulk commodity sea-freight loading point and feeder road network needs			
Local Government			
• Work with Kangaroo Island Council and the Local Government Association to implement local transport strategies to complement land use directions of the Kangaroo Island Development Plan, with a focus on freight movements, tourism and accessible townships:			
<ul style="list-style-type: none"> Road, pedestrian and cycling networks and facilities in Kingscote, Penneshaw and other key towns to support tourism and active local communities Create safe and convenient walkable neighbourhoods Upgrades to support safe and reliable heavy vehicle movements, including last mile access Safe and reliable road and cycling networks to support tourism and local travel, and improved access to key tourism sites Work with Kangaroo Island Council to implement the National Airport Safeguarding Framework, including the Airport master plan for Kingscote Upgrades of boat ramps, jetties and wharfs, including upgrading of Kingscote wharf 			

* These proposed actions will be subject to further investigations and availability of funding.

Figure 5–13 Kangaroo Island solutions



Murray and Mallee Region

Major regional centres: Murray Bridge and Berri

With a population approaching 68,900 people, the Murray and Mallee region is expected to grow at a rate of 0.4 per cent per annum to around 75,230 people by 2036. It is important to note however that Murray Bridge, which forms part of *The 30-Year Plan for Greater Adelaide*, is expected to grow at a more significant rate. Significant land to the south of the South Eastern Freeway, for example, has been rezoned for residential development to support growth in Murray Bridge.

While the River Murray remains the focus of the region's economy, the area has undergone significant economic restructuring in recent years as a result of prolonged drought conditions between 2006 and 2010. Key economic activities are based on primary production and include horticulture, viticulture, dairying, intensive livestock production and associated processing activities. The river also provides a strong focus for tourism.

With three major interstate highways passing through this region, there are significant opportunities to improve the efficiency of freight movement to key port and airport facilities in Adelaide and markets in Victoria and New South Wales. Upgrades to the Sturt, Mallee, and Princes Highways as well as key access roads across the region will be progressively undertaken to make the most of these economic opportunities, providing the impetus for increased development at key centres along these routes. These safety and capacity improvements will also support increased tourist and passenger movements to destinations across the region.

Regional passenger transport services will be improved through better provision of information about services and the State Government will work with local councils to facilitate a review of strategically located regional passenger transport services.

The State Government will also work with local councils to develop cycling and walking frameworks and provide cycling/walking facilities to enhance access to local employment, shops and services in townships, as well as support tourism.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Continued support for regional passenger bus services e.g Murray Bridge Provincial City Bus Services and integrated passenger services			
Roads			
1. Sturt Highway – road widening, shoulder sealing, overtaking lanes, delineation, capacity improvements and bridge and intersections upgrade, and potential further capacity improvements including duplication of sections in the longer term			
2. Sturt Highway – investigate need for potential future arterial road bypass of Renmark			
3. Sturt Highway – arterial road bypass of Truro			
4. Dukes Highway – capacity improvements including duplication, Tailern Bend to Keith			
5. Provide five new vehicle ferries to support ongoing ferry crossing operations along the River Murray			
6. Mallee Highway – road widening, shoulder sealing and rest areas			
7. Murray Bridge growth area transport infrastructure			
• Potential upgrading the South Eastern Freeway/Adelaide Road Interchange to facilitate residential growth			
• Upgrade the Adelaide Road/Swanport Road/Mannum Road intersection			
• Other arterial and local road upgrades			
8. Princes Highway – road widening and shoulder sealing			
9. Loxton to Pinnaroo Road – road widening and shoulder sealing			
10. Pinnaroo to Bordertown Road – road widening and shoulder sealing			
11. Adelaide Hills freight route – Murray Bridge through Cambrai to Sedan (and to the Sturt Highway) – road widening and shoulder sealing			
12. Paringa bridge replacement			
13. Swanport bridge – investigate duplication			
14. Karoonda Highway – road widening and shoulder sealing			
Area-wide solutions			
• Road widening, shoulder sealing and intersection improvements targeted at major freight and traffic routes			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			

SOLUTIONS AND ACTIONS

Murray and Mallee Region

Cycling and walking – Area-wide solutions			
<ul style="list-style-type: none"> State Bicycle Fund – work with local councils to develop and implement a regional cycling and walking strategy and provide cycling/walking facilities in key locations 			
Ports, rail freight, airports and intermodals			
15. Investigate freight logistics improvements to support the grain task, including grain handling facilities			
16. Investigate potential upgrade requirements on Adelaide-Melbourne rail line to facilitate increased capacity (including double stacking)			
17. Support freight hub and potential intermodal activity at Monarto including access for High Productivity Vehicles			
Area-wide solutions			
<ul style="list-style-type: none"> Work with local councils to identify upgrades of strategically important local aerodromes including Waikerie, Loxton and Renmark 			
Local Government			
<ul style="list-style-type: none"> Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on freight movements, tourism and accessible townships: 			
<ul style="list-style-type: none"> Road, pedestrian and cycling networks and facilities in Murray Bridge, Renmark, Barmera, Berri, Loxton, Waikerie and other key towns to support tourism and active local communities Create safe and convenient walkable neighbourhoods Safe and reliable road and cycling networks to support tourism and local travel, and improved access to key tourism sites Options for local heavy vehicle bypass of affected towns Upgrades to support safe and reliable heavy vehicle movements, including last mile access, to support horticulture, grain and other freight generating industries Upgrades of boat ramps, moorings, jetties, navigation aids etc along River Murray and coast Work with local councils to implement the National Airport Safeguarding Framework for Waikerie, Loxton and Renmark airports 			

* These proposed actions will be subject to further investigations and availability of funding.

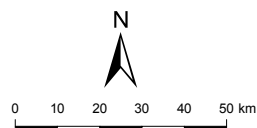
Growth area infrastructure may be subject to timing of urban development.

Figure 5-14 Murray and Mallee Solutions

Data source: Department of Planning, Transport and Infrastructure.

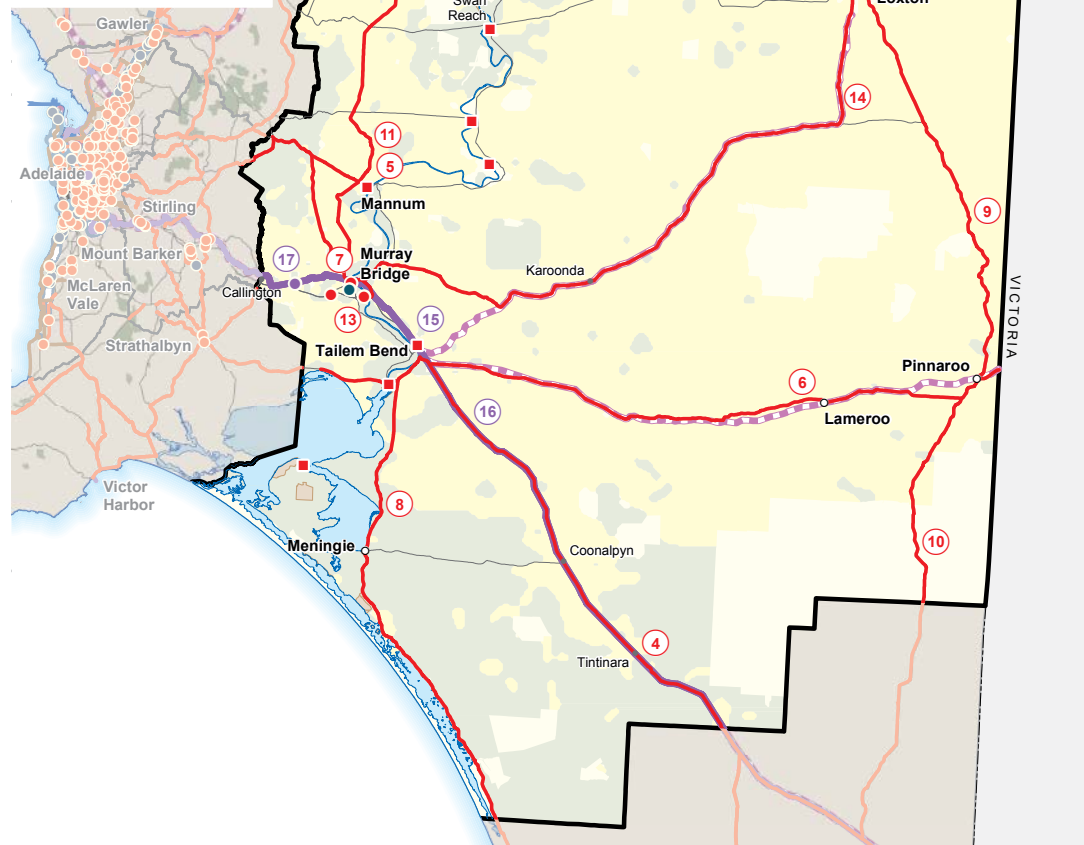
Solutions identified on this map may be subject to further intensive investigations and may vary as a result.

- Road improvements
- Passenger Transport improvements
- Road improvements
- Rail freight, ports, airports and intermodal improvements
- ▭ South Australian Government Region boundary
- Aboriginal lands
- Primarily cropping
- Primarily livestock
- Wine growing region
- Main road
- Freight railway
- Ferry



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PLN ID: 4389



Limestone Coast Region

Major regional centre: Mount Gambier

The Limestone Coast region serves as South Australia's gateway to Victoria and features important tourist and freight transport links. With a population of around 64,370 in 2011 and expected growth to around 72,240 people by 2036 (0.5 per cent per annum), initiatives to improve the safety and performance of the road network will be an important stimulus for ongoing economic development of the region.

The region has had to withstand significant economic restructuring in recent years due to changes in the forestry industry. Nonetheless, its economy remains strong and firmly based around primary production (agriculture, horticulture, viticulture and dairying), associated processing activities and tourism.

Upgrades to the Riddoch and Princes Highways, as well as the Pinnaroo to Bordertown Road and Bordertown to Naracoorte Road will support the region's world class wine growing, dairy and processing industries as well as improve the safety of the road network for increasing tourism and freight traffic. A freight traffic bypass of the historic Penola township, an important tourist centre for the region, will also be developed in stages.

Regional passenger transport services will be improved through better provision of information about services and the State Government will work with local councils to facilitate a review of strategically located regional passenger transport services.

The State Government will also work with local councils to deliver cycling/walking frameworks and facilities that both promote the adoption of active travel modes for local journeys and support tourism.

Growth in transport demand in the region led to the development of a *Green Triangle Action Plan* in 2009 to make the most of opportunities arising from growth in the mining, timber, renewable energy and agricultural sectors. The South Australian Government will continue to deliver this plan in partnership with the Victorian Government, local councils and the timber and freight industries.

Implementation timeframe*	Short (Next 5 yrs)	Medium (5 to 15 yrs)	Long (15+ years)
Public transport – Area-wide solutions			
• Development of a Regional Passenger Transport Plan to address regional accessibility requirements			
• Better information for regional passengers			
• Continued support for regional passenger bus services, e.g. Mount Gambier Provincial City Bus Services and integrated passenger services			
Roads			
1. Penola bypass			
2. Riddoch Highway – road widening, shoulder sealing, overtaking lanes and rest areas			
3. Princes Highway – road widening and shoulder sealing			
4. Pinnaroo to Bordertown Road – road widening and shoulder sealing			
5. Dukes Highway – capacity improvements including duplication, Keith to the border			
Area-wide solutions			
• Road widening, shoulder sealing and intersection improvements targeted at major freight and traffic routes			
• Increase maintenance to improve and sustain the performance of the transport network and make better use of our transport assets			
• Continue to implement the <i>Road Safety Strategy</i> and address road safety blackspot and higher risk locations			
Cycling and walking – Area-wide solutions			
• State Bicycle Fund – work with local councils to develop and implement a regional cycling and walking strategy and provide cycling/walking facilities in key locations			
Ports, rail freight, airports and intermodals			
6. Preserve the South East Rail corridor for potential future freight demand			
Area-wide solutions			
• Work with local councils to identify upgrades of strategically important local aerodromes including Kingston, Naracoorte, Millicent, Bordertown and Mount Gambier airport			
Local Government			
• Work with local councils and the Local Government Association to implement local transport strategies to complement land use directions of local Development Plans, with a focus on freight movements, tourism and accessible townships:			
<ul style="list-style-type: none"> Road, pedestrian and cycling networks in Mount Gambier and other major towns, including rail level crossings on local roads where applicable Create safe and convenient walkable neighbourhoods Upgrades to support safe and reliable heavy vehicle movements, including last mile access and in conjunction with implementation of the <i>Green Triangle Action Plan</i> Airport master plan – Mount Gambier Upgrades of boat ramps, jetties and wharfs, including capacity improvements at Port MacDonnell and improvements Beachport Options for local heavy vehicle bypass of affected towns, including Naracoorte Safe and reliable road and cycling networks and facilities to support tourism and local travel, and improved access to key tourism sites Work with local councils to implement the National Airport Safeguarding Framework for Kingston, Millicent, Naracoorte, Bordertown aerodromes and Mount Gambier airport 			

* These proposed actions will be subject to further investigations and availability of funding.

Figure 5–15 Limestone Coast Solutions



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