

Regional Strengths and Infrastructure Gaps

Regional Analysis:
South Australia

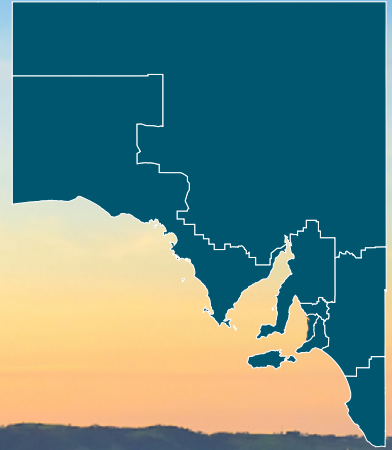


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6.5 South Australia



Victor Harbor, South Australia

6.5.1 Adelaide Hills, Fleurieu and Kangaroo Island

The Adelaide Hills, Fleurieu and Kangaroo Island region covers a diversity of environments ranging from the conservation areas of Kangaroo Island to iconic wineries and one of the fastest growing urban areas in the state. The region's diversity extends to its varied local product and service offerings, developed and delivered by a network of resilient and growing communities.



Recent years have seen the growth of the tourism industry, particularly for Kangaroo Island and the region's main viticulture districts. Key transport upgrades have also enabled growth in the region, both in terms of improving freight efficiency and supporting a larger population. However, increasing congestion and the rapid growth of urban areas is placing significant pressure on infrastructure.

The region recognises the importance of environmental resilience for sustainable growth. It hopes to address congestion issues through better public transport to reduce reliance on personal vehicles and improve the efficiency of freight movements. Housing and accommodation supply will also be essential to meet population growth and tourism needs.

Strengths

Key existing assets

Economic	Water infrastructure	Mt Barker wastewater treatment plant and recycled water scheme, Murray Bridge-Onkaparinga Pipeline, Mt Bold Reservoir, Clarendon Weir and Happy Valley Reservoir aid in building water security.
	Transport infrastructure	The Melbourne-Adelaide rail corridor and South-Eastern Freeway act as valuable freight and passenger connections to other regions. The infrastructure provides competitive advantage for the region as exports and visitor numbers grow.
Natural	Climate and topography	The region has an ideal climate to support high-productivity agriculture and viticulture and enhancing attractiveness for visitors. Reliable wind and water resources offer renewable energy generation opportunities for the region.
	Natural environments	There are nine national parks on Kangaroo Island alone, with diverse flora and fauna. The green landscapes of the mainland and coastline support primary industries and a thriving visitor economy. Flinders Chase National Park is known for penguin colonies and striking coastal rock formations, like the sculpted Remarkable Rocks and the stalactite-covered Admirals Arch.

Key regional growth industries

Agriculture, forestry and fishing	Tourism	Healthcare and social assistance
<p>Agriculture is a prominent sector in the region, with strong horticultural production in the Adelaide Hills, dairy and sheep in Fleurieu and Kangaroo Island and viticulture prominent throughout.¹ Growth in this sector will be driven by innovative food production and agribusiness that adds value to traditional outputs.² The adoption of regenerative farming practices will also boost the sustainability of the industry.³</p>	<p>The Adelaide Hills, Fleurieu and Kangaroo Island region is endowed with pristine natural environments, unique creative outputs and boutique food and wine experiences, presenting significant opportunities for tourism.⁴ Kangaroo Island in particular saw an increase in visitor spending from \$123 million to \$141 million between 2017 and 2019, and is expected to reach \$199 million in 2025.⁵</p>	<p>The healthcare and social assistance sector accounts for one in eight jobs in the region (2019-20).⁶ The region has a higher proportion of persons aged 60 or over than regional South Australia, providing strong demand for facilities and programs to support the needs of older residents.⁷ Residents in the region are serviced by a strong health network including the Mount Barker Soldiers' Memorial Hospital.</p>

Remarkable Rocks, Kangaroo Island, South Australia



Infrastructure gaps



Sector: Transport

Sub-sector: Public transport

Infrastructure gap: Capacity, connectivity and quality of public transport

The Adelaide Hills, Fleurieu and Kangaroo Island region adjoins the east, south and south-west boundaries of the Adelaide Metropolitan region, with the region's communities located between 10 and 110 kilometres from the Adelaide CBD.⁸ The region is connected to the capital by a public transport network including Adelaide Metro bus services, LinkSA bus routes and two ferry operators. Currently the public transport network in the Adelaide to Mount Barker corridor is well serviced, however there are still many areas and towns that are poorly connected, with a lack of regularly scheduled public transport.⁹ As a high proportion of residents also work in the region, there is a need for accessible intra-regional public transport infrastructure.¹⁰

A 2019 Regional Public Transport Study for RDA Adelaide Hills, Fleurieu Peninsula identified various public transport challenges in the region based on stakeholder feedback. Some of the challenges included frequency of service, network coverage, integration between services, bus stop amenities and signage.¹¹

A high-quality public transport network will be vital in properly servicing a region that is expected to have large population growth within the next two decades.

Key facts

In 2016,

3.6%

of people in the region took public transport to work.¹²



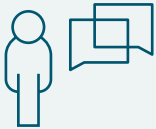
64%

of the region's workers live and work in the same local government area.¹³



Impact

- The projected rise in population growth may lead to an increase in traffic on public roads and number of passengers requiring and taking public transport.
- Cost of access and number of ferry services to Kangaroo Island results in impacts upon residents, visitors and freight. This also inhibits the attraction of skilled workers to the island.
- Despite the majority of workers both living and working in the region, the use of public transport to commute to work is very low. Providing accessible and efficient public transport networks may increase the public transport modal share.



Consultation feedback

During consultation in the Adelaide Hills, Fleurieu and Kangaroo Island region stakeholders noted that public transport in the region is a significant challenge. Stakeholders noted that with the population growth in the region during the last few years, the strain on public transport has increased significantly. This has impacted the area with increased congestion on road networks as commuter numbers grow, especially on routes towards Adelaide. The development of a better public transport network and increased services was raised by stakeholders as an opportunity to help alleviate the increasing congestion on roads.

Improvements to the existing public transport infrastructure will be necessary to better connect and enable access between different towns in this region and prepare for the future.



Sector: Social infrastructure

Sub-sector: Housing

Infrastructure gap: Availability, diversity and affordability of housing

The Adelaide Hills, Fleurieu and Kangaroo Island region boasts both urban and rural living opportunities in coastal and inland landscapes. The lifestyle offering this facilitates has been a major factor in attracting people to move to this region.

Mount Barker District Council's resident population is forecasted to grow from 39,615 people in 2022 to 56,710 people in 2036, over 43%.¹⁴ The Alexandrina Council is also forecasted to grow from 28,372 in 2022 to 36,907 by 2041, over 30%,¹⁵ reflecting the projected population increases within this region.

However, the region is currently facing shortages in affordable housing and accommodation, with vacancy rates at an all-time low and in some towns, there are no available rental properties.¹⁶ In June 2021, only 24 rental properties were listed across Kangaroo Island, Yankalilla, Victor Harbor and Alexandrina Councils combined.¹⁷ The lack of available, affordable and quality housing is a key inhibitor to attracting skilled workers, leading to consequences that affect regional development, growth and liveability.¹⁸

Key facts

Mount Barker Council's goal is to attract

\$2.8 billion



in housing and major project investment by 2037.¹⁹

In 2016,

92.6%

of all dwellings were separate houses.²⁰



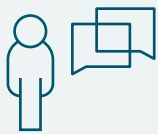
1.2%

of house sales between 2011 and 2017 were affordable to very low and low income households, compared to 5.4% in Greater Adelaide.²¹



Impact

- To support projected population growth, major investment will be required to build more housing which meets the future population profile in the region. This will necessitate investment in infrastructure and policy reform which facilitates greater housing diversity. Most notably, there will be a need for more medium to high density dwellings to accommodate the projected and growing population numbers in existing centres.
- With an average of 20.1% of residents paying over \$350 per week in rent, the region is more expensive as compared to the regional South Australian average of 4.5% of residents paying over \$350 per week in rent.²² In 2016, 36.9% of residents had a weekly household income below \$1000,²³ increasing the likelihood of residents experiencing housing stress.



Consultation feedback

During consultation, stakeholders discussed the many changes driven by population growth in the region, including increased urbanisation, growth in commuter towns and the heightened risk of rising property values forcing out producers. There were also concerns expressed around social exclusion as property prices are driven higher as a result of these changes.

Stakeholders saw opportunity to address these issues through strategic urban planning to oversee the current and future urban development taking place in the region. An affordable, diverse and accessible housing market is seen by locals as being necessary to attract and retain a diverse and prosperous local community that will generate and boost economic activity within the region.



Sector:	Transport
Sub-sector:	Freight
Infrastructure gap:	Capacity, connectivity and quality of freight infrastructure

The region’s major freight connections include the South-Eastern Freeway and Adelaide-Melbourne rail corridor. The South-Eastern Freeway is one of the busiest roads in South Australia and is the main link between Adelaide and Melbourne, resulting in conflicts of use and congestion from freight and personal transport.²⁴ Key infrastructure upgrades over the past two decades which have helped to support the growth in freight movements include the Seaford Railway Line extension and electrification, the Heysen Tunnels and South Eastern Freeway developments and Aldinga and McLaren Vale upgrades.

However, there remains a lack of intermodal facilities to enable more efficient and higher capacity of freight transportation. With total exports generated by the region in 2019–20 reaching over \$2.52 billion,²⁵ optimising the freight network will provide the potential to help boost future export opportunities for the region. Benefits in boosting the export capacity of the local economy relate to both industry output and increased direct and indirect employment opportunities along the supply chain.

Key facts

\$40
million

investment into
Kangaroo Island Road
Safety and Bushfire
Resilience Package.²⁶

\$14
million

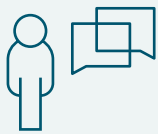
investment into
Lobethal
Freight
Access
Upgrade.²⁷

71.2%

of exports were from
manufacturing, mining
and agriculture, forestry
and fishing industries.²⁸

Impact

- The \$40 million Kangaroo Island Road Safety and Bushfire Resilience Package will upgrade roads in the region, enabling improved freight productivity. The project includes road widening, shoulder sealing and intersection improvement.²⁹
- Improving freight accessibility and infrastructure quality can improve safety for passenger vehicles alongside delivering improved productivity and efficiency outcomes for industry.³⁰
- In 2019–20, the majority of exports coming from the region were from the manufacturing and agriculture industries. These industries are inextricably linked with the need of freight movement and networks. To support export activity, freight networks will need to be continually maintained and upgraded.³¹



Consultation feedback

Transport was identified as a significant challenge for the Adelaide Hills, Fleurieu and Kangaroo Island region, with workshop participants commenting on the need for greater transport infrastructure to keep up with population growth and congestion. It was noted that operation during peak periods is hampered by specific choke points at the Adelaide Plains end of the corridor and that there was a need to provide more alternate (non-freeway) local routes.

Freight accessibility and productivity was also identified as a key challenge, with stakeholders noting inefficient freight bypasses, bottlenecks from the Hills to Glen Osmond Road and increasing tension with passenger vehicles. Efficient sea access to Kangaroo Island with increased capacity was noted as an opportunity to better connect the island to inland areas, which would support both the businesses selling from Kangaroo Island and freight movement onto the island.

6.5.2 Adelaide Metropolitan



The Adelaide Metropolitan region offers a high standard of liveability for residents, providing the benefits of a capital city without compromising on access to natural landscapes. Offering world class research, education, defence and technology, as well as a growing cultural and arts scene, Adelaide Metropolitan is a uniquely liveable region.

Over the years, its liveability has attracted steady population with additional growth in high density living in the Adelaide CBD and low to medium density development for the inner suburbs and surrounding areas. The additional pressure of growing populations on communities has led to an increase in congestion and pressure on road infrastructure.

The region hopes to address transport challenges through improved public transport and planning for an integrated network, which is seen as vital towards achieving greater sustainability and connected communities. In addition, the region's water infrastructure must meet the requirements for the projected growing population.

Strengths

Key existing assets

Economic	Gateway ports	Adelaide Airport provides connectivity for residents and tourists to the region and beyond, whilst Port Adelaide provides import and export capacity.
	Transport infrastructure	Adelaide has a diverse public transport network consisting of a contracted bus system, metropolitan railways and approximately 16.5 km of tram network.
	Energy infrastructure	The City of Adelaide is the first council in South Australia to use 100% renewable electricity to power its assets, and the city has had strong uptake of rooftop solar supply for private residences. ³²
Social	Education and research institutions	Home to multiple educational institutions such as University of South Australia, University of Adelaide, Flinders University, Torrens University Australia and Carnegie Mellon University.
	Community infrastructure	The region is home to a wealth of significant arts, cultural and event spaces, including the Art Gallery of South Australia and Adelaide Oval.
	Health infrastructure	The region has high quality and accessible health facilities such as Royal Adelaide Hospital. Industry leading health services are driven by collaboration with research institutes.

Key regional growth industries

Healthcare and social assistance	Knowledge sector	Aerospace
<p>The \$3.6 billion Adelaide Biomed City is one of the largest health and life sciences clusters in the southern hemisphere and enables collaboration between the South Australian Health and Medical Research Institute and the new Royal Adelaide Hospital.³³ Both facilities are equipped with state-of-the art technology and equipment with Royal Adelaide Hospital providing world-class healthcare. Other facilities such as the Centre for Cancer Biology and a new medical school will expand the region’s health research, innovation and expertise.</p>	<p>The region is a significant knowledge hub with a wealth of infrastructure and initiatives enabling industry collaboration and innovation. The region has world class education institutions such as University of Adelaide and University of South Australia in addition to innovation hubs Tonsley, Lot Fourteen and Technology Park Adelaide. Tonsley Innovation District is recognised globally for reimagining traditional manufacturing.³⁴ The region’s recently opened Lot Fourteen is an innovation hub for space, defence, hi-tech and creative industries.³⁵</p>	<p>The region is home to the Australian Space Agency, SmartSat Collaborative Research Centre and South Australian Space Industry Centre, all of which contribute to a vibrant entrepreneurial space economy. The Australian Space Agency headquartered in Adelaide has set an ambitious target to triple the size of the space industry to \$12 billion by 2030.³⁶ Adelaide will be vital to achieving this target with over 80 space-related organisations committed to industry growth and aided by world-class precincts and facilities such as Lot Fourteen, Tonsley, Technology Park Adelaide and Koonibba Test Range.³⁷</p>



Torrens River, Adelaide, South Australia

Infrastructure gaps



Sector: Transport

Sub-sector: Public transport

Infrastructure gap: Capacity, connectivity and quality of public transport

Adelaide Metro is Adelaide's key public transport system and comprises of buses, trains and tram services. Adelaide's public transport system is largely radial, with most train, bus and tram routes providing access to central areas either directly, or in the case of bus feeder routes, through interchanges.³⁸ Unlike other cities, buses perform the majority of Adelaide's public transport task and have the greatest number of passenger kilometres, passenger hours and boardings.³⁹ Rail travel is also prominent, serving the far north and south, and usage is expected to increase.⁴⁰

Public transport use in Adelaide is significantly lower than in Sydney, Melbourne and Brisbane,⁴¹ however there is an increasing demand for the network to better serve the changing needs of a growing resident population, as well as serve increased commuter demand. By 2031, Adelaide is projected to experience a net increase of around 110,000 jobs with a significant employment cluster in Adelaide City of over 30,000 additional jobs.⁴²

A lack of integration between various public transport modes results in extended travel times for journeys with interchange and fewer total viable connections, making public transport less attractive.⁴³ Amenity around many public transport interchanges does not meet customer expectations and there are legacy accessibility issues at many railway stations.⁴⁴

A growing population and increase in non-resident workers will require a robust public transport network to connect and efficiently move people between locations and workplaces. An efficient and accessible network will attract more people to choose public transport modes as an alternative means of travel to personal vehicle use, which may help to relieve road congestion and improve road safety and community wellbeing.

Infrastructure South Australia's 20-Year State Infrastructure Strategy in 2020 identified a range of public transport options that could increase access and capacity. The strategy notes that planning should occur for future mass transit options where population growth is forecast, and corridors preserved for future optionality where possible.⁴⁵

Key facts

The cost of delay on Adelaide's urban network was estimated as

\$1.4 billion

and projected to grow to

\$2.6 billion in 2031.⁴⁶



Public transport trending down

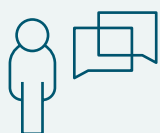
29%

in South Australia as at 26 February 2022, from the baseline (median value for the corresponding day of the week during 3 January to 6 February 2020).⁴⁷



Impact

- In 2018-19, the total Adelaide Metro patronage increased by 1.5% higher compared with the previous financial year.⁴⁸
- Adelaide's recent employment growth has been centred on the inner and middle suburbs, whereas population growth has been strongest in the middle and outer suburbs. Existing public transport services do not support urban density and a continuation of existing land use patterns will result in greater reliance on and use of private passenger vehicles, in turn leading to further road congestion and delays at the expense of economic efficiency.⁴⁹
- The long period of relatively low population growth has put limited strain on the network, but as the population of Adelaide grows, a greater mode shift to public transport will be needed to maintain the efficiency of the network and to avoid the congestion experienced in other states.⁵⁰
- The population of Adelaide is forecast to grow and the passenger transport network will need to improve its efficiency to be able to manage this growth in a way that maintains Adelaide's liveability. As the trend towards greater density in urban infill continues, it provides opportunities to plan for a more efficient public transport system as well as more walkable communities.⁵¹



Consultation feedback

The main challenge identified by consultation participants in the Adelaide Metropolitan region was delivery of an integrated and efficient transport network to service a growing population. It was noted that the region requires a public transport network which will alleviate congestion on roads and provide efficient connectivity between the major employment and activity centres.

There was a general perception shared by stakeholders that the momentum in changing these issues was also being slowed by low levels of funding. An important note raised was the need for an approach that combined infrastructure planning and community consultation, as often it was community resistance that was a barrier for major network changes. Improvements which encourage greater adoption of active (on-demand) transport and provide a better public transport network will be vital in supporting the liveability and connectivity of the region.



Sector:	Transport
Sub-sector:	Roads
Infrastructure gap:	Capacity, connectivity and quality of road infrastructure

The number of people residing in Adelaide, as well as the spatial distribution of where they live and work are key drivers of the city’s transport patterns.⁵² The overall distance between where people live and work is expected to widen, increasing the magnitude of the transport task.⁵³

By 2031, peak period congestion on Adelaide’s road network is forecast to increase significantly, with the performance of many north-south routes deteriorating significantly. This indicates that the level of demand placed on the road network is likely to exceed its ability to provide reasonable levels of service to motorists.⁵⁴

Key facts:

When compared to the South Australian rural road network, metropolitan Adelaide sees the majority (86%) of minor injuries, 44% of all fatalities and 59% of all serious injuries, with 43% of all serious casualty crashes occurring at intersections.⁵⁵



Congestion is increasing in Adelaide, however the costs of road congestion and public transport crowding remain lower than the four Fast-Growing Cities of Sydney, Melbourne, Brisbane and Perth.⁵⁶

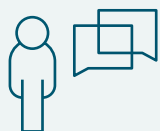


Adelaide has the lowest proportion of arterial roads with a speed limit above 50km/h, and average speeds on arterial roads have declined by 1.1% per year over the last decade.⁵⁷



Impact

- The uptake of zero emission vehicles in South Australia has been slowly increasing. In 2018, of the more than 1.4 million registered vehicles, only 290 were electric vehicles, an increase of 70% since 2013, which is in line with eastern capitals.⁵⁸ The State of Electric Vehicles 2021 notes that South Australia has the second highest proportion of EVs of their light vehicle fleet at 0.16%.⁵⁹ South Australia's Electric Vehicle Action Plan focuses on charging infrastructure and notes the desire to see all new sales electric by 2050.⁶⁰
- Concentration of congested links south of the CBD where demand for travel in the peak direction results in traffic volumes approaching or exceeding road capacity. Most prominently, the Main South Road/South Road corridor carries high volumes of traffic and is congested for most of its length.⁶¹
- Beyond providing new or upgraded road infrastructure, infrastructure interventions such as upgrade and maintenance works on signage, CCTV cameras and bus indents on key roads offer opportunities to reduce congestion and improve road safety.⁶²



Consultation feedback

Participants in regional consultations highlighted that the transport of freight through the region is a major challenge contributing to road degradation and congestion. The benefits of better separating freight and regular commuters across the road network was identified to help alleviate the pressure currently faced by urban road assets. Opportunities to improve the current transport networks noted by participants included the development of heavy vehicle bypasses, more freight corridors to connect with the South Eastern Freeway, upgrades to capacity and highways duplication.

Participants also identified a lack of strategic planning and connected policy across all levels of government as an inhibitor to the delivery of priorities and well-planned infrastructure. Long-term strategic planning to align and manage infrastructure rollouts involving road infrastructure capacity, connectivity and quality was viewed as a priority.



Sector: Water

Sub-sector: —

Infrastructure gap: Water security

Adelaide has a diverse portfolio of water supply options including its multiple reservoirs, stormwater, wastewater, groundwater, the River Murray and the Adelaide Desalination Plant.⁶³ The Government of South Australia's *Water Security Statement 2022* notes that this combination of resources helps to provide a high degree of water security for urban Adelaide.⁶⁴ In metropolitan Adelaide, the water network is made up of an interconnected system with more than 9,300 km of water mains and numerous pump stations to deliver water to users.⁶⁵

While Adelaide has a high degree of water security, ensuring future water security will not be without challenges and stakeholders highlighted concerns regarding water infrastructure catering for future growth. Challenges include balancing the future water needs of a green Adelaide (an effective adaptation to reduce the impact of increasing summer temperatures) with other water demands.⁶⁶ Urban water management will need to consider ageing infrastructure requiring maintenance, upgrade and replacement.⁶⁷ Integrated management of the full urban water cycle brings with it the potential to deliver positive community, economic and environmental outcomes.⁶⁸

Key facts

The Government of South Australia's *Water Security Statement 2022* notes Adelaide's existing water sources are likely sufficient to enable economic growth to 2050, without significant augmentation, under a high-end emissions and mid-range population growth scenario.⁶⁹ There will, however, likely be an increase in use of the Adelaide Desalination Plant to meet Adelaide's future water security requirements.⁷⁰



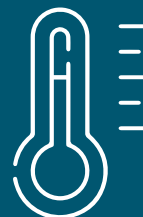
In summer 2018-19 there were

47 days

of no rainfall in Adelaide CBD, making it the driest start to the year since 1957. In February 2019 the rainfall in Adelaide's CBD was 32% of the long-term average.⁷¹

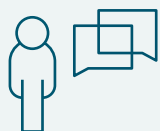


Potential impacts of climate change on residents, visitors and businesses could include reduced water availability and increasing heat resulting in increased stress and resources required for maintaining open space, public realm and vegetation.⁷²



Impact

- The Adelaide Desalination Plant (ADP) has been delivering drinking water since 2011 and provides a source of water which is not dependent on rainfall. The plant's water production capacity is flexible, meaning production can be aligned with water availability from other sources and efficiently meet supply requirements. The water security provided by the desalination plant has enabled Adelaide to reduce its reliance on the River Murray.⁷³
- The South Australian Government has agreed to assist in national drought relief by using water from the Adelaide Desalination Plant to increase supply to urban Adelaide. This offset water allocations from the River Murray and freed up available river water for communities and agribusinesses in the upper Murray catchment. It is recognised that while the ADP provides a high degree of water security for Adelaide, it comes at a cost (compared to the production costs of providing Adelaide with potable water from the River Murray and the Mount Lofty Ranges).⁷⁴
- South Australia is internationally recognised as a leader in the collection, treatment, storage and use of stormwater for non-potable purposes through managed aquifer recharge (MAR). Successfully integrating MAR into a city's water supply portfolio requires careful management of water quality risks. Increased networking of existing and future stormwater recycling schemes has the potential to improve the reliability of supply and strengthen the case for investment in recycled water.⁷⁵



Consultation feedback:

Stakeholders expressed concerns that water infrastructure within the Adelaide Metropolitan region was designed with relatively limited supply pipeline network for a region with such a dense population. It was highlighted that the expected future population growth and urban consolidation within this region is highly likely to increase water supply demands on already ageing infrastructure. Stakeholders noted that water security is inextricably linked to liveability and quality of life and will be a key challenge this region will need to address.

6.5.3 Barossa Gawler Light Adelaide Plains



The Barossa Gawler Light and Adelaide Plains region is renowned for its world-class wine, artisanal produce, innovating industries and diverse landscapes from coastline to extensive agricultural, viticultural and horticultural land of the Mount Lofty Ranges.

The region has seen rapid and sustained population growth in recent years, particularly in the urban fringe neighbouring Adelaide Metropolitan. This strong growth has been driven particularly by older residents, as the region's unique lifestyle attracts families and retirees. However, this has resulted in increased pressure on health assets and the need for better connectivity. It also increases the importance of lifestyle facilities for workers and families.

Looking ahead, climate change adaptation and sustainability are increasingly in focus, as the region looks to support continued growth and sustainable production. A major priority has been water security as climate impacts reduce surface water levels and constrain growth of the region's agricultural, viticultural and horticultural industries.

Strengths

Key existing assets

Economic	Tourism brand	The Barossa brand is renowned for high-quality food, wine, and other artisanal products. The region's reputation attracts visitors.
	Transport infrastructure	The Northern Expressway provides a high-value link between Adelaide and Gawler, enhancing last access to port and international airport.
	Defence assets	RAAF Base Edinburgh houses significant defence assets and provides direct and indirect employment opportunities.
	Specialised precincts	The region has a concentration of equine facilities, including club, industry suppliers, veterinary services, breeding studs and trainers.
Natural	Natural environments	The Adelaide International Bird Sanctuary, Mt Crawford Forest, vineyard landscapes, national parks and reserves offer biodiversity, liveability and tourism value.
	Climate and topography	The region's Mediterranean-like climate is ideal for premium wine and food production.

Key regional growth industries

Agriculture, forestry and fishing	Tourism	Manufacturing
<p>The wine industry is a notable component of the regional economy, with Barossa contributing 27% of the total value of the South Australia grape and wine sector.⁷⁶ Value adding activities such as food and wine processing will continue to strengthen the regional agriculture sector and make significant contributions to the regional economy.⁷⁷ High technology horticulture is another area of growth, with climate resilient food production at scale.</p>	<p>The Barossa Gawler Light Adelaide Plains region has a growing tourism industry which contributed almost \$220 million to the local economy in 2019.⁷⁸ Already globally recognised as a premium food and wine destination, the region has opportunities to capitalise on their growing nature and wellness-based tourism offerings.⁷⁹ Creative industries also offer tourism opportunities for the region.⁸⁰</p>	<p>Manufacturing (predominately food and beverage manufacturing) is the largest contributor to the regional economy with \$484.5 million of value add in 2019-20.⁸¹ In the Light local government area, the top manufactured products are glass, metal, food and beverage.⁸² Leveraging this regional advantage, many emerging opportunities are in advanced manufacturing and value-adding food processing.⁸³</p>



Wine valley in Barossa, South Australia

Infrastructure gaps



Sector: Water

Sub-sector: —

Infrastructure gap: Water security

Water and water infrastructure networks are a key resource within the Barossa-Gawler-Light-Adelaide Plains region, servicing the prominent horticulture and agriculture industries. These industries rely on successful irrigation to support economic growth and activity. Existing regional water supply infrastructure include the Bunyip Scheme (formerly the Gawler Water Reuse Scheme (GWRS)), Barossa Infrastructure Limited (BIL) and the Northern Adelaide Irrigation Scheme (NAIS).⁸⁴ These assets have supported businesses in securing water, however rising demand from industries, climate change and a growing population continue to put pressure on infrastructure networks and their ability to deliver in the future.

Water supply in the Barossa Valley region is included in the *Infrastructure Priority List*, noting that the River Murray is currently the major source of irrigation water to the region. Smaller volumes of groundwater are available, although the quality in some areas is not fit-for-purpose or sufficient to meet increasing industry demand.⁸⁵ The region's wine industry, by virtue of its reliance on climate dependent sources of water supply from the River Murray, is exposed to drought, climate variability and climate change risks.⁸⁶ Improving water security, production capacity and climate resilience for the region will reduce the economic impacts of future droughts and could increase production from existing vineyards.⁸⁷

The New Water Infrastructure to the Barossa Project (Barossa New Water) is investigating the viability of delivering new water supply to Barossa and Eden Valleys by leveraging supply and infrastructure of the Northern Adelaide Irrigation Scheme, and other existing infrastructure. Barossa New Water addresses industry demand from the wine, livestock, and horticulture sectors for new water sources to provide security from declining rainfall, surface water and underground water availability.⁸⁸ It also includes the treatment, transfer and distribution of high-quality recycled water.⁸⁹

Key facts

Expanded use of
recycled water

has been identified as offering significant potential in improving irrigation capacity and economic output.⁹⁰



In 2019–20, the agriculture, forestry and fishing industries output generated

\$618.2 million

for the region.⁹¹



The Barossa Valley received only

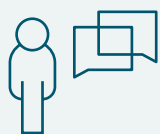
11mm

of rainfall over the first four months of 2019.⁹²



Impact

- Investment in improved water security will allow the region to boost its horticultural industry productivity and become a national leader in intensive, high technology food production.⁹³
- There is an opportunity to further increase the outputs of the agriculture, viticulture and horticulture industries with the growing demand for premium food and wine. To reap economic benefits, robust irrigation infrastructure and networks will be necessary to support the growth of produce.
- Communities in the region have been hit hard by rainfall deficit, leading to a 40% decline in grape harvest yields in 2018 and 2019 compared to 2017.⁹⁴ This has significant implications for a community that produces high value returns and advanced jobs in the agriculture and horticulture industries and associated manufacturing.



Consultation feedback

Water security was identified by stakeholders as being a significant infrastructure challenge facing the region. Concerns were expressed over the distribution, price and equality of access to water, with workshop participants commenting on the need for greater investigation into irrigation schemes to support the region's agribusinesses in the horticulture, livestock and wine industry. Consultation also revealed that there were opportunities for the region to achieve higher water security by utilising fit for purpose and cost competitive recycled water. Stakeholders noted that while recycled water was available, fit for purpose treatment and infrastructure for delivery was needed. Improved water security was seen to help to support sustainable high value agriculture, tourism, manufacturing industry expansion and high value jobs for a growing population.



Sector: Social infrastructure

Sub-sector: Health and aged care

Infrastructure gap: Access to and capacity of health and aged care infrastructure

The population is projected to increase over next decade in the Barossa-Gawler-Light-Adelaide Plains region.⁹⁵ The region's proportion of people over the age of 65 is increasing, although this ageing population is currently accompanied by a low supply of residential aged care facilities.⁹⁶ Capacity of the region's health and aged care facilities will need to deliver quality services to meet this projected population growth.

Improving aged care capacity is not the only health infrastructure challenge faced by the region, with the rate of people that are clients of a community mental health service 32% above the metropolitan average.⁹⁷ This reflects the growing importance of providing well-equipped and accessible mental health service facilities in the region.

Key facts

There are relatively few residential aged care places in the region compared with metropolitan Adelaide, with the offering sitting at 78.3 compared with 95.4 places per 1,000 population aged 70 years and over, respectively.⁹⁸



In 2017-18,

14.4%

of people aged 18 years per 100 population, experienced high or very high levels of psychological distress (3% above the Metropolitan Adelaide rate).⁹⁹

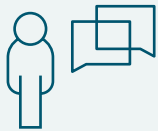


The region has been identified as being in need of additional primary healthcare capacity, with business case development underway for a new Barossa Hospital.¹⁰⁰



Impact

- The region will require well-developed and accessible health and aged care infrastructure to ensure it is able to cater for the needs of an ageing population.
- Increased capacity of primary healthcare infrastructure in the region will enable improved access to quality healthcare for the community and help prepare the region for future demand brought about by a growing population.
- Poor mental health can adversely affect an individual's ability to engage with employment and impede social inclusion which may have flow-on effects to economic growth and social cohesion in the region.



Consultation feedback

Increasing pressure on health services was noted by stakeholders as being a key challenge for the region. It was noted that there has been increasing pressure and demand for social and health services driven by population growth occurring across the whole region. It is noted that demand for mental health services is impacted by challenges such as COVID-19, drought and natural disasters.

Stakeholders also identified the need for greater provision of mental healthcare, upgraded health service sites and more home-based services for the older population. To enable the region to be future ready to manage an ageing and growing population, stakeholders sensed there will be a need for greater social and community infrastructure to address these trends.



Sector: Telecommunications

Sub-sector: —

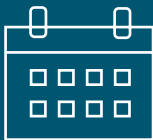
Infrastructure gap: Broadband and mobile connectivity

Improved digital connectivity resulting from high quality and accessible broadband and mobile network infrastructure can have significant benefits for a community. These benefits include providing a way to connect through areas of business, education, service delivery and social interaction.¹⁰¹ The region averaged a 2021 Australian Digital Inclusion Index (ADII) score of 67.5 (based on Barossa, Gawler, Light and Adelaide Plains local government areas), below the national average of 71.1.¹⁰²

In 2019/20 the total tourism and hospitality sales in the region was \$216.2 million.¹⁰³ High quality broadband and mobile connectivity are essential for visitors to be able to navigate the region, engage with service providers and purchase goods and services. Faster broadband speeds are also critical in enabling enhanced uptake of agricultural technology (AgTech) in the region, which has the potential to boost productivity and economic output. Two AgTech demonstration sites at Nuriootpa and Turretfield aim to demonstrate the value of technology to farms and producers in the region.¹⁰⁴

Key facts

In 2019-20, there was a total of
1,613,700
visitor nights in the region.¹⁰⁵



The region averaged
a 2021 ADII score of

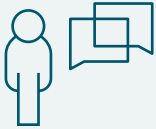
67.5

(based on the Barossa, Gawler,
Light and Adelaide Plains local government
areas), ranging between 66 and 69. This is
below the national average of 71.1.¹⁰⁶



Impact

- Broadband and mobile connection is vital in supporting the region's economic growth. With the Barossa Valley being an iconic tourism destination, visitors will expect fast and reliable connection during their stays.
- Increased uptake of AgTech would allow more productive and sustainable farming practices in the region through enabling less-labour intensive and more water efficient practices. A strong digital network will be required to facilitate AgTech uptake.



Consultation feedback

Stakeholders noted that improved digital connectivity throughout the region would enable higher levels of productivity, particularly in AgTech, and help to increase value and output for primary industries. AgTech was understood to be an opportunity for many businesses in the region to leverage as it could enable less labour-intensive and more sustainable business practices.

Black Spots were also raised as a challenge for tourism. Stakeholders noted that maintaining and upgrading current broadband and mobile networks would further support growth in the tourism industry and enhance the global presence of its producers and artisans by allowing businesses to take advantage of online marketing and e-commerce.

6.5.4 Far North

The Far North region covers a significant expanse of land, stretching from the Northern Territory border to the Flinders Ranges and Port Augusta. The region's wealth of sun-drenched land, mineral resources and extensive grazing rangeland is home to a network of resourceful communities.

The region's natural grazing lands support organic food and fibre production. While efficiencies are being realised across livestock production in the region, stakeholders note this is not always reported in economic data focusing on value at point of shipment rather than production. Carbon farming is seen to present additional opportunities for adaption of agricultural and other land management practices to generate carbon offsets and reduce greenhouse gas emissions with broader economic benefits.¹⁰⁷

The region has seen shifts in its economic base in recent decades, with the increased prominence of tourism, mining and renewable energy. Essential energy, water and transport infrastructure will be needed to underpin the growth of these industries. An increase in tourism visitation numbers has brought attention to the need for a better transport network which has flow-on effects for accessibility and efficiency of freight movements. Digital connectivity is also recognised as essential to enhancing economic opportunities and promoting social capital for the region.



Strengths

Key existing assets

Economic	Gateway ports	Port Augusta is an essential junction for major road and rail connections, supporting movement of residents, visitors and freight. In this sense, Port Augusta acts as a strategic gateway for the region.
	Transport infrastructure	The Stuart Highway is the major route to the Northern Territory and the Birdsville and Strzelecki Tracks also provide linkages in the north-east of the region. The Joy Baluch bridge provides access across the Spencer Gulf. Numerous other roads serve mining operations, pastoralists, the community and tourists. The Adelaide-Darwin rail corridor also provides a south-north connection.
Natural	Natural environments	The Flinders Ranges and the outback are significant tourism assets and home to important wildlife and rich First Nations culture.
	Natural resources	Opals, copper, uranium, iron ore, gold and silver deposits are essential for a thriving resources industry that competes globally. Extraction of these diverse natural resources supports many jobs in the region.
	Climate and topography	Unique climatic conditions across the vast expanses of the Far North provide an opportunity for solar energy and other renewable resources to be harnessed for energy generation.

Key regional growth industries

Mining	Tourism	Energy
<p>Mining has traditionally been the primary economic driver, responsible for over 63% of the Far North’s output, and contributing over \$1.7 billion in regional value-add.¹⁰⁸ The rich mineral deposits in the region will continue to support growth, with expanding operations in copper, silver and iron ore and opal extraction.¹⁰⁹ Once completed, Port Playford will provide export shipping services to existing and future mining operations and projects in the North Gawler, Curnamona and Braemar iron ore regions.¹¹⁰</p>	<p>The Far North has many environmental assets that support the tourism industry, including the Flinders Ranges, salt lakes and outback Australia.¹¹¹ The Flinders Ranges is full of cultural significance and sightseeing opportunities, that have been able to attract an average of 796,000 overnight visits.^{112,113} Kati-Thanda Lake Eyre is the largest lake in Australia and is a significant tourism attraction.</p>	<p>Local renewable energy projects are diverse and include solar, wind, hydro energy generation.¹¹⁴ The renewable energy sector has a rapidly growing presence in the Far North region,¹¹⁵ with pipeline projects estimated to contribute over 2,800 construction jobs and bring \$2.4 billion to the local economy.¹¹⁶ The Davenport Substation is a key asset serving as a link between renewables and the electricity network.¹¹⁷</p>



Strzelecki Track, South Australia

Infrastructure gaps



Sector:	Water
Sub-sector:	—
Infrastructure gap:	Water security

The Far North region of South Australia has water security challenges as a result of various environmental and industrial factors. 2019 statistics from the Bureau of Meteorology noted the Far North region in the ‘lowest’ category for availability of natural water supply, which classifies the area as having experienced very low rainfall compared to the climate record.¹¹⁸ The primary source of water is groundwater from the Great Artesian Basin, one of the world’s largest and deepest artesian groundwater basins. Groundwater is the only reliable source of fresh water, as rainfall and surface water flows are extremely variable.¹¹⁹

Where there is surface water present in this district, the quality of water is an issue as it is highly saline, which limits its useability. The region’s dry climate also brings about issues for groundwater supply, as this climate causes a high evaporation rate for the surface water, further limiting the scarce quantity that is available.¹²⁰ Opportunities exist to work collaboratively to share innovation, continue to learn and further develop technologies to maximise the potential of water availability.¹²¹

Key facts

Petroleum, mining and pastoralism account for more than **90%** of water use.¹²²



50 GL (1.7%)

is available for use in the Far North from prescribed water resources in South Australia (2018-19).¹²³

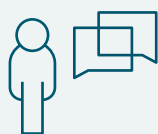


Total average rainfall of **29.3 mm** in 2019 (annual average 173 mm).¹²⁴



Impact

- The extreme variability of rainfall events and surface water flows puts pressure on the Great Artesian Basin as the single source of groundwater.¹²⁵
- Scarcity of water was a significant barrier to economic development throughout outback South Australia. The *Water and Infrastructure Corridors Initiative* aims to address water access and growth constraints by improving knowledge of groundwater resources in targeted regions of South Australia.¹²⁶
- In many parts of regional and remote South Australia, the provision of drinking water services is not nearly as secure, reliable or affordable as for those in Adelaide and other regional centres. This disproportionately affects vulnerable members of the community.¹²⁷



Consultation feedback

Consultation with key stakeholders from the Far North region revealed water security to be a major concern for the region. This concern extended to both water supply and quality, as well as its role in both supporting growth of the community and industries.

Stakeholders also expressed concerns over the impacts of climate change and intensification of water security concerns should surface and groundwater assets be depleted. As the region's mining and agriculture industries rely heavily on water, water security will also be essential to building resilience for existing operations. Currently, stakeholders noted that poor water security and quality in the region is a key inhibitor to attracting further industry investment. The cost of water was also noted as impacting the more remote areas of the region, particularly in areas with significant vulnerability and low incomes.



Sector: Telecommunications

Sub-sector: —

Infrastructure gap: Broadband and mobile connectivity

Advancing telecommunications connectivity and access is a key priority for the region. Given the remoteness of some communities in the Far North, digital connectivity is important for ensuring access to services necessary to daily life. However, access to quality telecommunications infrastructure currently varies across the region and lack of high speed broadband in some areas has constrained opportunities for residents as well as for businesses.¹²⁸

Improvements to mobile and broadband connectivity has the potential to generate new efficiencies for existing and emerging businesses throughout the region. With a growing dependence on digital connectivity and telecommunications to support a growing tourism industry, enhancing broadband and mobile connectivity has emerged as a significant opportunity for economic growth in the region.¹²⁹

Key facts

In Unincorporated SA,

33.6%

of households in the region are classified as low income, with a weekly household income of less than \$650 (2016).¹³⁰



The region's local government and unincorporated areas 2021 Australian Digital Inclusion Index (ADII) score is

below

both the state and national average.¹³¹



Impact

- With a significant proportion of households in the region being classified as low income, ensuring equitable access to devices and infrastructure which promote digital inclusion can be a challenge.¹³²
- Since 2016, 90 areas in the region have been recorded as having poor or no mobile coverage. This not only inhibits access to e-services and basic mobile connectivity for residents, but also constrains the ability of the region to attract visitors and industry investment.¹³³



Consultation feedback

During consultation in the Far North, stakeholders identified a growing need for quality mobile and broadband connectivity, particularly to support the development of businesses and an emerging tourism industry. Enhancing liveability was also a key consideration for stakeholders, with improved digital connectivity noted as being a key factor to achieving this goal.

Enhanced telecommunications infrastructure was considered to offer potential in making the region more attractive for a younger population demographic who could boost the economic diversity and strength of the region. Addressing mobile black spots and introducing more reliable communications connectivity and digital access across the region was also raised as being key to providing access to remote health services, training and education. Limitations with satellite internet services was also identified.

Stakeholders noted the importance of reliable internet for day-to-day business operations, where existing challenges to complete basic business tasks is hampering economic growth. Digital connectivity challenges also severely limits the ability for residents to work from home, which could present economic benefits for the region.



Sector:	Transport
Sub-sector:	Freight
Infrastructure gap:	Capacity, connectivity and quality of freight infrastructure

The Far North region, with its unique geography connecting four other states and territories in Australia, acts as a key freight connector for the nation. There are many rail movements through the Far North region daily, with Spencer Junction located in Port Augusta being one of the busiest junctions in Australia.¹³⁴ However, a key opportunity for the region lies in increasing accessibility for the region for road freight.

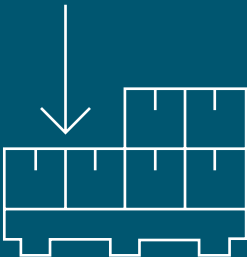
The capacity of the region to physically connect with national and international markets is limited by road conditions, with much of the region’s network unsealed.¹³⁵ Unsealed roads are relied upon for major linkages between Adelaide and south-western Queensland. These routes are critical for major oil and gas facilities, alongside providing basic access for passenger vehicles. Sealing strategic routes will be critical to improving freight network efficiency and productivity for the region, state and the nation. Co-benefits from delivering on these improvements include enhancing road safety and improving remote area access for both residents and visitors.¹³⁶

Key facts:

77.39%
of South Australia’s
total freight volumes
are carried by road.¹³⁷



Livestock of various kinds are raised in the Far North and west of the State, and beyond in areas such as the Northern Territory, which are transported between remote properties and abattoirs and export points in South Australia.¹³⁸



The Strzelecki Track links the towns of Lyndhurst in the south to Innamincka in the far north-east of South Australia. It is a vital supply link for major oil and gas facilities, and is an essential transport corridor for outback communities, tourism and pastoralists. The committed sealing of the Strzelecki Track should improve access for safety, freight productivity and reliability.¹³⁹



Impact

- Much of the current road network supporting industry in the regions is in poor condition that limits efficiency and productivity. There are also limited options to get bulk minerals to market. For South Australia to fully capture potential growth opportunities from its iron ore resources, a more efficient bulk export solution must be identified.¹⁴⁰
- Infrastructure South Australia forecasts that freight volumes on the road network will increase by 20% by 2030. This growth will put pressure on road freight infrastructure to meet the growing demand for efficient and safe connections.¹⁴¹
- Efficient freight is fundamental to South Australia fulfilling its growth ambitions. While significant benefits have been achieved with improvements to freight networks, these have traditionally been fragmented and modally focused. Improvements to freight movement must be considered on a whole supply chain basis.¹⁴²



Consultation feedback

Transport infrastructure was identified during consultation as being critical to improving the physical connectivity of the region. Better transport infrastructure including road and rail is expected to enhance freight and passenger movements for growing mining and tourism industries. It was expressed that as visitation has increased, the number of vehicles on roads, rail and sea freight infrastructure present opportunities which could help alleviate pressure on roads, and improve safety.

Stakeholders also raised concerns over unsealed outback roads which are negatively impacting freight productivity, increasing operating costs and making accessibility difficult. It was noted that allowance of triple road trains along the Birdsville & Oodnadatta tracks down to Orroroo had positive impacts on pastoral businesses, as the per head cost for freight went down significantly. Improving rail efficiency connections to the deep water port at Whyalla and capacity enhancements to enable road trains to operate between Western Australia and Victoria were also noted as opportunities. Continued improvements to the transport network are seen as essential to supporting industry growth, particularly to accommodate future increases in visitation from South West Queensland.

6.5.5 Limestone Coast



The Limestone Coast region occupies the southernmost area in South Australia. The region offers a diversity of landscapes ranging from expansive coastlines and some of the world's oldest caves through to productive farmland delivering high-quality food and wine.

The region has experienced diversification of industry, adoption of new technologies, and growth of value-added processes to compliment the region's primary agricultural industry. Significant population growth has also led to greater demographic diversity. However, the region remains challenged when retaining younger residents, ensuring housing and social infrastructure matches growth and balancing environmental and economic outcomes.

Further industry intensification will require technology uptake and automation, with digital connectivity a critical enabler. The region also hopes to improve the availability and quality of its education and training opportunities to ensure young people study locally and a skilled workforce is available to meet industry needs.

Strengths

Key existing assets

Economic	Transport infrastructure	The region's road and rail network provide connections to the high-value markets of Adelaide, Geelong and Melbourne. The region is home to significant rail infrastructure in the north which transports primary products.
Natural	Climate and topography	The region benefits from high levels of average rainfall, natural watercourses and ample groundwater, ensuring reliable water access. These water sources supply the region's extensive productive farmland and natural assets. Arable land and coastal accessibility also support the thriving agriculture, aquaculture, fishing and tourism sectors in the region.
	Natural environments	The region's extensive coastline, sinkholes, lakes and national parks, enhance liveability and promote visitors to the region. Natural attractions include Umpherston Sinkhole, Kilsby Sinkhole, Blue Lake and the Narcoote Caves National Park which is a World Heritage site with Australia's most complete fossil record dating back 500,000 years.

Key regional growth industries

Agriculture, forestry and fishing	Tourism	Healthcare and social assistance
<p>Agriculture, forestry and fishing is the most productive industry in the region, generating over \$1 billion in 2019/20.¹⁴³ Diversification into agribusiness and high value manufacturing from local specialisations in food and wood production will be the main driver of industry growth.¹⁴⁴</p>	<p>The region’s tourism industry has significant potential for growth and is expected to provide 805 new jobs by 2026.¹⁴⁵ Limestone Coast and its natural environment presents many opportunities for cultural, nature-based and marine tourism activities,¹⁴⁶ as well as offerings related to regional food and wine production.¹⁴⁷ World Heritage listed Naracoorte Caves receive 53,000 visitors annually.¹⁴⁸</p>	<p>Employment in the health and social services sector saw a 9.1% increase between 2014 to 2020,¹⁴⁹ with continued growth expected due to the ageing population and growing demand for specialised services.¹⁵⁰ Regional strengths, such as training for nursing professions, places the Limestone Coast in a strong position to achieve prosperity in this sector.¹⁵¹</p>



Lake George coastline near Beachport, South Australia

Infrastructure gaps



Sector: Social infrastructure

Sub-sector: Education (tertiary)

Infrastructure gap: Access to further education and skills training

RDA Limestone Coast identifies that there is limited vocational education and training access in some critical locations within the region, including Naracoorte, Bordertown and Keith, noting that industry has expressed concerns that vocational education within Mount Gambier does not align with identified needs.¹⁵² This situation may be exacerbated by projected changes in industry demand for skills and labour to meet structural adjustments, responses to new technologies and growth in service sectors.¹⁵³

Access to skills and workforce is identified as a key growth challenge for the region.

Agriculture, health, social services, tourism and many small businesses are facing major skills related issues, which will limit their ability to create further employment opportunities.¹⁵⁴

Key facts

52%

of residents have post-secondary qualifications compared to 61% across South Australia.¹⁵⁵



33.5%

of residents completed year 12 compared to 47% across South Australia.¹⁵⁶



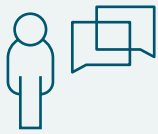
1.3%

of residents currently attending university compared to 4.7% across South Australia.¹⁵⁷



Impact

- Lack of skilled workers has resulted in shortages for some industries.¹⁵⁸ This restricts economic output and reduces services available to the community, such as healthcare.¹⁵⁹
- A lack of further education and skills training has reduced the diversity of career pathways available in the region, exacerbating skill gaps.¹⁶⁰
- Compared to the regional South Australian average, the region has fewer knowledge-intensive business services and fewer new business entries.¹⁶¹



Consultation feedback

Stakeholders indicated the region is undergoing significant structural change with employment shifting more towards service-based jobs such as healthcare. Respondents highlighted soft and hard education infrastructure as critical to ensure the right type of skills and capabilities are accessible to support industry growth and attraction to the region.

Stakeholders also noted insufficient innovation and support by industry has led to disengagement in education for the region's student population. The region has experienced stalled population growth, an ageing population, and outmigration of young people. Stakeholders suggested that improved access to local training facilities may help to support the development and retention of a sustainable working population to counteract these population trends. Education, innovation and business hubs have been identified as a key method to upskill the region.



Sector: Social infrastructure

Sub-sector: Housing

Infrastructure gap: Availability, diversity and affordability of housing

There is insufficient accommodation at all levels and sizes across the Limestone Coast region.¹⁶² This has been attributed to lack of investment in housing, conversion of properties to short term holiday accommodation, insufficient and inadequate age care homes, and skilled worker shortages to build new properties.¹⁶³

Recent circumstances have increased need for available, diverse and affordable housing. Given its attractive lifestyle and natural offering, the Limestone Coast has seen significant relocation during the COVID-19 pandemic, decreasing stock of available private housing.¹⁶⁴ Stock of affordable accommodation has been declining, causing rising prices for purchasing or renting as demand continues to grow.¹⁶⁵

The Limestone Coast also continues to be important in housing new migrants to Australia, particularly Bordertown, Naracoorte, Mount Gambier and Grant.¹⁶⁶ A lack of affordable housing has meant migrants have lived in overcrowded, low quality or poorly located housing at high price, or relocated to metropolitan areas.¹⁶⁷

Key facts

Financial assistance requests to through ac.care's Limestone Coast Homelessness Service rose

44%

in December 2020 and January 2021, in comparison to the previous year.¹⁶⁸



The number of people seeking emergency accommodation at ac.care's Limestone Coast Homelessness Service has increased by a third over December 2020 and January 2021, compared to the same period in 2019/20.¹⁶⁹



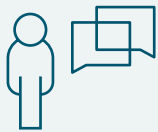
24%

of residents experiencing rental stress.¹⁷⁰



Impact

- Research from Regional Development South Australia has revealed that businesses in the region have not been able to operate at full capacity or grow as they cannot attract new workers due to a lack of available accommodation.¹⁷¹
- The region has a growing proportion of an ageing workforce in many critical occupations.¹⁷² Insufficient housing impacts the ability of the region to recruit and maintain a productive working population, a situation which may lead to unsustainable dependency rates.
- Unavailability of housing has resulted in limited retention of migrants that come to the region.¹⁷³



Consultation feedback

Stakeholders noted that affordable housing has impacted the ability of the region to attract and retain workers in the region.

Increasing recognition of the desirability and liveability of the region has increased demand for houses in the region, yet there has been a lack of infrastructure investment to accommodate the rising population in the Limestone Coast. Stakeholders identified a significant recent increase in demand particularly after the COVID-19 pandemic. This has resulted in a lack of available and affordable housing for workers and older people. Stakeholders noted that better digital connectivity would assist in alleviating some demand for housing, where remote working arrangements may allow workers to live further away from town centres.



Sector: Telecommunications

Sub-sector: —

Infrastructure gap: Broadband and mobile connectivity

In terms of economic value to be derived from infrastructure investment, improving telecommunications infrastructure has been identified in the *2019 Limestone Coast Infrastructure Audit* as being most beneficial to the region.¹⁷⁴ Greater mobile phone coverage and increased availability of high-speed broadband will provide substantial benefits for both businesses and residents in the region.¹⁷⁵ An infrastructure audit conducted for the region in 2019 identified large areas where data coverage is limited, particularly through the centre and north. This could limit local economic productivity, growth and competitiveness, particularly as industries such as agriculture become more data driven.¹⁷⁶

Digital connectivity through appropriate infrastructure has been identified as critical to utilise Big Data and the Internet of Things. These will help ensure the Limestone Coast remains competitive with metropolitan regions and globally. Digital infrastructure is also seen as necessary for supporting changing delivery models for training and education in the region.¹⁷⁷

Key facts

158

mobile black spots reported in 2018.¹⁷⁸



The region's seven local government areas (Grant, Kingston, Mount Gambier, Robe, Tatiara, Wattle Range and Naracoorte and Lucindale) averaged a 2021 Australian Digital Inclusion Index (ADII) score of

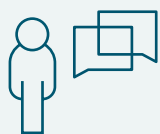
63.9,

which ranged from 61 to 66. This is below the national average of 71.1 and the South Australian average of 69.¹⁷⁹



Impact

- Stakeholders report that growth of the agriculture and forestry sector, a key economic driver for the region is being affected by poor connectivity.¹⁸⁰
- Limited access to new digital technology impacts capacity for education and skills development in remote areas. This can also hinder integration of new technology with businesses.¹⁸¹
- Limestone Coast acknowledge the value of digital infrastructure in creating an inclusive community and safely managing emergencies. Poor connectivity is seen a barrier to these outcomes.¹⁸²



Consultation feedback

Stakeholders identified that robust and evolving telecommunications infrastructure is required to support regional economic development. Stakeholders emphasised multiple black spots exist across the region and these were impacting performance of industries and community digital connectivity. Investment in new digital and data technologies was highlighted as a way to enhance productivity and improve competitiveness of goods both regionally and in global markets.

Respondents acknowledged improvements in telecommunications infrastructure will have positive benefits across other services and help solve other challenges in the community. Telecommunications infrastructure was considered important in the delivery of education, innovation and business hubs. Improved telecommunications were also identified as being key to enabling remote working, reducing demand on housing close to town centres, while not jeopardising community inclusiveness.



Sector: Transport

Sub-sector: Freight

Infrastructure gap: Capacity, connectivity and quality of freight infrastructure

The region has a large diversity of agriculture and forestry, including dairy, grains, cattle, sheep, horticulture and viticulture.¹⁸³ The forestry industry is significant and accounts for more than half of the freight task.¹⁸⁴ The Limestone Coast regional economy, largely commodity based, is particularly dependent on being able to move goods in an effective and efficient manner.¹⁸⁵ Transport of these commodities in the region is by road and includes many movements between South Australia and Victoria.¹⁸⁶

RDA Limestone Coast notes that the large amount of food and related products produced in the region illustrates the need for intermodal freight infrastructure.¹⁸⁷ An intermodal freight hub of this nature is considered to have the potential for significant productivity benefits and would increase opportunities to enter new markets, particularly if the hub had cold storage capability.¹⁸⁸ A 2020 study has also investigated the hypothetical reinstatement of the rail line between Mount Gambier and Heywood, as well as between Mount Gambier and Wolseley.¹⁸⁹

Key facts

The region is a
land bridge
between Adelaide
and Melbourne.



In the Limestone Coast region, the largest numbers of freight movements occur on the Dukes Highway, Riddoch Highway, Princes Highway, Nelson Road (Glenelg River Road), Penola-Hamilton Road and a range of feeder roads into the Port of Portland.¹⁹⁰



Trips that originate in the region average a distance of

195km

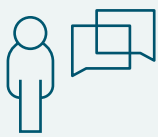
and cost of

\$23.10/tonne.¹⁹¹



Impact

- High Productivity Vehicles (HPV) can substantially improve the productivity and competitiveness of industry, particularly those that have high transport inputs such as forestry and dairy. Improving HPV access to regional roads can therefore boost the region's competitiveness and attractiveness for investment. To deliver greater HPV access requires a combination of regulatory and hard infrastructure outcomes.¹⁹²
- Benefits to high productivity transport infrastructure and intermodal facilities includes improved regional productivity, competitiveness, connectivity, market access, safety, employment and supporting other industry sectors such as construction in development.¹⁹³
- The vast distances often required for freight movement in the region means that the transport network is central to the region's economic wealth.¹⁹⁴



Consultation feedback

Stakeholders noted that transport infrastructure investment has not kept up with the growth. A key stakeholder priority was a growing freight task, in particular the increasing number of larger and heavier trucks on local roads. The uptake of automation in agriculture and intensification of food production, growth of the tourism industry, increase in value adding industries and creation of new industries such as renewable energy is anticipated over the coming decade. Additionally, more forestry and irrigation are expected to lead to increasing food production as domestic and export demand increase.

Balancing investment to capture the benefits of connections across road and rail was seen as a priority. Workshop participants highlighted the need for intermodal freight hub facilities and freight rail connection in the southern parts of the region, in order to support growing freight volumes, alleviate pressure on local roads and increase opportunities to enter new markets. Attracting investment from outside the region and expansion of export and import infrastructure and capabilities was also highlighted.

6.5.6 Murraylands and Riverland



The Murraylands and Riverland region sits in central-eastern South Australia, stretching from the Victorian border to the eastern Mount Lofty ranges, Coorong and lower lakes. The region is home to a network of vibrant communities set amongst productive agricultural and horticultural lands which have supported the region's emergence as a food bowl of South Australia.

The region has seen population growth in recent years, as well as shifts in the nature of the agricultural industry, with consolidation of smaller farms, increased dryland farming and diversification in horticulture and livestock production all changing the nature of operations and outputs for the region.

The region anticipates continued population growth aided by better digital connectivity and housing availability and affordability. There is also a drive to support the region's industries through improving freight infrastructure to increase export potential and productivity. In addition to this, there is also a collective desire to focus on strengthening water security and climate change resilience as the region grows.

Strengths

Key existing assets

Economic	Major attractions	The Monarto Zoo attracts national and international visitors for its wildlife experiences and role in threatened species conservation. The Bend Motorsports Park, a multipurpose motorsport facility, hosts major races and visitor experiences such as circuit racing, karting, and off-road driving.
Natural	Natural environments	The Murray River is a natural attraction in the region and centre point for many local communities. The river supports local business and supplies water for many industries. The river supplies water to the fertile agricultural land, providing economic opportunity and enhancing liveability in the region.
Social	Cultural heritage	Ngaut Ngaut Conservation Park protects sacred sites and offers visitors and locals opportunities to connect with First Nations culture. The culturally significant conservation park educates visitors on the Nganguraku and Ngaiawang people. The park also offers guided tours for visitors.

Key regional growth industries

Agriculture, forestry and fishing	Tourism	Energy
<p>The region has a thriving agricultural sector, with diverse activities in grains, livestock, horticulture, and production of fruits and nuts.¹⁹⁵ Regional activities contribute to 60% of the state's total production in grapes,¹⁹⁶ with future growth underpinned by the region's innovative, value-adding agricultural processes.¹⁹⁷</p>	<p>Significant growth opportunities exist in the regional tourism industry, taking advantage of Murraylands and Riverland's nature-based and adventure tourism offerings.¹⁹⁸ The region's reputation for premium food and wine,¹⁹⁹ as well as agritourism potential, will enable tourism diversification as well as supporting the local agricultural sector.²⁰⁰</p>	<p>Renewable energy is a growing sector for the region, with a \$1 billion investment in the development of a battery and solar farm facility, as well as a \$550 million windfarm project.²⁰¹ There are also significant opportunities for bioenergy production through utilising the region's agricultural waste products to generate sustainable energy.²⁰²</p>

Pink Lake at Meningie South Australia



Infrastructure gaps



Sector: Telecommunications

Sub-sector: –

Infrastructure gap: Broadband and mobile connectivity

A lack of high-quality telecommunications infrastructure is recognised as being a critical infrastructure gap in the Murraylands and Riverland region.²⁰³ Residents located outside of centres, and workers in remote agricultural regions often do not have mobile coverage.²⁰⁴

Removing mobile black spots has been a continued focus of the Australian Government.²⁰⁵ In round 4 and round 5 of the Mobile Black Spot Program, 11 base stations in the Murraylands and Riverland region have been funded to help reduce black spots in the area,^{206,207,208} with the opportunity for more sites to be requested in round 6. Despite the rollout of new stations, there has still been connectivity issues across the region. There has also been ongoing concerns accessing 3G and 4G networks alongside the roll-out of new 5G technologies.²⁰⁹

Lack of internet access has also limited economic and social benefits to the region. While some projects have improved digital connectivity for households and businesses, many areas remain with broadband connection via satellite only.²¹⁰

Key facts

179

mobile black spots reported by the community.²¹¹



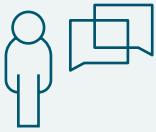
22%

of survey respondents faced barriers accessing healthcare telecommunications services in the region.²¹²



Impact

- Lack of telecommunications infrastructure restricts business efficiency.²¹³ It prevents readily available communication between workers, third party logistics providers and customers. Efficiency is a priority to deliver fresh agricultural goods to market.
- Lack of internet connectivity reduces the accessibility to education for students. Introduction of the Murray River Hub aims to provide online learning for tertiary and VET students however does not address the availability of reliable internet for all students across the region.²¹⁴



Consultation feedback

Inadequate telecommunications infrastructure was perceived by stakeholders as restricting local businesses and social engagement in the community. Existence of mobile black spots was also reflected in discussion with community members. Respondents also addressed the need for reliable wireless network access, which is not yet available in some towns.

Opportunities for the region identified in the consultation included population growth and retention of skilled workers. These opportunities may be leveraged through the development of telecommunications infrastructure to maximise benefit to the region.



Sector: Social infrastructure

Sub-sector: Housing

Infrastructure gap: Availability, diversity and affordability of housing

The Government of South Australia's strategy for housing – *Our Housing Future 2020-2030* – notes for regional Australians 'there is a current lack of housing that is appropriate, affordable, safe, accessible, sustainable and secure'.²¹⁵

The Murraylands and Riverland region reflects this challenge. Population growth in the region has been outpacing the growth of housing availability.²¹⁶ This continues to put upward pressure on the price of houses and reduces the stock of affordable housing. In Murray Bridge, the proportion of houses that are accessible to low and very-low income earners was only 15.8%, compared to 28.3% across the rest of the state.²¹⁷

This housing supply issue has been further exacerbated by the COVID-19 pandemic. Movement of people from metropolitan areas to the region continues to place demand on housing and impacting both renters and buyers.²¹⁸ In 2018, very low income and low income renters across the region experienced higher housing stress than the rest of the state.²¹⁹ These households face relegation to an undersupplied public housing market to find alternative accommodation or are otherwise forced to move out of the region.²²⁰ This reflects the region's need to expand availability of affordable and diverse housing options.

Key facts:

2%

of 123 available rental properties were accessible to single people on the age and disability support pensions in March 2021 (advertised private rentals in the Limestone Coast, Riverland or Murraylands).²²¹



Over 27,000 households in the region paid

30%

or more of their income on housing (rent or mortgage) in 2018.²²²



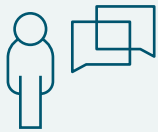
0.77%

of residents estimated to be homeless in Murray and Mallee (compared to 0.23% across South Australia).^{223,224}



Impact

- Unavailability of housing in the region has negatively impacted business output and available community services. The region has a large number of jobs available due to recent growth, however many jobs remain vacant as housing cannot be located.²²⁵
- A lack of affordable housing impacts young people due to lower incomes, forcing young people out of the community to regions with more affordable housing.²²⁶ This is despite more young people wanting to remain in the region.²²⁷



Consultation feedback

Consultation with local stakeholders highlighted affordable and diverse housing as a priority for the area. Of particular concern was how a lack of housing options may limit the local economy. As a major agricultural and manufacturing region, there is high demand for workers, particularly during seasonal busy periods of planting and harvest that put pressures on housing supply. The issue is made more prominent by the general rise in population in the region, as well as the region's strong tourism sector demanding temporary accommodation.

Stakeholders also shared a belief that population growth is the biggest opportunity for the region. To leverage this opportunity, the region needs to provide affordable and diverse housing options for skilled workers.



Sector: Transport

Sub-sector: Freight infrastructure

Infrastructure gap: Capacity, connectivity and quality of freight infrastructure

With agriculture being the largest industry in the Murraylands and Riverland,²²⁸ the region relies heavily on freight for the distribution of commodities.

Freight is moved from the region predominantly via road – the main road corridors being the Mallee Highway, Sturt Highway, Dukes Highway and Karoonda Highway.²²⁹ These roads are shared with residents and tourists placing strain on the network. Many roads in the region require shoulder resealing, carriageway quality improvements, widening of lanes and the provision of overtaking lanes.²³⁰ The *Murraylands and Riverland 2019 Infrastructure Audit* also noted a need for truck rest stops and township bypasses to improve safety after multiple incidents.²³¹

Closure of the Loxton rail to Taillem Bend, and Pinnaroo Rail to Taillem Bend has placed further pressure on the road network.²³² These regions have typically used rail to transport grain, however this has been replaced by heavy vehicles for cost efficiency and the region’s airports currently do not have freight capability.²³³

Key facts

300

road freight trips
per day for primary
production goods.²³⁴



Regional rail closures added

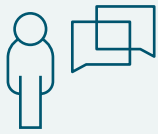
3,000

road freight trips
annually.²³⁵



Impact

- Recent feasibility studies have demonstrated that failure to invest in rail in the region, namely the Northern Rail Bypass, may result in significant loss of benefits to the Murraylands and Riverland region.²³⁶
- Increased heavy vehicles on roads with inadequate infrastructure leads to higher road casualties. As an example, Swanport bridge in the region has experienced multiple fatalities related to the carriageway.^{237,238}
- Continued reliance on road for freight movement in the region will lead to increased costs for local councils to maintain them.²³⁹



Consultation feedback

Lack of rail infrastructure, and strained road links throughout the region was identified by stakeholders. While the North-South Freight Route project was mentioned as a positive infrastructure project to support the region's growth, participants were concerned the project wasn't addressing key transport infrastructure challenges. For example, road issues such as lane width and carriageway conditions on approach to bridges still needs to be improved.

Examples of opportunities to improve connectivity were discussed, including the potential for township bypasses in Truro and Renmark to improve safety and boost efficiency. Existing transport connections unable to accommodate higher productivity vehicles were discussed, noting the example of Swanport Bridge as being unable to accommodate future growth to that end.

6.5.7 Eyre Peninsula

The Eyre Peninsula region stretches from the Western Australian border south to Port Lincoln and east to Whyalla, covering rugged coastlines and areas of significant agricultural productivity. Communities across the region leverage pristine landscapes and natural advantages in climate and geography with a reputation for delivering quality products across traditional and emerging industries alike.

Historically, the region has experienced population stagnation with the loss of inland communities driven by the consolidation of farms and challenges in retaining a younger cohort. This population stagnation has been detrimental as the region has seen a decline in services offered and loss of rail connectivity. Climate change has also impacted the region with water security becoming an increasing issue of concern.

The region has identified key opportunities for economic growth and diversification in tourism, space, mining and renewable energy sectors. These industries will support the Eyre Peninsula's large agriculture, fishing and manufacturing industries. In addition, the region hopes to improve liveability to support the current population and improve its ability attract and retain workers. Stakeholders have identified energy reliability, water security and access to healthcare and social services as crucial.



Strengths

Key existing assets

Natural	Natural environments	An extensive coastline provides amenity and contributes to the visitor economy, whilst marine areas sustain a highly productive seafood industry. Fertile and arable land has also contributed to the diverse horticultural and livestock production in the region.
	Natural resources	The region is home to high quality magnetite, graphite, kaolin gypsum and mineral sands. Extraction of these minerals for export supports regional employment and contributes to continued investment.
	Climate and topography	The expansive and arid areas of the region make the region suitable for solar energy production. The extensive coastline is subject to significant wind and swell, providing opportunity for onshore or offshore renewable energy production.

Key regional growth industries

Agriculture, forestry and fishing	Aerospace	Energy
<p>Agriculture, forestry and fishing is the largest employer in Eyre Peninsula, accounting for 15.1% of the workforce.²⁴⁰ High-quality productions in lamb, beef, pork and niche grains, along with the region’s reputation in premium seafood which makes up 65% of South Australia’s total seafood catch, will continue to drive growth in the sector.²⁴¹</p>	<p>The Eyre Peninsula is home to the second South Australian space launch site. Whalers Way Orbital Launch Complex has the advantage of being close to established space infrastructure and ideal weather and conditions for rocket launching.²⁴² The development of this infrastructure presents employment opportunities and strengthening of specialised space launch capabilities.²⁴³</p>	<p>The Eyre Peninsula’s geographical location offers large open spaces and expansive coastlines, making it ideal for solar, wind and wave energy generation.²⁴⁴With the development of the Eyre Peninsula Gateway Project, a green hydrogen and green ammonia project, the region is well-placed to expand renewable energy capabilities.²⁴⁵</p>

Greenly Beach, Eyre Peninsula, South Australia



Infrastructure gaps



Sector:	Water
Sub-sector:	—
Infrastructure gap:	Water security

The Eyre Peninsula faces challenges in meeting the current and projected water demands from communities and industry.²⁴⁶ Regional population growth targets rely on supply of enabling infrastructure, including water infrastructure, to be met.²⁴⁷ At the same time, the region’s mining, manufacturing and agriculture industries are highly water-intensive and potential future opportunities in emerging industries such as hydrogen production will rely heavily upon a secure and sufficient water supply.²⁴⁸

With almost three-quarters of the region’s public water supply derived from a single source, there is a need to diversify the supply mix to improve resilience and capacity for growth.²⁴⁹ This concentration of supply is particularly concerning given climate projections for the region, which anticipate longer periods of much higher temperatures and increasing variability in rainfall patterns.²⁵⁰

Key facts

10 GL
of prescribed water resources available for use each year.²⁵¹



Over **74%**
of public water supply on the Eyre Peninsula comes from the Uley South Basin.²⁵²

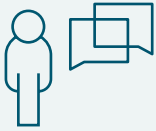


48%
of the region’s output is derived from water intensive industries including agriculture, manufacturing and mining.²⁵³



Impact

- Infrastructure which facilitates a diverse water supply mix for the region will be critical in ensuring industry and community resilience. Recent major investments for desalination capacity takes a step towards seizing this opportunity.²⁵⁴
- There are considerable groundwater resources in the region which could be better utilised for irrigation and industry if appropriate distribution and irrigation infrastructure is made available.²⁵⁵ This would not only serve to improve industry productivity, but also enhance water security for the community by reducing demand on shared water storage and distribution infrastructure.
- The region is home to multiple waterways and wetlands, some of which are recognised as being nationally significant. Reducing strain on these natural assets by securing a diverse and secure water supply from alternative sources is crucial in supporting biodiversity and sustainability.²⁵⁶



Consultation feedback

Stakeholders expressed that the region has an urgent need to deliver a scalable, affordable and secure water supply for communities and industries. Stakeholders were concerned the current water supply will not be able to support the region within the next five years. With participants identifying population growth as an opportunity for the region, this needs to be supported by access to water resources.

Environmental sustainability was also a prominent issue on the minds of key regional stakeholders. This included ensuring that demand for water from population and industry growth did not jeopardise the environmental sustainability and biodiversity.



Sector: Social infrastructure

Sub-sector: Health and aged care

Infrastructure gap: Access to and capacity of health and aged care infrastructure

The Eyre Peninsula region does not have the health infrastructure required to deliver equitable access to high-quality health, aged care and disability services across the region.²⁵⁷ This issue is particularly problematic for communities outside of major service centres. These rural and remote communities typically have higher proportion of First Nations residents, as well as higher rates of socioeconomic disadvantage and chronic health issues than in major centres.²⁵⁸ A lack of access to health infrastructure in these areas, inclusive of primary, secondary and tertiary care, exacerbates this wellbeing gap. Centralisation of health infrastructure in the region also places greater pressure on fewer facilities, which can accelerate for the decline of health infrastructure assets.²⁵⁹

Across the region, capacity of existing health infrastructure to deliver disability services and aged care is limited.²⁶⁰ Government and inter-region partnerships to share capacity may aid in some locations, however interventions are required to provide more spaces in aged care facilities, improve community care infrastructure, and establish specialised healthcare assets which facilitate treatment and rehabilitation services for disabled people.

Key facts

The healthcare and social assistance industry employs

12%

of the region's population.²⁶¹



Attracting

skilled health workers



is a key priority for the Eyre Peninsula region.²⁶²

Health infrastructure is largely concentrated in the

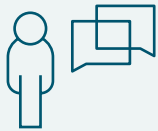
south-east

of the region.²⁶³



Impact

- First Nations peoples comprise 5.6% of the regional population, compared to 2% across South Australia.²⁶⁴ Compared with the balance of the population, First Nations peoples have poorer health and physical wellbeing outcomes.
- With 16% of the region's over-65 population having a need for assistance with daily living, delivering high-quality aged care infrastructure with capacity to meet growth in demand will be crucial in enhancing community wellbeing and taking pressure off primary care infrastructure.²⁶⁵
- Access to quality social infrastructure, including health and aged care facilities, is a key element in building liveable, resilient communities. Without health and aged care infrastructure in place, the competitiveness and productivity of the Eyre Peninsula region risks being undermined as it seeks to attract and retain new and existing residents.²⁶⁶



Consultation feedback

Improved access to and capacity of health infrastructure was highlighted by local stakeholders as being a significant challenge for the Eyre Peninsula region. Failing rural medical services, a lack of primary care infrastructure and reduced availability of community services was perceived by workshop attendees as having been a key trend in the region over the past 20 years.

Beyond delivering new health infrastructure assets in underserved areas, as well as upgrading ageing assets, stakeholders considered attracting and retaining a base of skilled healthcare workers to be a crucial factor in building the capacity of the region's healthcare system. The region's current offering in specialised disability and rehabilitation services was also noted as being insufficient to meet current and expected service demands from the population.



Sector: Energy

Sub-sector: Electricity and gas

Infrastructure gap: Distribution, transmission and generation of energy

The Eyre Peninsula region's energy supply has reliability and quality issues, with areas of particular concern being the southern tip of the peninsula and the west of the region. The region's reliability and quality issues are a result of severe weather events, system failures, and vulnerable and ageing distribution infrastructure.^{267,268} Reliability issues at the distribution feeder level have predominantly been caused by lightning strikes on radial distribution lines.²⁶⁹ These reliability issues impede resident's ability to carry-out day-to-day functions during supply outages. It also constrains the region's ability to grow industries and attract investment.²⁷⁰

The region's geography can make the transmission of energy costly and challenging. Despite this, significant opportunities exist for small and large-scale solar and wind energy generation. If transmission and distribution of this energy can be cost-effectively provided, it is likely to result in a more diverse, reliable and resilient energy system for the region's growing centres and remote communities.

Key facts

Commercial demand accounts for over

35%

of energy supply across the region.²⁷¹



7.95 MW

of combined power generated by Streaky Bay and Coonalpyn Solar Farms.²⁷²



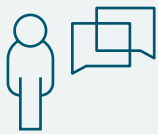
The 2016 Eyre Peninsula blackout cost the region

\$8.3 million.²⁷³



Impact

- In addition to solar and wind generation, the region has the potential to generate electricity from pumped hydropower and hydrogen. This could contribute to a more secure, affordable and low emissions energy system.²⁷⁴
- 85% of Eyre Peninsula businesses experienced multiple power outages in 2016, with 35% of respondents stating they owned a back-up power generator out of concern for energy security in the region.²⁷⁵
- Severe and frequent weather events, such as lightning strikes, impact the region's energy supply quality and reliability, and cause frequent blackouts.²⁷⁶ In light of a likelihood of increasing storms and more volatile weather patterns in the region in the future,²⁷⁷ there is a need to ensure energy infrastructure is resilient and the supply mix sufficiently diverse.



Consultation feedback

Consultation with key regional stakeholders in the Eyre Peninsula revealed energy infrastructure to be one of the highest priority challenges facing the region. Workshop attendees emphasised that improved supply and transmission infrastructure was needed most urgently at the tip of the peninsula and in rural and remote communities.

The region's potential to develop further in renewable energy also emerged as a common theme across the region. This potential was seen not only to present an opportunity in improving energy security, but also in providing an opportunity for industry diversification and job creation if investment in large-scale renewable projects could be facilitated.

6.5.8 Yorke and Mid North



The Yorke and Mid North region encompasses a network of small communities spread over a range of geographies from coastal towns to farmland and ranges. Renowned for its local food and wine products, the region also has a thriving tourism and agricultural industry.

Over the years, the region has seen improvements to digital connectivity and telecommunications, freight access and the growth of nature-based tourism. However, climate change impacts have been a cause for concern with an increased number of droughts, issues with water security and rising sea levels.

Looking to the future, the region hopes to secure its water supply and grow its industries through improving the quality and coverage of digital connectivity to support the adoption of new technologies and grow the region's online presence. It also hopes to increase the affordability of its current housing stock and increase social housing to attract a greater number of workers to the region.

Strengths

Key existing assets

Economic	Energy infrastructure	The region is home to many renewable energy assets, including the Hornsdale Power Reserve, 'South Australia's Big Battery' and the incoming Crystal Brook Energy Park. While providing energy, the assets attract knowledge-sector workers to continue expanding renewable energy capability in the region.
	Tourism brand	The region has developed a reputation for high-quality wine and produce, which support thriving horticulture, viticulture and tourism industries. The Clare Valley, Yorke Peninsula and Southern Flinders are widely renowned tourist destinations in the region.
	Gateway ports	The region is home to multiple seaports including Port Pirie, Wallaroo, Ardrossan and Port Giles. Port Pirie Airport has freight capability while airports located at Clare, Maitland, Peterborough and Yorketown provide passenger connectivity for the region, support industry and provide support in natural disasters.
Social	Natural resources	Copper, gold, lead dolomite, granite, gypsum, limestone, sand and slate are commodities extracted in the region. The Nyrstar Port Pirie facility is one of the world's primary lead smelters, with an integrated multi-metal facility.

Key regional growth industries

Agriculture, forestry and fishing	Energy	Tourism
Agriculture, forestry and fishing is a key industry in the region, contributing to 43.7% of South Australia’s Gross State Product in grains, and supported by productive horticulture, forestry and livestock activities. ²⁷⁸ There is major potential for growth through investments in value-adding processes and innovation to enhance agricultural productivity and sustainability. ²⁷⁹	The Yorke and Mid North region is renowned for their renewable energy capabilities, with the region contributing to over 70% of the state’s total wind energy output. ²⁸⁰ The region has also been identified by the Australian Electricity Market Operator (AEMO) as a key renewable energy zone. ²⁸¹	The Yorke Peninsula region has a thriving tourism industry, attracting \$220 million in visitor spending in 2019, compared to \$198 million in 2017. ²⁸² There is significant potential for growth as the region continues to advertise premium wine offerings in the Clare Valley, and outback experiences south of the Flinders Ranges. ²⁸³



Port Pirie, South Australia.

Infrastructure gaps



Sector:	Water
Sub-sector:	—
Infrastructure gap:	Water security

The Yorke and Mid North region’s water infrastructure is ageing, causing old water pipes to repeatedly burst, damaging surrounding assets such as roads.^{284, 285,286,287} Some areas also have issues with capacity, pressure and limited supply of water to residents and businesses, causing reduced liveability and productivity issues.²⁸⁸

The region is also undergoing social and economic growth.²⁸⁹ More people are relocating to areas such as the Clare Valley, and existing infrastructure is struggling to meet demand. The agriculture, horticulture, renewables and mining industries are also expanding and demand more water.²⁹⁰ The region has identified the need for new and alternative water sources such as increased bore and recycled water, or introduction of desalinated water to accommodate demand.²⁹¹

Climate change and risk of drought also puts the primary supply of water from the Murray River at risk.²⁹² To mitigate this, communities have identified the need for increased storage opportunities, water recycling systems, water efficient infrastructure and diversified water sources to improve efficiency, reliability and security of water supplies across the region.

Key facts

River Murray water supplies residential use in most of the major towns in the region, as well meeting the demand for water for industrial, agricultural and commercial uses.²⁹³



The Bureau of Meteorology says average rainfall in the Murray Darling Basin is projected to

decrease

because of climate change.²⁹⁴



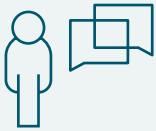
58%

of water demand is for non-residential purposes.²⁹⁵



Impact

- Current water resources in Yorke and Mid North are nearing or are at the limits of what has been identified as sustainable and limiting population growth for the region in the absence of alternative sources.²⁹⁶ Infrastructure is needed to accommodate new demand and ensure future access to water.
- Decline in water supply in the Murray River due to drought may mean the river will not be able to meet demand requirements.²⁹⁷ Water entitlements may be purchased by SA Water, however this may increase costs for consumers.
- Low water security has resulted in increased drought funding in the Mid Yorke and North region.²⁹⁸



Consultation feedback

Stakeholders raised concerns regarding access to reliable water in the region and felt there wasn't appropriate water infrastructure to harness alternative sources. Participants identified the Clare Valley and the Upper Spencer Gulf townships as particularly at risk of water demand being greater than supply.

Stakeholders identified water recycling as critical to benefit the region, with improved water management being a key opportunity for agriculture. They also identified infrastructure as being a key pathway to increasing community resilience and enable growth.



Sector: Telecommunications

Sub-sector: —

Infrastructure gap: Broadband and mobile connectivity

Whilst major centres in the Yorke and Mid North region have access to fixed line connections,²⁹⁹ access to the fixed National Broadband Network in remote communities is variable.³⁰⁰ The region's 2021 Australian Digital Inclusion Index (ADII) scores are lower than the South Australian and national average.³⁰¹

Mobile coverage in parts of the region is also limited, which has created challenges in remote areas particularly those supporting the agriculture and mining sectors.³⁰² In a submission to the *2021 Regional Telecommunications Review*, the RDA Yorke and Mid North noted that during bushfires, loss of telecommunications poses risks to fire fighters, farmers and community members. Some tourism destinations, particularly remote beaches and or national parks have limited coverage and can pose challenges with regard to tourists' way-finding.³⁰³

Key facts

Telecommunications caused

61%

of respondents to miss business deadlines.³⁰⁴



Using Regional Australia Institute's [In]Sight tool, the region ranked

54th

out of 60 for technological readiness, taking into account existing resources and speed in adopting new technologies.³⁰⁵



The region's local government areas averaged a 2021 ADII score of

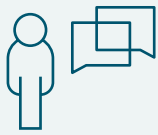
61.2,

ranging from 59 to 63.

This is below the South Australian average of 69.³⁰⁶

Impact

- In a submission to the 2021 Regional Telecommunications Review, the RDA Yorke and Mid North noted that the township of Moonta (Yorke Peninsula) experienced three outages in an approximate six week period, impacting local businesses.³⁰⁷
- In some parts of the region, community members in the agricultural and viticultural sector are unable to get 'real time' connectivity on parts of their properties. This can equate to lost sales and business opportunities.³⁰⁸



Consultation feedback

Digital connectivity was a concern raised by stakeholders during the consultation workshop. Stakeholders noted the region has over 100 mobile black spots, impacting local connectivity and disrupting businesses and visitors to the region. Improving connectivity and introducing more reliable technologies was an opportunity emphasised as having significant potential to enable the growth of new and existing businesses and boost investment.



Sector: Social infrastructure

Sub-sector: Housing

Infrastructure gap: Availability, diversity and affordability of housing

Multiple housing gaps exist in the Yorke and Mid North region, with insufficient community, rental and private housing available.³⁰⁹ There is a pressing need for more allotments in the region's townships that include affordable housing, as well as greater housing diversity, particularly to support aged care and independent living.³¹⁰ The region has experienced a significant increase in the number of households spending more than 30% of their income on mortgage repayments or rent.³¹¹ While this is aligned with national figures for low-income households it creates significant accommodation issues, with concerns about levels of homelessness in some communities. Available housing currently does not match the demand profile.

Several private organisations operate properties in the region aiming to improve the supply of diverse and affordable housing. Among them include Access 2 Place, Junction, Unity Housing Company Ltd and Uniting Country Housing SA.³¹² However, significant challenges remain in the region, with Yorke and Mid North accounting for the highest level of rental stress in regional South Australia and the lowest proportion of social housing.^{313,314}

Key facts

29.7%

lone households
(compared 26.6% in
South Australia).³¹⁵



The region has the highest
level of rental stress

(34.8%)

in regional South Australia.³¹⁶



The region has the
lowest proportion of
public housing

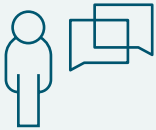
(2.5%)

in the state.³¹⁷



Impact:

- The region has seen a significant rise in job vacancies.³¹⁸ These may not be filled unless housing options are available to potential workers.
- Inability to find affordable and suitable housing near townships reduces the liveability of the region.³¹⁹
- High rental stress experienced in the region can lead to residents leaving the community for more affordable housing elsewhere.³²⁰



Consultation feedback:

Affordable accommodation and housing was identified as a challenge by many stakeholders involved in community consultation. One of the primary concerns was that demand for affordable rental housing will continue to grow, but not be met by an increase in supply. Stakeholders were concerned if supply of housing did not continue to grow then rent prices would increase in the region.

Stakeholders also highlighted a need to consider the demand impacts of increased migration due to the COVID-19 pandemic, and how this will further strain housing in the region. Stakeholders continue to expect more visitors as the tourism industry expands, which will bring a need for greater supply of short-term accommodation. Stakeholders emphasised the need for the region to provide more housing as a means of improving the capacity of local businesses and industry to attract and retain workers.

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