

# **Barossa, Adelaide Hills, Northern Adelaide Plains, Fleurieu Peninsula and Kangaroo Island**

This is a rapidly growing region, fringing Adelaide, producing high-value primary produce with natural and built recreational assets that attract national and international visitors. Key infrastructure issues are ensuring transport access and energy reliability to support social and economic development throughout the region.



## At a glance

Area	11,881 km² (1.21% of State)
Population	128,264 in 2001, 8.74% of SA
Aged < 15	21.65% against SA average of 19.57%
Aged > 65	13.13% against SA average 14.40%
Demographic trends	2016 projection: 149,185 people or 9.35% of SA (up 16.31% from 2001) Strongest residential growth will be in Mount Barker, Victor Harbor, Northern Adelaide Plains, Strathalbyn and coastal areas.
Natural Resources	Diverse region including coastal areas, beaches, plains, Adelaide Hills and Kangaroo Island with representative biota preserved in conservation areas. High rainfall with fertile soils in varying topography.
Key Industries	Tourism/retail, viticulture and wine, beef/dairy, sheep, horticulture, forestry
Seaports	Penneshaw, Kingscote, Cape Jervis and Wirrina
Commercial Airports	Kingscote

Principal Industries

Agriculture

Generally high rainfall and fertile soils produce many high-value commodities, which generate 20–25% of the state’s total gross agricultural value from three percent of the state’s agricultural land base.

There is significant local value-adding to farm produce (e.g. grapes/wine; fruit and vegetables; dairy products; timber/furniture; speciality foods; cereals and hay).

The forestry and viticulture and wine industries are expected to continue growing, intensive animal keeping is expanding in the Mallala and Light districts, while the dairy industry is relocating to the Fleurieu, Limestone Coast and Mid North.

Fishing and aquaculture is expanding in southern Fleurieu and Kangaroo Island.

Some 15,800 ha of vineyards produce 115,000 tonnes of grapes per year; this is projected to grow to 180,000 tonnes by 2008. The Barossa is expected to grow in importance as a processing centre for grapes grown across the state. Growth in viticulture and wine-making will depend on additional water supplies and new wine processing facilities.

Tourism

The region contains significant attractions for national and international visitors; this underpins the state’s tourism marketing. The main attractions are the extensive system of parks and reserves, the pristine coastal environments, and the region’s open rural character and historic townships. There is a significant day-trip market for local, interstate and international visitors.

Kangaroo Island and Barossa are two of Australia’s most significant attractions for international visitors.

Mining

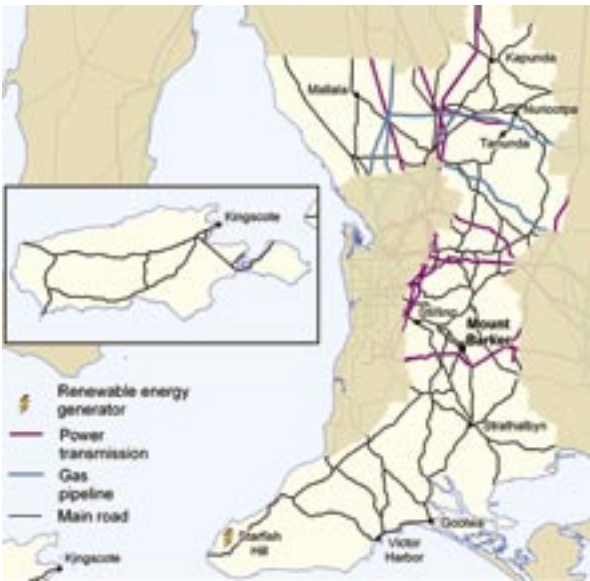
Significant mining industries in the region include bluestone, limestone, sand, clay and other quarry products, and siliceous sands. Proximity to markets is a key to industry success.

Manufacturing

There are industry clusters in Gawler (Kingsford Estate), Kapunda, Freeling, Angaston, Tanunda, Mount Barker, Woodside, Lobethal, Strathalbyn, Goolwa and Victor Harbor. Many of these clusters have developed to service primary production or local needs. However, there is a shortfall of appropriately zoned quality industrial sites for large-footprint industries. Growth opportunities are in Kingsford Estate, Roseworthy, Mallala, Kapunda, Monarto, Victor Harbor, Goolwa, Strathalbyn and Mount Barker.

Infrastructure

Energy



Electricity supply networks are generally well developed, although some areas, particularly the southern Fleurieu Peninsula, parts of the Barossa and Kangaroo Island, experience supply inconsistencies and poor reliability, particularly at ends of single wire earth return (SWER) lines.

The Essential Services Commission of SA (ESCOSA) has determined a stand-alone reliability service standard for Kangaroo Island that will see improved electricity supply to these consumers.

Major augmentation and upgrading may be needed to accommodate increased demand for electricity due to changes to the dairy industry, and continued population and industry growth in some regional, district and local centres, such as Mount Barker, Barossa and Victor Harbor.

The southern Fleurieu is recognised as high value for wind farms, having good wind and grid connections. The 34.5 MW Starfish Hill wind farm was completed in 2003.

A new peaking electricity generator at Angaston should, along with transmission upgrades, alleviate issues in the Barossa.

While both the SEA Gas and Moomba gas pipelines run through the region, only Freeling, Angaston and Nuriootpa are supplied with mains gas for residential and/or industrial purposes. There are opportunities to expand regional reticulation. Embedded generation, co-generation and demand management have the potential to delay the need for network augmentation.

## Water



The Adelaide Hills watershed provides on average 60% of Adelaide's mains water supply. The River Murray provides the shortfall and water from both sources is stored in Adelaide Hills reservoirs.

Predicted changes in rainfall patterns due to climate change over the next 30 to 70 years may exacerbate the pressure on these water resources. (Mount Barker's rainfall has dropped 6% in the last 25 years).

The Gawler River catchment (including the North Para River system) has been heavily modified by farm dams and weirs, flood mitigation schemes and reduced aquifer recharge.

Use of groundwater aquifers and surface water in farm dams is approaching the estimated sustainable limit. Several private water schemes are in operation but have limited spare capacity.

Mains water is available in most of the larger towns; however, in some towns, rapid economic development has resulted in water systems operating near capacity at peak periods. Meadows, Echunga, Second Valley, Delamere, American River and Cape Jervis rely on local water supplies, including rainwater and water carting. Salinity levels resulting from water use and the collection of wastewater can impact on the ability to recycle the treated water.

Wastewater treatment plants at Angaston, Bird-in-Hand and Myponga may require augmentation if there is significant growth in the areas served.

Irrigation schemes utilising recycled water require consideration of impacts on groundwater and potential for soil salinisation.

Regional irrigation management plans – as opposed to individual plans – need to be carried out before new irrigation schemes are undertaken. Treated wastewater from the Bolivar wastewater treatment plant may be an alternative source of non-drinkable water.

Residential, commercial and industrial growth will require orderly augmentation of existing infrastructure. Many septic tank effluent disposal schemes (STEDS) across the region are already at capacity. Still other communities are awaiting the installation of STEDS; however, in some cases this depends on connection to reliable water supplies. A number of STEDS will need to be upgraded to cater for residential and industrial growth.

There is growing demand for development in the northern Gawler suburbs and north east of Willaston including the developing industrial area of Kingsford Estate. As projects are approved SA Water is upgrading the sewerage system to meet this demand.

Transport



A complex, multi-modal transport network runs throughout the region, supporting a vast range of diverse activities including agriculture, tourism, commuting, leisure and local travel. Freeways and highways running through the region connect Adelaide and South Australia to interstate markets.

Some major growth industries, such as viticulture; associated processing and value-adding industries; horticulture; forestry; and tourism are expected to place increased demand on transport networks.

Many transport routes that host significant commuter, freight and tourist traffic, particularly in the Barossa and southern Fleurieu, are experiencing increased demand. The Victor Harbor road is currently being upgraded which will assist freight and tourism.

The Adelaide suburban rail services extend to Gawler and Belair. There are daily bus services to Adelaide from Goolwa, the Barossa Valley and Victor Harbor. Commuters to Adelaide from the larger population centres are serviced by regular peak-hour bus services but options outside of peak times are limited.

The Noarlunga to Cape Jervis road services the Kangaroo Island ferries and the towns of Yankalilla, Normanville and Myponga. The Adelaide to Victor Harbor road services the growing Encounter Bay area, including Port Elliot, Middleton and Goolwa.

The harbours of Cape Jervis, Penneshaw and Kingscote currently provide access to Kangaroo Island for freight and passenger traffic via roll-on-roll-off ferries. New facilities are being considered (at Ballast Head) to service the blue gum industry. Other underutilised Kangaroo Island harbours include American River and Vivonne Bay.

The interstate standard-gauge Adelaide–Melbourne, Adelaide–Perth and Adelaide–Darwin rail lines run through the region. The Gawler–Angaston broad-gauge line is primarily used for limestone. An intermodal hub at Angaston may see greater rail use by the wine industry and provide direct rail access to interstate and overseas markets (particularly if new rail shuttle technology is developed).

The key transport issues in the region are largely the result of tensions and conflicts that occur due to the competing needs of freight, tourism, commuters and local and regional travel.

The Local Roads Advisory Committee is reviewing the current criteria for categorising and thus funding roads under the control of Transport SA. It will look at issues such as the responsibility for the tourism ring route on Kangaroo Island.

New grain handling facilities at Mallala, access to animal processing facilities, and Dublin livestock market are increasing traffic through towns.

Specific infrastructure issues related to the road networks include road re-classification, road duplication, bypasses, road upgrades, and designation of freight routes, particularly for over-dimensional vehicles.



## Land

Industrial land, particularly large, appropriately serviced and zoned sites, is in short supply.

There are opportunities for the development of large-scale industrial sites in the Fleurieu (Goolwa), the Barossa Valley (Kingsford Estate) and the Central Hills at Strathalbyn. Other opportunities exist for more targeted industry cluster sites, e.g. for value-adding of food products around Mount Barker.

The value of the region's land for high value agriculture, especially export-oriented industries like viticulture and wine, attractive scenery and life style and proximity to Adelaide, is resulting in tensions on appropriate land uses. This is further exacerbated by the region's attractiveness for tourism. Quality primary industry land should be protected, restrictions to residential expansion enforced and suitable sites for tourism accommodation identified.

## Information and Communications Technology (ICT)



Most of the region has dial-up internet access and ADSL broadband is only available in a few of the larger centres. Aggregation of demand by large capacity users will help to provide the critical mass to minimise access costs.

There is currently limited ADSL coverage on Kangaroo Island and part of the southern Fleurieu Peninsula. Demand aggregation projects are underway as a means of securing adequate access for the major centres.

Most of the region is serviced by mobile communications but there are gaps in coverage in some sparsely populated areas and on some secondary roads.

## Waste Management

The Integrated Waste Services (IWS) landfill at Dublin, other smaller landfills in the region and the proposed Waste Management Pacific landfill just outside the region at Inkerman are earmarked to receive increased waste from metropolitan Adelaide from 2005.

A green waste recycling facility is being developed near Langhorne Creek to provide compost. The State Government will contribute to the upgrade of road access to this facility.

Regional and local government operated waste disposal facilities are nearing the end of their operational lives. New facilities will be required to meet strengthened EPA requirements.

## Health

There are a number of hospital and health facilities in the region including Angaston, Tanunda, Gawler, Kapunda, Endunds, Gumeracha, Mount Barker, Strathalbyn, Victor Harbour, Mount Pleasant, and Kingscote.

These areas are experiencing population growth which exceeds other regions. This places increasing demands on health services.

Demand for accessible services for the elderly is increasing, particularly on the South Coast. Services for children and families is a focus in Mount Barker, Strathalbyn and the Northern Adelaide Plains.

## Housing

The area used to be seen as a cheap alternative to Adelaide for local low-income workers and commuters. Recent demand growth is decreasing housing affordability.

The region is experiencing increasing demands for aged care facilities in several nodes in the Barossa, Mount Barker and South Coast.

Justice and Emergency Services

The Victor Harbor courthouse no longer provides the functionality now expected from courts and is being replaced.

The SA Police (SAPOL) facilities at Mount Barker, Gawler and Victor Harbor are targeted for upgrading, so that SAPOL has adequate accommodation and can deliver high standards of service to the community.

Education and Training



Population is increasing due to ease of access to Adelaide, range of employment opportunities, affordable housing, and semi-rural lifestyle. The region is considered to be the most likely to require new education and child care infrastructure in the future.

Current and future growth is expected to occur in the Adelaide Hills, specifically in Mount Barker and, to a lesser extent, the Barossa Valley (including Gawler). Other regional centres such as Strathalbyn and the southern Fleurieu area, including Victor Harbor and Goolwa, will also continue to see steady growth.

In response to growth in the Barossa Valley and surrounding area, the Nuriootpa TAFE campus is being upgraded.

A business case for upgrading the Victor Harbour TAFE is being developed.

Science, Technology and Innovation

SA Research and Development Institute (SARDI) operates a network of regional research and development (R&D) facilities including four (Flaxley, Lenswood, Nuriootpa and Turretfield) in this region. These facilities provide a broad range of R&D programs in support of agricultural enterprises in the state, including crops, livestock and horticulture.

## Projects

Project	Priority #	2005/6– 2009/10	2010/11– 2014/15	SASP Targets
<b>Energy</b>				
<b>Kangaroo Island electricity supply reliability</b> <ul style="list-style-type: none"> <li>Construct backup generation capacity and improve reliability of distribution network</li> </ul> <b>* Lead – private sector, State Government</b>	U/way	*		5.11
<b>Barossa electricity supply capacity</b> <ul style="list-style-type: none"> <li>Reinforce the 132 kV supply line to the Dorrien sub-station and upgrade the substation to strengthen and augment the network</li> </ul> <b>Lead – private sector</b>	1	*		1.6
<b>Reticulated gas supply to Mount Barker and Strathalbyn</b> <ul style="list-style-type: none"> <li>Develop a case to attract high-volume gas users to Mount Barker district and Strathalbyn</li> </ul> <b>Lead - Adelaide Hills and Fleurieu Regional Development Boards</b> <ul style="list-style-type: none"> <li>Extend the gas supply network to Mount Barker and Strathalbyn</li> </ul> <b>Lead – private sector</b>	3  3	*  *		1.6  1.6
<b>Water</b>				
<b>Gawler River flood mitigation</b> <ul style="list-style-type: none"> <li>Implement the flood management strategy for the Gawler River</li> </ul> <b>Lead – local government, State Government</b>	U/way	*		1.5
<b>New Victor Harbor wastewater treatment plant</b> <ul style="list-style-type: none"> <li>Construct a new wastewater treatment plant at Victor Harbor</li> </ul> <b>Lead – State Government</b>	U/way	*		5.11
<b>Sewerage infrastructure</b> <ul style="list-style-type: none"> <li>Upgrade the sewerage infrastructure as development proceeds</li> </ul> <b>Lead – State Government</b>	2	*	*	5.11
<b>Kangaroo Island water supply to major towns</b> <ul style="list-style-type: none"> <li>Provide reticulated water to American River</li> <li>Provide additional local storage capacity at Kingscote</li> </ul> <b>Lead – State Government</b>	3 3	* *		1.3 5.11
<b>Capacity of wastewater treatment facilities</b> <ul style="list-style-type: none"> <li>Explore opportunities to work with local enterprises to fund the development of local STED schemes</li> <li>Explore the viability of building connections between waste management schemes in adjacent towns to maximise utilisation</li> <li>Upgrade STEDS in small communities</li> <li>Consider utilisation of combined industry/town waste projects to improve resource recovery and value adding</li> </ul> <b>Lead – local government, private sector</b>	1  1 1	*  * *		5.11  5.11 1.12 1.16

\* Lead – lead responsibility for promoting, developing and evaluating the project.

# Priority – preliminary rankings. Priority numbers do not represent a final commitment by the State Government or other lead entities. See the Delivering the Plan section for further details.

Project	Priority	2005/6– 2009/10	2010/11– 2014/15	SASP Targets
<b>Capacity of water reticulation system</b> <ul style="list-style-type: none"> <li>Improve water supplies to meet projected demand in a number of towns in the Fleurieu Peninsula</li> </ul> <b>Lead – State Government, private sector</b>	3	*	*	5.11
<b>Irrigation water for expansion of vineyards and horticulture</b> <ul style="list-style-type: none"> <li>Investigate the viability of additional irrigation systems for vineyards and horticulture, particularly those using recycled water from Bolivar, for the Barossa and Northern Adelaide Plains</li> <li>Investigate new water supplies for Langhorne Creek viticulture</li> </ul> <b>Lead – private sector, State Government</b>	3 3	* *		1.12 1.12
<b>Gawler River horticultural expansion</b> <ul style="list-style-type: none"> <li>Expand the Bolivar recycled water network to the north of the Gawler River to support new horticulture developments</li> </ul> <b>Lead – private sector</b>	3		*	1.5
<b>Transport</b>				
<b>Ferry access to Kangaroo Island</b> <ul style="list-style-type: none"> <li>Upgrade the ferry terminal at Cape Jervis</li> <li>Redesign the Cape Jervis marshalling yards to improve safety and efficiency</li> <li>Redevelop the Cape Jervis Harbour to cater for larger vessels</li> </ul> <b>Lead – private sector, State Government</b>	U/way 2 3	* * *		1.13 1.5 1.13
<b>Road safety and capacity on southern Fleurieu Peninsula</b> <ul style="list-style-type: none"> <li>Upgrade the Victor Harbor Road</li> <li>Ensure the Cape Jervis road supports Kangaroo Island traffic</li> </ul> <b>Lead – State Government</b>	U/way 2	* *	* *	2.9 2.9
<b>Rail connectivity to the Barossa/Mid North</b> <ul style="list-style-type: none"> <li>Support the development of an intermodal hub at Angaston as part of a state-wide intermodal strategy</li> </ul> <b>Lead – private sector</b>	1	*		1.12
<b>Road access to the Barossa</b> <ul style="list-style-type: none"> <li>Upgrade the Sturt Highway to four lanes from Gawler to Nuriootpa to meet growth in traffic volumes</li> </ul> <b>Lead – Australian Government</b>	1		*	1.16
<b>Kangaroo Island roads</b> <ul style="list-style-type: none"> <li>Upgrade tourism roads on Kangaroo Island</li> </ul> <b>Lead – local government</b>	1	*	*	1.13
<b>Road traffic growth in the Barossa</b> <ul style="list-style-type: none"> <li>Undertake improvements to the Barossa Valley Way including shoulder sealing, upgrades of intersections and railway level crossings</li> </ul> <b>Lead – State Government</b>	3		*	1.16



Project	Priority	2005/6– 2009/10	2010/11– 2014/15	SASP Targets
<b>Utilisation of Kangaroo Island harbours</b>				
■ Designate Penneshaw as the primary freight and passenger ferry harbour	2	*	*	5.11
■ Maintain Kingscote wharf for recreation and commercial operations	2	*	*	5.11
■ Update the master plan for Kingscote Harbour, including the viability of a marina	3	*		1.13
<b>Lead – State Government, local government</b>				
■ Develop fit-for-purpose road and port facilities to support export of wood chips and grain	3	*	*	1.5
<b>Lead – private sector</b>				
<b>Kingscote airport capacity</b>				
■ Extend the Kingscote airport runway and upgrade the terminal to cater for increased freight and tourist flights, if demand and a viable carrier are identified	2		*	1.13 5.11
<b>Lead – local government</b>				
<b>Road freight transport congestion</b>				
■ Undertake a needs analysis for the development of a new access to the South Eastern Freeway near Mount Barker	3	*		1.5
<b>Lead – local government</b>				
<b>Public transport</b>				
■ Investigate options to improve public transport in the region	3	*		3.9
<b>Lead – State Government, local government</b>				
<b>Directional sign-posting</b>				
■ Implement the SA Tourism Commission (SATC) policy on signage for roads and tourist attractions	3	*		1.13
<b>Lead – private sector, local government</b>				
<b>Land</b>				
<b>Accommodation for international and interstate visitors</b>				
■ Support a range of accommodation throughout the region, based around the key tourism attractions of viticulture and natural attractions	1	*	*	1.13
<b>Lead – private sector</b>				
<b>Supply of zoned and serviced industrial land</b>				
■ Encourage the establishment of industrial estates to cater for large-footprint industries at Kingsford Estate, Goolwa and Strathalbyn	2	*		1.6 5.11
■ Support the establishment of an industrial park in Mount Barker to service value-adding for food products	2	*		1.12 1.16
■ Establish industrial zones on Kangaroo Island to support the development of wood chip export facilities	3	*	*	1.12 1.16
<b>Lead – local government, private sector</b>				
<b>Affordable housing</b>				
■ Encourage the development of affordable housing in Freeling, Mallala, Gawler and Lewiston	3	*	*	6.6
<b>Lead – local government, private sector</b>				

Project	Priority	2005/6– 2009/10	2010/11– 2014/15	SASP Targets
<b>Information and Communications Technology (ICT)</b>				
<b>Access to broadband</b>				
<ul style="list-style-type: none"> <li>Develop a business case that identifies and aggregates sufficient broadband demand to support expanded services in larger towns, particularly in Barossa Valley, Kangaroo Island and southern Fleurieu</li> </ul> <b>Lead – private sector</b>	U/way	*		4.7
<b>Health</b>				
<b>Aged care facilities</b>				
<ul style="list-style-type: none"> <li>Provide more aged care facilities and services (residential and community aged care) to meet the needs of the ageing population in areas including Kapunda and Kangaroo Island</li> </ul> <b>Lead – Australian Government, private sector, State Government</b>	U/way	*		2.2
<b>Primary health care centres</b>				
<ul style="list-style-type: none"> <li>Continue to upgrade hospital facilities to better meet acute service requirements and support the co-located delivery of primary health care services, including general practice, allied health, mental health and Aboriginal health programs in the Barossa, Kangaroo Island and Mount Barker</li> </ul> <b>Lead – State Government, private sector</b>	2	*	*	2.2
<b>Justice and Emergency Services</b>				
<b>Standard of courthouse facilities</b>				
<ul style="list-style-type: none"> <li>Upgrade the Victor Harbor courthouse</li> </ul> <b>Lead – State Government</b>	U/way	*		2.8
<b>Standard of SAPOL facilities</b>				
<ul style="list-style-type: none"> <li>Develop new police facilities at Mount Barker, Gawler and Victor Harbor</li> </ul> <b>Lead – State Government</b>	U/way	*		2.8
<b>Education and Training</b>				
<b>Utilisation of school assets</b>				
<ul style="list-style-type: none"> <li>Rejuvenate local schools to support improved utilisation and integration of services</li> </ul>	U/way	*		6.14
<ul style="list-style-type: none"> <li>Undertake planned capital works at schools in Angaston, Gawler, Mylor, Hewett, Kapunda, Kingscote, Port Elliot, Stirling, Victor Harbor and Woodside</li> </ul> <b>Lead – State Government</b>	U/way	*		6.14
<b>Condition and capacity TAFE facilities</b>				
<ul style="list-style-type: none"> <li>Upgrade Nuriootpa TAFE</li> </ul>	1	*		6.17
<ul style="list-style-type: none"> <li>Develop proposals for the Victor Harbor TAFE</li> </ul>	2	*		6.17
<ul style="list-style-type: none"> <li>Ensure that future infrastructure requirements of TAFE, including ICT, support the expected growth in the primary and allied industries</li> </ul> <b>Lead – State Government</b>	2	*	*	6.15

Project	Priority	2005/6– 2009/10	2010/11– 2014/15	SASP Targets
<b>Roseworthy facilities</b> <ul style="list-style-type: none"> <li>Redevelop the Roseworthy campus of the University of Adelaide to provide facilities for training secondary school students for careers in agribusiness</li> </ul> <b>Lead – university sector</b>	2	*		6.13
<b>Capacity of childcare facilities</b> <ul style="list-style-type: none"> <li>Expand the capacity of childcare facilities</li> </ul> <b>Lead – private sector</b>	2	*		5.8
<b>Waste Management</b>				
<b>Solid waste management</b> <ul style="list-style-type: none"> <li>Develop regional cooperative schemes to manage solid waste recycling and disposal</li> </ul> <b>Lead – local government</b>	3	*		3.11



Barossa, Adelaide Hills, Northern Adelaide  
Plains, Fleurieu Peninsula & Kangaroo Island