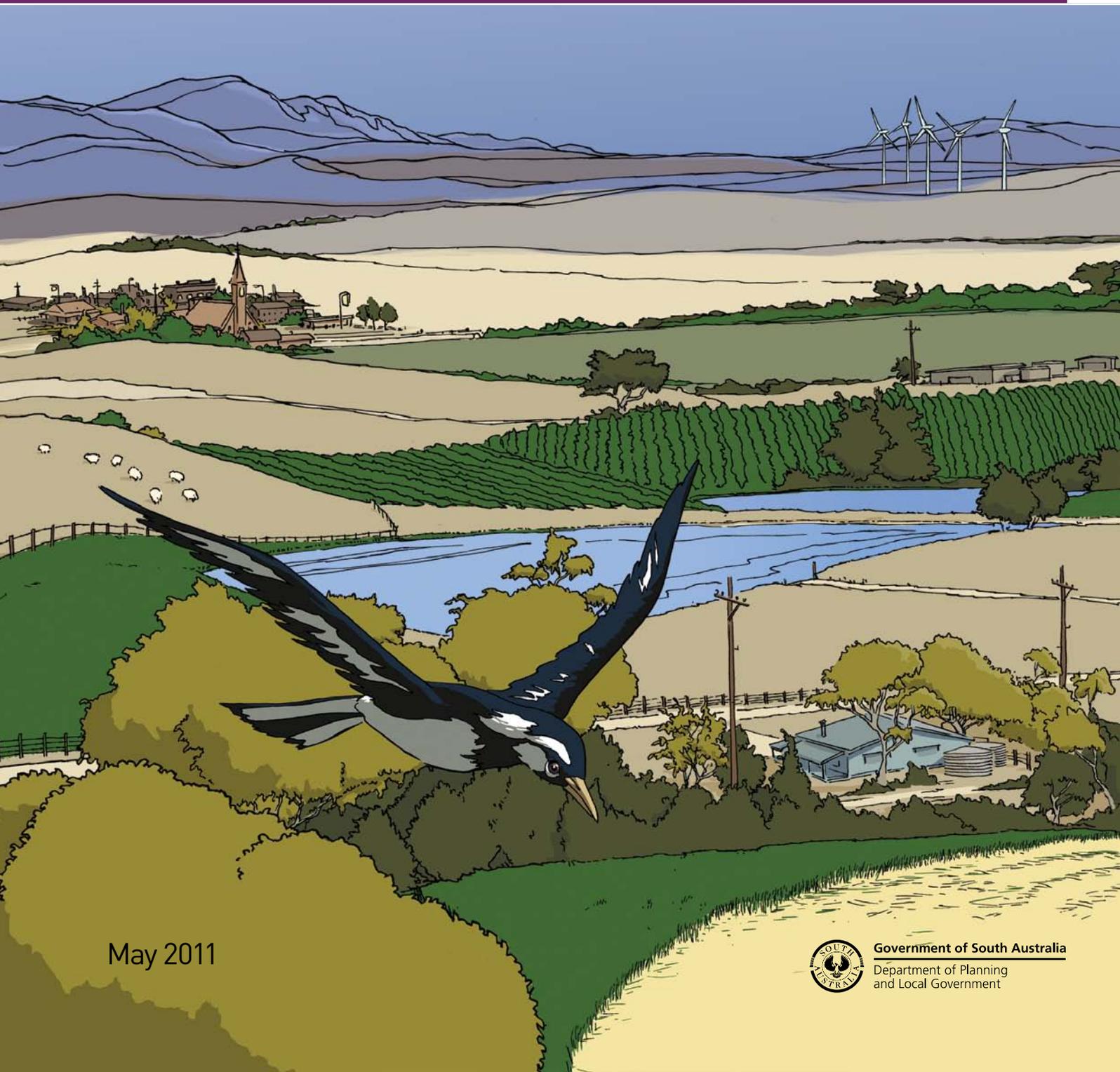# Mid North Region Plan

A volume of the South Australian Planning Strategy

May 2011

Government of South Australia
Department of Planning
and Local Government

Mid North Region Plan

A volume of the South Australian Planning Strategy

This document is the *Mid North Region Plan*.

The document has been prepared by the South Australian Government, through the Department of Planning and Local Government, as a volume of the South Australian Planning Strategy pursuant to section 22 of the *Development Act 1993* and is subject to change.

For further information

Please visit www.dplg.sa.gov.au or telephone the Department of Planning and Local Government on 08 8303 0600.

Government of South Australia
Department of Planning
and Local Government

MINISTER FOR URBAN DEVELOPMENT, PLANNING AND THE CITY OF ADELAIDE

South Australia's Mid North is a diverse region, with some of the state's most appealing tourist destinations and an economy underpinned by primary production and processing. The region is known for the wines of the Clare Valley, the rich history of towns like Burra, the agriculture that drives centres like Crystal Brooke and Peterborough, and the industry of Port Pirie. The region is crossed by South Australia's major freight and tourism routes and, importantly, it is home for around 40,000 people.

The *Mid North Region Plan* is designed to make sure this beautiful region remains a great place to live, work and visit for many years to come. This plan is one of seven regional volumes in the South Australian Planning Strategy. Based on a presumption of steady economic growth, the plans indicate where new housing, industry and commercial activity should be best located – and not located. The plan outlines the different roles and functions of towns and addresses important issues, such as the way industrial, commercial and residential areas connect and impact on each other.

As with all of the regional plans, the challenge is to balance changes in the economy and population with the need to protect the region's natural and historical features. These include unique ecosystems, landscapes and the built environment of towns. The plan identifies the potential effects of growth on these features and sets out land-use principles and policies for development that will support their protection. Ultimately, the plan is about helping the Mid North to continue to grow and develop in a way which preserves everything the community values about the region.

The *Mid North Region Plan* was produced as a result of close collaboration between the State Government, local councils, regional development and natural resources management boards, local industry and the community. The result is a document which points the way to a future of well-managed growth, protected natural and industry assets, and strong communities.

Hon John Rau MP
Deputy Premier

Minister for Urban Development, Planning and the City of Adelaide
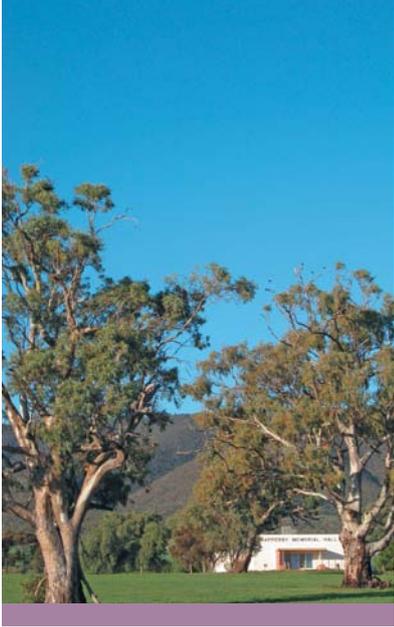
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OVERVIEW

Chapter A

OVERVIEW

Chapter A

Background

The *Mid North Region Plan* (the Plan) guides future land use and development in the region. It has been prepared by the South Australian Government, through the Department of Planning and Local Government, in collaboration with the Mid North, Southern Flinders Ranges and Northern Regional Development Boards[1], the Northern and Yorke Natural Resources Management Board, other state government agencies and the seven councils of the region:

- Clare and Gilbert Valleys Council
- District Council of Mount Remarkable
- District Council of Orroroo Carrieton
- District Council of Peterborough
- Northern Areas Council
- Port Pirie Regional Council
- Regional Council of Goyder.

Submissions received from industry, interest groups and local communities during the two-month public consultation period in 2008 have contributed to improving and finalising the Plan.

For more information about the *Mid North Region Plan* and how it was developed, please see Appendix 1.

1   The Mid North, Southern Flinders Ranges and Northern Regional Development Boards became Regional Development Australia Yorke and Mid North in 2009–10.

The role of the South Australian Planning Strategy

The *Mid North Region Plan* is one of seven regional volumes that, together with *The 30-Year Plan for Greater Adelaide*, make up the South Australian Planning Strategy. The regions covered in the regional volumes of the Planning Strategy are: Eyre and Western, Far North, Kangaroo Island[2], Limestone Coast, Murray and Mallee, Yorke and Mid North (refer to Map A1).

While the Yorke and Mid North regions are currently covered in the Planning Strategy as separate volumes, they eventually will be combined into one volume.

In the regional volumes the state government gives direction on land use and development for the period 2010–2036. They set out how the government proposes to balance population and economic growth with the need to preserve the environment and protect the heritage, history and character of regional communities. They also outline where people are likely to live and the projected make-up of the population so that state and local government agencies

2   Kangaroo Island is part of the Fleurieu and Kangaroo Island SA Government Administrative Region but for planning purposes it is covered in a separate regional volume of the South Australian Planning Strategy. The Fleurieu Peninsula is covered in *The 30-Year Plan for Greater Adelaide*.

can plan for the provision of services and infrastructure, such as transport, health, schools, and aged care and community facilities.

At a local level, the regional volumes provide guidance and resources for councils as they undertake their Strategic Management Plans and review and amend their Development Plans. Development Plans contain the zones, maps and explicit rules that specify what can and cannot be done with land in a council area. Councils must ensure that their Development Plans are consistent with the land-use policies and directions of the relevant regional volume. The regional volumes also guide amendments to Development Plans in unincorporated (out of council) areas, as undertaken by the Minister for Urban Development, Planning and the City of Adelaide (the Minister).

The Structure Plans for the state's major regional cities, including Mount Gambier, Port Augusta, Port Lincoln, Port Pirie and Whyalla, flow from the regional volumes.

The South Australian Planning Strategy is a requirement of section 22 of the *Development Act 1993*. The Minister is responsible for its preparation on behalf of the state government and for reporting to the South Australian Parliament annually on its implementation. Each volume of the strategy must be reviewed at least every five years.

Far North

Eyre and Western

Yorke and Mid North

Murray and Mallee

Limestone Coast

Kangaroo Island

Greater Adelaide

Coober Pedy

Roxby Downs

Ceduna

Port Augusta

Whyalla

Port Pirie

Port Lincoln

Renmark

Adelaide

Murray Bridge

Kingscote

Bordertown

Mount Gambier

N

0   100   200   300 km
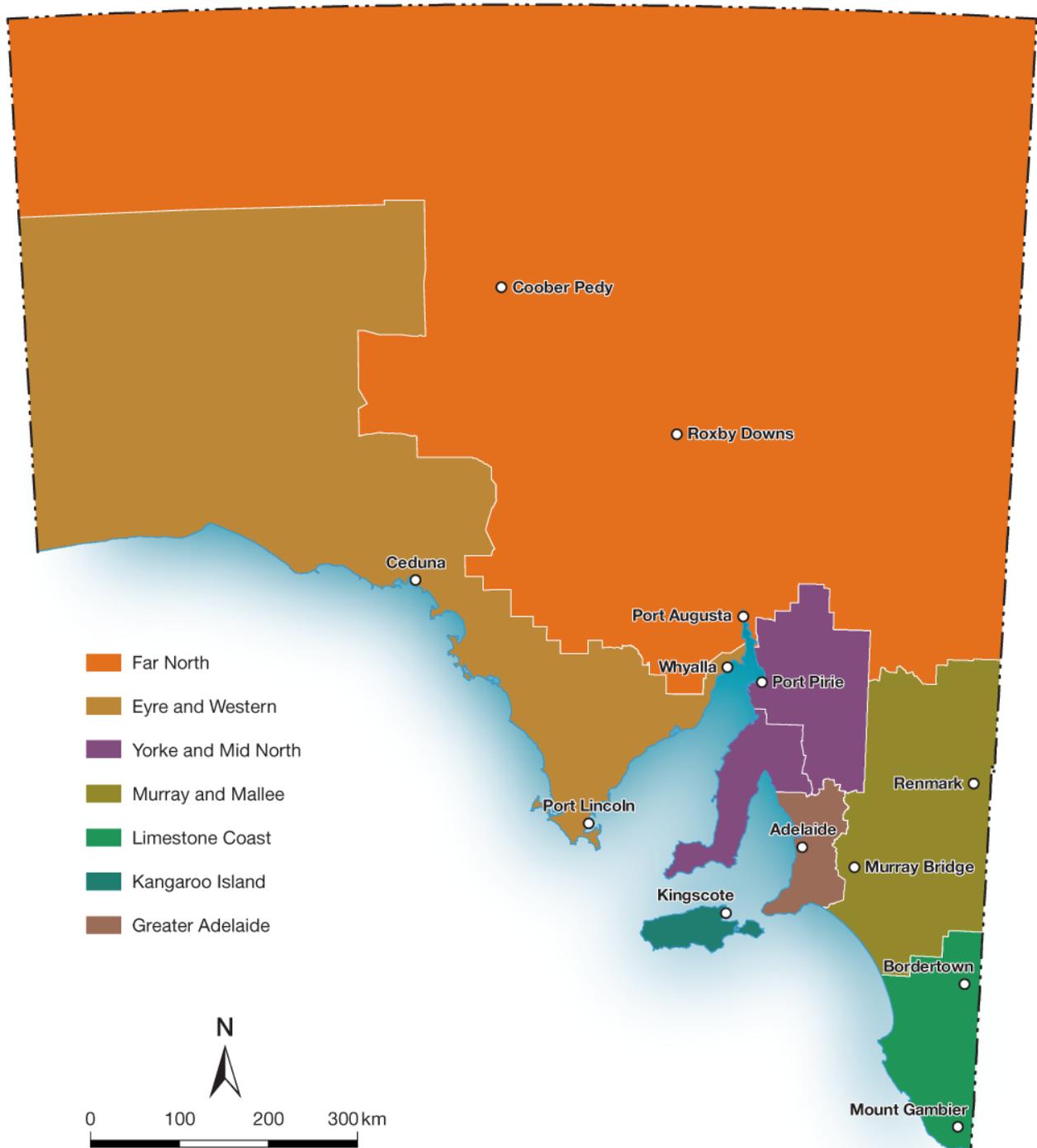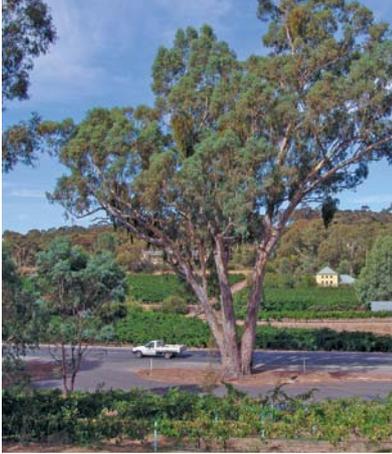
The objectives of the regional volumes

To maximise the state's opportunities and respond to its challenges, the regional volumes of the South Australian Planning Strategy have three interlocking objectives. They are to:

- maintain and improve liveability
- increase competitiveness
- drive sustainability and resilience to climate change.

Figure A1 shows how these three objectives interrelate.

Alignment with state government policies

The regional volumes of the South Australian Planning Strategy provide a link between broad, statewide planning aims and local, council-specific planning needs, and they work in tandem with key state policies, leading to a consistent approach to land use and development across the state.

Firstly, the volumes support the achievement of a range of social, economic and environmental targets in *South Australia's Strategic Plan*. Second, they feed into the

Strategic Infrastructure Plan for South Australia (2005–06) by identifying the infrastructure priorities needed to support economic and population growth. Third, they tie in with the *Housing Plan for South Australia* (2005), *Water for Good—A Plan to Ensure our Water Future to 2050* (2009), the *Economic Statement* (2009), the *State Natural Resources Management Plan* (2006), the regional natural resources management plans (2009) and *South Australia's Waste Strategy* (2005).

Figure A1 – Objectives of the regional volumes of the South Australian Planning Strategy

Liveability

A country lifestyle that is relaxed and has a strong sense of community

Has adequate and equitable access to services

A vibrant arts, cultural and sporting life

Housing and cost of living is affordable

Best elements of the past and present are evident in town design and form

Competitiveness

Attracts jobs and investment

Retains people in the region

Attracts and welcomes people from different backgrounds and places

Scenic landscapes with an intrinsic sense of place

Attractive to a diverse range of businesses and industries

Maximises competitive advantage in renewable and clean energy

Sustainability and climate change resilience

Pattern of settlements is deliberately re-engineered towards greater sustainability and climate change resilience

Adaptation means the region responds to the risk of climate change and massively improves water and energy efficiency
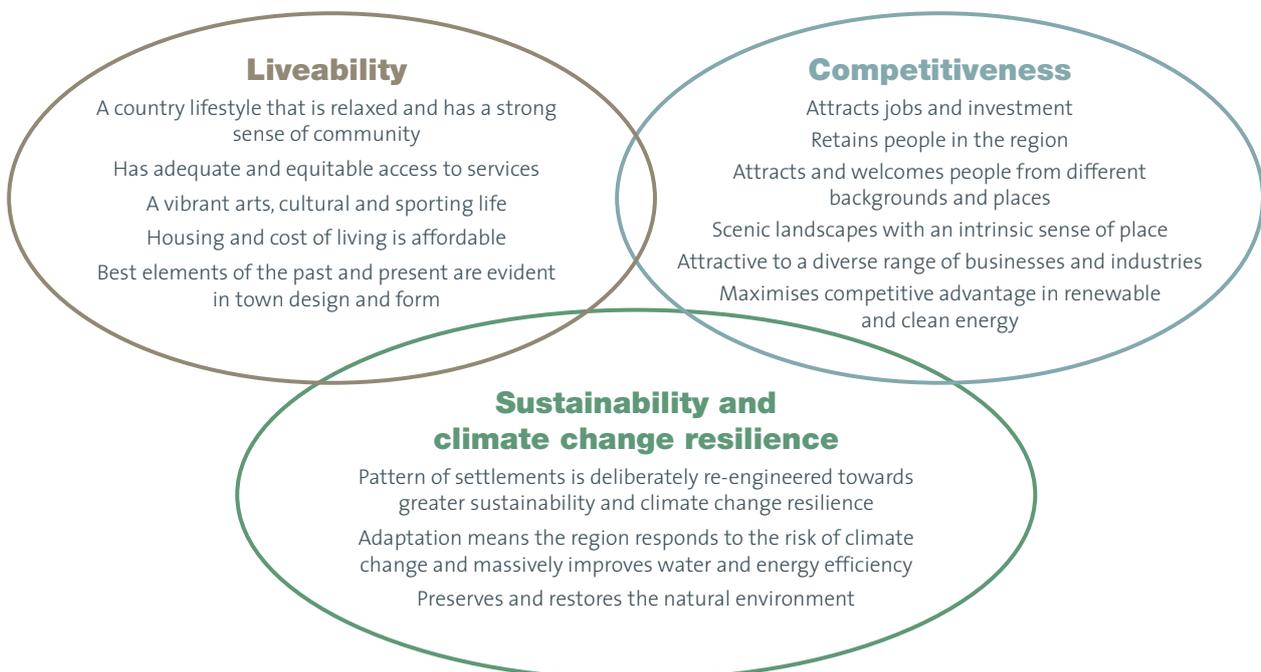
Preserves and restores the natural environment

Figure A2 – The *Mid North Region Plan's* relationship with key state government policies

South Australia's Strategic Plan

| Growing prosperity | Improving wellbeing | Attaining sustainability | Fostering creativity and innovation | Building communities | Expanding opportunity |

SPATIAL STRATEGY

SASP OBJECTIVES   **SASP OBJECTIVES**

Mid North Region Plan

Port Pirie Structure Plan

STATE POLICY INITIATIVES   **STATE POLICY INITIATIVES**

| Water for Good – A Plan to Ensure our Water Future to 2050 | Greenhouse Strategy | State Natural Resource Management Plan | Strategic Infrastructure Plan for South Australia | Skills Strategy for South Australia |

| Information, Communication and Technology | Population Policy | Economic Statement | Planning Reform |

Relationship to *South Australia's Strategic Plan*

Figure A2 shows the relationship of the regional volumes with *South Australia's Strategic Plan* (SASP) and its targets, as well as the links to several state policy initiatives.

See Appendix 3 for further information about SASP principles and targets.

How the regional volumes will work at regional and local government levels

While the regional volumes will primarily operate at a regional level, local government will play a pivotal role in their implementation, in collaboration with DPLG, other state government agencies and

stakeholders such as regional development and natural resources management boards. The collaborative process will feature regional forums, which will bring councils and relevant bodies together each year to agree on long-term land-use and infrastructure priorities, appropriate targets, and the need to focus their respective resources on implementing the priorities.

Consideration of Commonwealth environmental matters

The regions encompass many matters of National Environmental Significance (NES) that are protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These matters include:

- nationally listed species and ecological communities
- migratory species
- wetlands of international importance under the Ramsar Convention (Ramsar-listed wetlands)
- national and World Heritage items/areas.

Councils' decision making processes and development controls should provide for early consideration of matters of NES and recognition that actions that may potentially have a significant impact on matters of NES will require a referral to the Commonwealth Department of the Environment, Water, Heritage and the Arts under the auspices of the EPBC Act.

Planning for change in regional South Australia

The regional volumes of the South Australian Planning Strategy set out land-use policies to manage the changes that are forecast to occur across the regions. Of particular concern are changes in population and climate, which are having, and will continue to have, significant impact on the demand for services and infrastructure, the natural environment, the character of communities and the economic prosperity of the regions.

Regional population change

The state government believes that sustainable population growth is essential to maintain healthy communities and a labour force that can support our economy. While much of the state's population growth is expected to occur in Greater Adelaide, regional areas are targeted to grow as well.

The make-up of the state's population is also changing dramatically—it is ageing at a faster rate than the other Australian states and this will bring significant challenges for planning, particularly in terms of the type and location of housing and its proximity to services.

South Australia's Strategic Plan (SASP) calls for regional South Australia to maintain an 18 per

cent share of the state's total population (Target 5.9). Based on the all-of-state population target developed for *The 30-Year Plan for Greater Adelaide*, this would equate to about 99,000 additional people taking up residence in regional areas, resulting in a regional population of 396,000 people by 2036.

Table A1 breaks down this population target by region and indicates the past population growth rates (1996–2008). Each region requires an average annual growth rate of 1.03 per cent to achieve its population target increase and maintain its 2008 share of the estimated resident population (ERP).

While overall population numbers in regional areas have remained relatively static during the past decade, there have been significant changes in where people are choosing to live.

Numbers have declined in the more sparsely populated areas, particularly those in the Far North, and in settlements with less than 1000 people (with the exception of coastal communities). Changes to population distribution are being driven by the restructuring of farming enterprises, resulting in larger and fewer agricultural properties; the interstate and intrastate migration of people seeking a regional lifestyle; and changing industry demands.

Table A1 – Population trends and targets by region 1996–2036

Region	Population trends		SASP T5.9 Target—Maintain regional SA's share (18%) of state population[a]			
	ERP in 2008[b]	Average annual growth rate 1996–2008 (%)	Share of 2008 regional population[c] (%)	Population target in 2036[d] (based on 2008 share)	Population increase 2008–36 (persons)	Population growth 2008–36 (persons per year)
Eyre and Western	58,072	0.19	19.54	77,385	19,313	715
Murray and Mallee	70,125	0.23	23.60	93,446	23,321	864
Far North	28,460	−0.46	9.58	37,925	9465	351
Limestone Coast	65,402	0.35	22.01	87,152	21,750	806
Yorke and Mid North[e]	**75,112**	**0.15**	**25.28**	**100,092**	**24,980**	**925**
Total	297,171	0.17	100.00	396,000	98,829	3660

Generally, towns with more than 1000 people have grown; several of these towns have had the fastest rates of population growth in the state. Larger centres such as Port Lincoln, Murray Bridge and Mount Gambier have continued to expand, while in Port Pirie, Port Augusta and Whyalla the population has stabilised and shown some improvement after a sustained period of decline.

The demographic profile of the regions also has been changing, with an ageing population and generally declining numbers of young people.

However, increasing economic investment in the regions and the expansion and diversification of primary industries, aquaculture, mining and the services that support tourism and older populations are expected to attract and maintain more young people and people from overseas. This will contribute to the achievement of the SASP population growth target.

Notes to Table A1:

a   *The regional population targets are aspirational, based on the all-of-state population target developed for* The 30-Year Plan for Greater Adelaide. *The timeframes cited are uncertain and the growth targets will be amended as the results of more recent demographic analyses become available.*

b   *ERP (estimated resident population). Australian Bureau of Statistics,* Regional population growth, Australia, *cat. no. 3218.0, ABS, Canberra, Apr. 2009.*

c   *Department of the Premier and Cabinet,* South Australia's Strategic Plan, *DPC, Government of South Australia, Adelaide, 2007, <www.saplan.org.au>.*

d   *South Australia's population is expected to reach 2.2 million by 2036. Department of Planning and Local Government,* The 30-Year Plan for Greater Adelaide: Background Technical Report, *DPLG, Government of South Australia, Adelaide, 2009, p. 16, <www.plan4adelaide.sa.gov.au>.*

e   *The Mid North's ERP in 2008 was 41,653. The population target for 2036 is 55,440, which equates to a population increase of 13,787 people.*

To achieve the SASP workforce targets, the South Australian Government, through the Department of Further Education, Employment, Science and Technology, is working with industry to develop workforce action plans in the mining, defence, construction, health, and advanced manufacturing sectors. As well, industry skills boards are developing workforce development plans to address the demand for labour and skills in industries that have lost workers to mining.

Any potential impacts on natural resources, the environment, biodiversity and the character of communities as a result of these changing population patterns and related development will need to be carefully managed.

Climate change

The potential effects of climate change on the regions range from threats to water supply, increased risk of bushfire and greater fragmentation of native habitats to increased pressure on health care services from more vulnerable people.

The state government believes it is critical to intervene now to help the regions prepare for and adapt to long-term climate change. Securing water and energy supplies is fundamental to economic, social and environmental wellbeing in the face of such change.

In recent years, state and local governments and regional communities have improved water security through augmentation of supply, the introduction of permanent water conservation, and measures such as wastewater re-use and stormwater harvesting. Increased housing density, improved water efficiency of buildings and the incorporation of water-sensitive urban design (WSUD) principles in the development process will lead to more efficient water consumption in regional towns.

State and local governments are developing regional demand and supply plans, to be in place by 2014, as outlined in *Water for Good—A Plan to Ensure our Water Future to 2050*, as well as investigating how regional communities can diversify their water supply sources.

In addition, state and local governments continue to investigate ways to organise land use such that it supports renewable and clean energy technologies. These opportunities will give South Australia a competitive advantage in a carbon-constrained economy. Investment in infrastructure will be critical to realise such opportunities.

These initiatives will extend the life and reliability of our water and energy supplies and allow the population and the economy to grow without placing unsustainable demands on our natural resources.

Our understanding of climate change and its ramifications is evolving rapidly. It is critical that policies and decisions are based on the best current information, and are able to be adjusted in the future if required.

Managing change

South Australia's regions face the challenge of managing the impacts of climate change and population growth to protect viable primary production industries and the natural resources upon which they depend. This challenge has been compounded by reduced rainfall during several drought years. During this time rural communities have again shown their resilience and capacity to manage in both good and bad years.

Local councils, regional and economic development boards, natural resources management boards and the state government have been working with the community, local groups and industry to develop effective strategies for specific sectors (for example, primary industries and tourism) and specific parts of the region (for example, individual towns and council areas) that will lead to a sustainable future for the regions.

They recognise that population and economic growth must be balanced with protection of the environment, including biodiversity, and retention of the regions' unique qualities for the benefit of future generations and to attract and retain skilled workers.

THE CONTEXT FOR THE PLAN

Chapter B

THE CONTEXT FOR THE PLAN

Chapter B

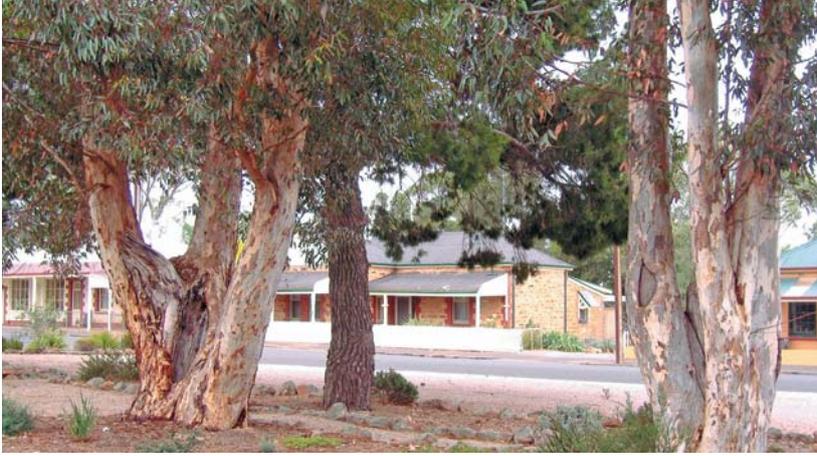### The Mid North region at a glance

The Mid North region:

- covers about 23,000 square kilometres, stretching from the Clare and Gilbert valleys in the south, west to Port Pirie on the Spencer Gulf, north to the Southern Flinders Ranges, and north-east to the pastoral lands beyond Goyder's Line[3]

- had a population of 40,096 people at the 2006 Census[4]

- has a major commercial and service centre, Port Pirie, which contains 33 per cent of the population; four important towns—Clare, Peterborough, Jamestown and Crystal Brook —which contain 20 per cent of the population; 15 smaller towns, which contain 16 per cent of the population; and other settlements and areas, which contain 31 per cent of the population

- is crossed by South Australia's major freight and tourism routes, which link the region to Adelaide in the south; the Flinders Ranges, the outback, Queensland and the Northern Territory in the north; and the Riverland, Murray Bridge, Broken Hill and New South Wales to the east

- has a regional economy underpinned by primary production and processing, light industry and tourism activities, which reflect the region's variations in climate and landscapes. Highlights of the region's economy are:

  - the world's largest integrated lead-zinc-silver smelter, which is located in Port Pirie and linked to mining activities throughout Australia

  - the fertile soils, internationally recognised quality wines and verdant landscapes of the Clare Valley, which has attracted steady population growth

  - the towns along the Burra to Hawker road into the Flinders Ranges, which are rich in railway, mining and pastoral heritage, as well as mineral resources and an emerging wind farm industry

  - Jamestown, which is an important centre for Australian livestock production and sales

  - Crystal Brook, Gladstone and Eudunda, which support productive grains and agribusiness industries

  - the Southern Flinders Ranges, which is one of the most popular nature-based and active adventure tourism destinations in the state, with strong horticulture and forestry industries.

See Appendix 2 for detailed information about the Mid North region, including its population distribution, economy and infrastructure.

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3 Goyder's Line originated in 1865 when the then Surveyor-General of South Australia, George Goyder, drew a line of reliable rainfall to delineate cropping country south of the line from extensive grazing land to the north.

4 Australian Bureau of Statistics, *2006 Census of Population and Housing*, ABS, Canberra, 2007.

Key goals for the Mid North region

The following goals were identified as critical to the region's future during consultation with local government, industry groups and communities. The goals, which are key drivers for the *Mid North Region Plan*, are grouped under four themes:

- environment and culture
- economic development
- population and settlements
- infrastructure and services provision.

Environment and culture

- Reducing the reliance on groundwater by developing strategies to re-use stormwater and wastewater

- Planning for the impacts of climate change on the region's environment, particularly low-lying coastal areas vulnerable to rising sea levels and storm surges, and on agricultural production, infrastructure and the regional economy

- Ensuring development protects and preserves the region's environmental assets, including native vegetation (within and outside national and conservation parks); coastal and marine habitats; and water resources

- Encouraging the creation of biodiversity corridors to support native flora and fauna

- Ensuring development is appropriately located, and not in areas that may adversely affect scenic landscapes.

Economic development

- Attracting and retaining a highly skilled and flexible workforce to ensure a stronger economic base

- Developing an integrated plan to guide the expansion of tourism, building on the region's character and natural assets

- Encouraging the development of wind farms in appropriate locations and the training of people in the region to undertake their operation and maintenance

- Attracting industry to the region, particularly where there is infrastructure capacity for growth (for example, electricity, gas, roads, rail and shipping infrastructure)

- Continuing to foster the development and diversification of primary industries, including viticulture

- Supporting the sustainable adaptation of primary industries to climate change

- Positioning the region to capitalise on the opportunities arising from the expansion of mining activities across the state.

Population and settlements

- Valuing the region's strong sense of community spirit

- Discouraging residential development outside towns

- Catering for the needs of an ageing population by developing a range of housing alternatives around existing health and community services

- Maintaining town character and heritage and promoting towns and settlements with distinctive built heritage and historical importance to the state, including Aboriginal heritage and importance

- Ensuring an adequate supply of residential land for future development, including maximising the use of surplus farmhouses resulting from farm amalgamations

- Providing greater employment opportunities and challenges to retain young people in the region.

Infrastructure and services provision

- Improving the capacity of water and sewer infrastructure to support population growth and the expansion of tourism and industry

- Expanding local electricity generation through renewable energy sources, such as wind farms and gas-fired peak demand plants, which will provide greater capacity for economic activity. This will require expansion of the transmission infrastructure to service this growth
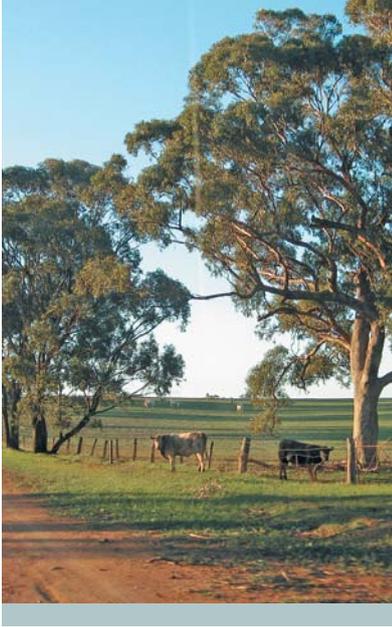
- Improving the information and communication technology (ICT) networks, particularly broadband, to: foster education, training and professional development opportunities; enhance health delivery; and support industry development

- Planning for the expansion of the transmission infrastructure required to meet increased electricity generation

- Maximising economic benefits by making the best use of existing and planned infrastructure

- Extending and upgrading access to broadband and mobile phone services across the entire region to support industry and expand distance education opportunities

- Implementing a waste management strategy, including a central solid waste disposal site

- Considering opportunities for establishing community sporting hubs, including the shared use of school facilities

- Supporting the development and maintenance of social and community facilities, including sporting, education, health and other facilities to service the local population.
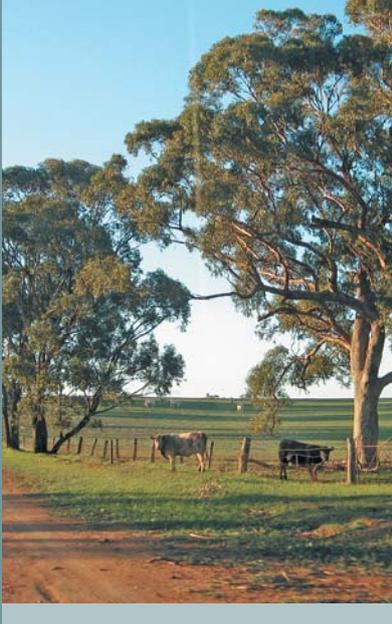
THE VISION FOR THE MID NORTH REGION

Chapter C

Chapter C

An integrated approach

The *Mid North Region Plan* is a coordinated and integrated vision for land use and development across the region. It responds to the opportunities and challenges facing the region and identifies the planning priorities, principles and policies necessary to achieve the vision (refer to Map C1).

The Plan allows for communities to develop and grow, and encourages initiatives that help retain the special qualities of the Mid North while fostering vibrant and distinctive towns that support a range of lifestyles. It supports activities that benefit the local and regional economy, provide local employment and attract people to the region. It recognises the region's variations in geographical features, economic strengths and community aspirations, and seeks to make the most of the different opportunities each presents. It seeks to balance the needs of people today with those of future generations.

The aims of the vision are to:

- manage the region's population, with a focus on Port Pirie, Clare, Burra, Crystal Brook, Jamestown, Peterborough and Booleroo Centre

- increase industrial investment, focusing on the Port Pirie to Peterborough corridor

- manage growth to protect natural and industry assets, especially to the south of Burra and Clare

- strengthen towns

- increase active, nature-based tourism, particularly in the Laura to Quorn corridor

- retain built heritage and link it with tourism, particularly along the Clare and Burra to Hawker corridors

- enhance development of renewable energy

- promote/expand the region's viticulture industry.

Legend

- ● Regional city
- ○ Major town
- · Minor town
- —— Road network
- —— Strategic road
- —— Primary freight road
- —— Secondary freight road
- ▪▪▪ National rail network
- ···· Disused rail
- ·–·–· LGA boundary
- —— Planning region
- ● Regional city/centre
- ● Major commercial/service centre
- ● Supporting commercial/service centre
- ● Local and visitor commercial/service centre

Environment and culture

- ▪ Water eco-systems and resources
- ▪ Protected area
- —— Coastal management
- ▪ Coastal flooding (potential)
- —— Scenic lanscape

Economic development

- ▪ Forestry
- ▦ Intensive livestock production and processing
- ▪ Key viticulture area
- ▲ Industrial land/hub (existing or future)
- ▲ Primary product processing and/or bulk handling facility
- —— Scenic tourist route
- ░ Wind energy (existing or potential)
- ▲ Strategic airport or airstrip
- ⚓ Port (existing or potential)

Population and settlements

- Ⓗ Strengthen heritage/township character
- ⊕ Future aged care accomodation and services
- ▲ Coastal tourist town

N

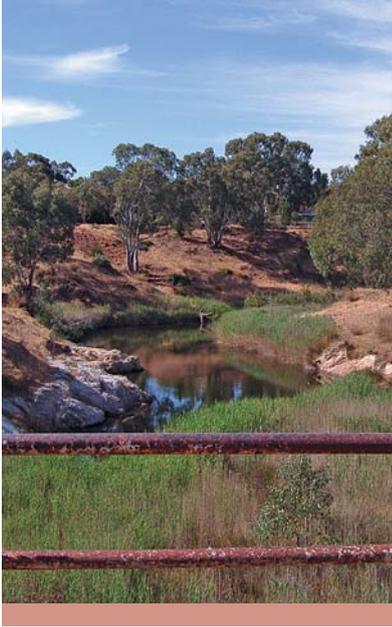0 10 20 30 40 50km

15

PRINCIPLES AND POLICIES

Chapter D

PRINCIPLES AND POLICIES

Chapter D

This chapter outlines the principles and the policies that are required to realise the vision for the Mid North region. These are set out under three themes:

- environment and culture
- economic development
- population and settlements.

Under each theme the Plan identifies:

- planning-related priorities for councils (and the Minister in out-of-council areas) to consider when developing Strategic Management Plans and updating Development Plans[5]
- principles to guide land-use planning and development
- planning-related policies that provide ongoing direction to councils (and which must be reflected in their Development Plans).

While the policies and specific targets of the *Mid North Region Plan* may change over time, the principles will be a constant driving force for future generations to ensure that the region has a world-leading approach to competitiveness, liveability, sustainability and resilience to climate change.

The contributions of these principles to South Australia's Strategic Plan are described in Appendix 3.

5   These priorities were identified during workshops with local councils in 2007 and 2008.

The principles are:

1. Recognise, protect and restore the region's environmental assets

2. Protect people, property and the environment from exposure to hazards

3. Identify and protect places of heritage and cultural significance, and desired town character

4. Create the conditions for the region to adapt and become resilient to the impacts of climate change

5. Protect and build on the region's strategic infrastructure

6. Retain and strengthen the economic potential of primary production land

7. Reinforce the region as a preferred tourism destination

8. Provide and protect serviced and well-sited industrial land to meet projected demand

9. Ensure commercial development is well sited and designed to support the role and function of towns

10. Strategically plan and manage town growth

11. Design towns to provide safe, healthy, accessible and appealing environments

12. Provide land for a supply of diverse, affordable and sustainable housing to meet the needs of current and future residents and visitors.

ENVIRONMENT AND CULTURE

Overview

The Mid North's environmental and cultural assets, underpinned by a range of existing plans, strategies and agreements, are essential to the region's development. Settlements and industry are inextricably linked to climate and water resources, as well as land- and water-dependent ecosystems. As well, heritage sites and structures of significance provide an essential sense of identity and connection with place.

The design, siting and management of development must prevent adverse impacts on environmental and cultural assets and minimise the exposure of people, property and the environment to danger from hazards such as floods and bushfires. It is also important to achieve sustainable levels of demand for water and energy, particularly in light of the projected impacts of climate change.

Several state government policies, guidelines and plans provide guidance on environmental management of the region, including the *Northern and Yorke Regional Natural Resources Management Plan* (2009);

Environment Protection Authority policies, codes of practice and guidelines; the *Living Coast Strategy for South Australia* (2004); *Coast Protection Board Policy Document* (2002); *No Species Loss—A Nature Conservation Strategy for South Australia 2007–2017*; *Tackling Climate Change: South Australia's Greenhouse Strategy 2007–2020*; *Wetlands Strategy for South Australia* (2003); *Marine Planning Framework for South Australia*; and Marine Protected Areas program.

The *Mid North Region Plan* seeks to ensure that future land-use directions complement these documents. It contains land-use principles and policies to guide future development in a manner that:

- protects biodiversity and areas of environmental sensitivity, including coastal areas
- supports the management of the region's natural resources
- prepares the region for the impacts of climate change
- ensures that development appropriately responds to hazards and risks
- helps preserve the region's heritage, including Aboriginal heritage.

Priorities for councils

- Incorporate information from environmental studies (for example, on biodiversity, the effects of climate change and dry-land salinity) into the review and update of Development Plans, including the identification of areas of high biodiversity value

- Maintain local heritage registers and identify heritage-listed sites in Development Plans

- Further improve understanding of the impacts of climate change on natural resources and habitats to inform future strategic planning for development and land use

- Incorporate the recommendations of the Port Pirie tenby10 project[6] into local strategic planning and Development Plans

- Investigate the sustainable limits of water use, and use this information to inform Development Plans

- Develop a flood risk mitigation plan for Port Pirie, taking into account the impacts of climate change, such as rising sea levels and extreme rainfall and rainfall run-off events.

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6   The tenby10 project aimed to reduce the blood lead levels in Port Pirie's children: the goal was for at least 95 per cent children aged 0 to 4 to have a blood lead level below ten micrograms per decilitre of blood by the end of 2010. At the time of publication the project was being reviewed.

Legend

- ● Regional city
- ○ Major town
- · Minor town
- — Road network
- — National road network
- —·—·— LGA boundary
- — Planning region
- Water eco-systems and resources
- Native vegetation
- Protected area
- Forestry
- Coastal management
- Coastal flooding (potential)
- — Scenic lanscape
- Ⓗ Strengthen heritage/township character
- ▪ ▪ ▪ Goyder's line

N

0 10 20 30 40 50km
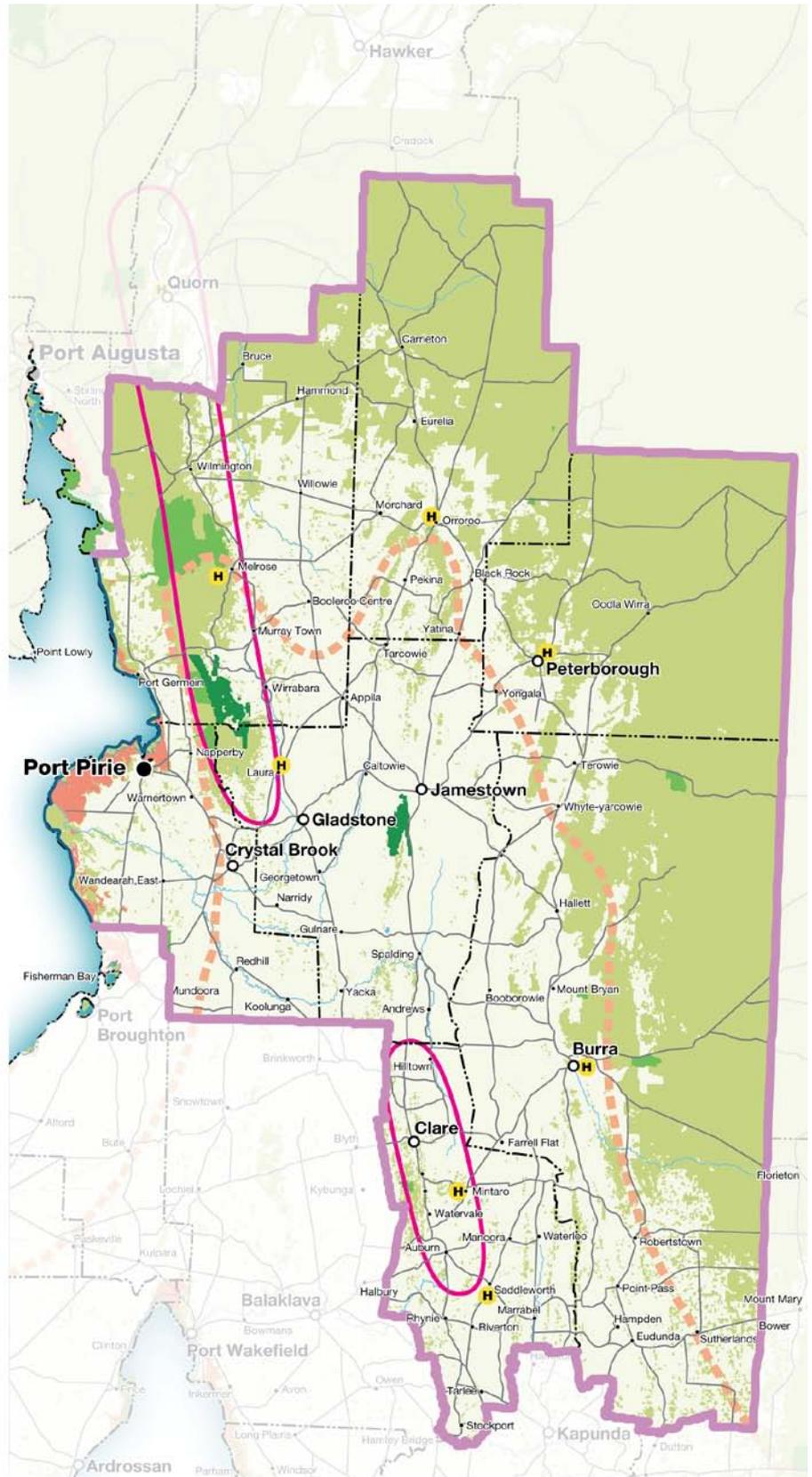
Principle 1

Recognise, protect and restore the region's environmental assets

Water

The region has several water ecosystems, ranging from watercourses to mangrove swamps and tidal estuaries on the coast. The main water catchments include Willochra Creek, Mambray Coast, Broughton River, Light River, Burra Creek and Wakefield River.

The two main watercourses are the Broughton and Wakefield rivers. Both are characterised by highly variable flow, with ephemeral channels, permanent spring-fed pools and some continuously flowing sections. The Clare Valley Prescribed Water Resources Area is the only such prescribed area in the region.

Rising groundwater levels in some cleared areas have resulted in dry-land salinity.

Land-use and development decisions must support the ongoing health of water-dependent ecosystems.

Policies

1.1 Protect the quality and function of water ecosystems by preventing the adverse impacts of land use and development such as the overuse of resources, erosion, land degradation and pollution.

1.2 Apply water-sensitive urban design principles (see Box 1) and appropriate buffers to ensure development does not affect natural watercourses and drainage patterns.

1.3 Encourage water harvesting initiatives where ecologically appropriate.

1.4 Pursue water-use efficiency through the built form at both house and town level by using water-sensitive urban design techniques.

Coastal, estuarine and marine environments

Good management of coastal areas and the marine environment is essential for the survival of a range of species, including some unique to the region.

The Upper Spencer Gulf is vitally important to the overall health of the local marine environment. The Gulf's wetland system is included in *A Directory of Important Wetlands in Australia*[7], acts as a fish nursery, and provides physical protection from coastal waters.

Of all the coastal areas of the Northern and Yorke Peninsula coast, the extensive salt marsh areas at the head of the Gulf have the highest priority for conservation.[8] Salt marsh complexes are home to important fish nursery habitats, and are also particularly vulnerable to sea level rise. Land will be required to support these nurseries as tide levels rise.

7   Environment Australia, *A Directory of Important Wetlands in Australia, Third Edition*, Environment Australia, Canberra, 2001.

8   Department for Environment and Heritage, *Conservation Assessment of the Northern and Yorke Coast*, DEH, Adelaide, 2007.

Major wetland areas, which include mangroves, seagrass and salt marsh habitat, are found in coastal areas, particularly south of Port Pirie. The grey mangroves (*Avicennia marina*) in this region form what is considered to be one of the largest undisturbed stands of the species remaining in South Australia.

Good management of coastal areas and the marine environment is essential for the survival of a range of species, including some unique to the region. A key objective of the *State NRM Plan* is that by 2015 there will be no further net loss of wetland or estuary extent or condition than that experienced in 2006, when the NRM plan was released.

Aboriginal sites and objects near the coast, in dunes and in the waters are protected by legislation.

The Department for Environment and Heritage (DEH)[9] is developing management frameworks and guidelines that will help to ensure that future development and use of the marine environment is sustainable. They will complement the Planning Strategy and need to be considered when reviewing and updating Development Plans.

Marine plans have been developed to ensure that future development and use of the marine environment is sustainable. Marine parks and aquatic reserve areas have recently been declared and specific zoning plans will be put into operation to encompass multiple uses and activities. These marine plans and parks will complement planning strategies and need to be taken into account in the review and updating of Development Plans.

Box 1—Water-sensitive urban design (WSUD)

WSUD techniques help to improve water quality and quantity, and reduce flood risk in urban areas, while enhancing biodiversity. They can be incorporated into development projects across a range of types and scales, including homes, streets, parking areas, subdivisions and multi-units, commercial and industrial developments, and public land. The techniques include:

- permeable paving of footpaths, common areas and parking spaces above underground water storage facilities
- water efficient fittings and appliances
- maintaining fixtures (for example, stopping leaks and drips from plumbing and taps)
- green roofs and living walls (that is, plantings on roofs and down walls)
- appropriate landscaping (for example, efficient irrigation, mulching, wind and sun protection, minimising lawn area and selection of suitable plants)
- wetlands to capture and treat run-off water
- the capture and storage of rainwater and stormwater for residential re-use, or to irrigate parks, sporting fields and other open space
- the capture, treatment and re-use of wastewater.

More information about WSUD principles and techniques can be found in the *WSUD Technical Manual for Greater Adelaide*, available at <www.planning.sa.gov.au/go/wsud>. Although the manual focuses on Greater Adelaide, many WSUD techniques can be applied in the Mid North Region.

9   DEH became the Department of Environment and Natural Resources (DENR) in June 2010.
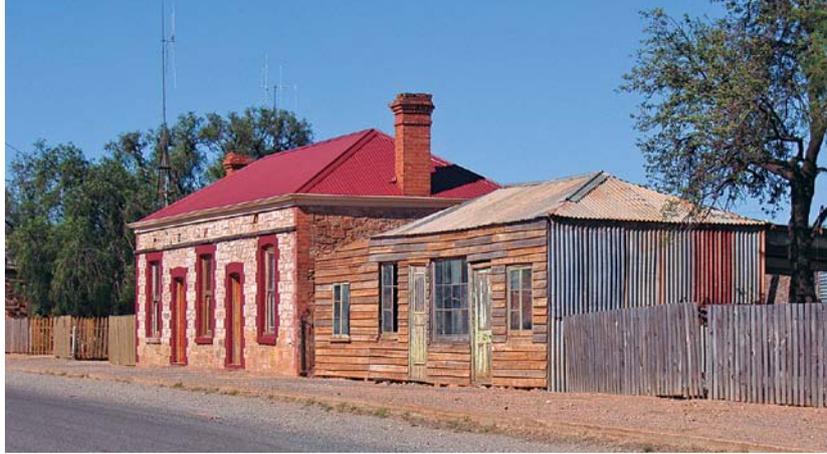
Policies

1.5 Protect coastal, marine and estuarine areas of conservation, landscape and environmental significance by limiting development in these areas. In limited circumstances, development may require such a location (for example, a development of state significance), in which case the social and economic benefits must be demonstrated to outweigh the environmental and amenity impacts.

1.6 Protect coastal features and biodiversity by establishing coastal zones (see Box 2) that incorporate:

▸ habitats that are highly sensitive to the direct impacts of development

▸ important geological and/ or natural features of scientific, educational or cultural importance

▸ landscapes of very high scenic quality.

1.7 Integrate into Development Plans coastal management requirements, including:

▸ coast protection policies under the *Coast Protection Act 1972*

▸ marine parks under the *Marine Parks Act 2007*

▸ aquatic reserve areas under the *Fisheries Management Act 2007*

▸ relevant provisions of the *River Murray Act 2003*

▸ relevant provisions of the *Natural Resources Management Act 2004*.

Box 2—What is a coastal zone?

Coastal zones in Development Plans incorporate:

- coastal features and habitats that are highly sensitive to the direct impacts of development, including coastal dunes, coastal wetlands, samphire (tidal marsh), mangrove areas and estuaries

- important coastal geological features and other natural features of scientific, educational, heritage or cultural importance

- buffers separating development from sensitive coastal habitats or important marine fauna sites

- areas where exposure to coastal hazards (such as seawater flooding or erosion) has not been addressed (for example, by a seawall or a strategy to protect development)

- coast protection measures such as erosion buffer areas, seawalls and levee banks

- high-quality coastal landscapes and land of rural character that provides a backdrop to the coast.

Areas not required to be in a coastal zone include: conservation areas that do not have coastal sensitive features and habitats; landscapes that provide a backdrop to the coast but do not include coastal features; areas where exposure to coastal hazards has been addressed; and farming or primary production land.

Source: Eyre Peninsula Local Government Association, *Eyre Peninsula Coastal Development Strategy*, 2007.

Land biodiversity

The Mid North region consists of predominantly land-based habitats, which are mainly woodlands and tussock grasslands.

The *Northern Agricultural Districts Biodiversity Plan* (DEH, 2001) identifies threatened habitat areas that have been extensively cleared of vegetation and are poorly conserved, such as the Mid North grasslands. Unless protected and restored, some plant and animal species in this area are threatened with extinction. Targeted restoration and retention of the remnant vegetation are critical to maintain biodiversity in the Mid North.

The retention and management of native vegetation and habitats on private and public land are important to reverse the negative effects of grazing and other human activities. These effects include poorer soils, higher rates of erosion and habitat loss, and the introduction of pest plants, animals and pathogens.

To protect the region's biodiversity, ecological investigations and impact assessments should be undertaken in areas that are proposed for rezoning or development.

Some developments may also require assessment by the Commonwealth (see Box 3).

Box 3 – Environment Protection and Biodiversity Conservation Act

Applicants for and proponents of development may be responsible for forwarding development proposals to the Commonwealth Environment Minister. The Minister is responsible for determining if the action is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth), and subject to assessment and approval processes under the Act.

Policies

1.8 Improve development certainty and transparency by introducing a clear hierarchy of environmental areas to be protected, and incorporate the protection of these areas into Development Plans. The three categories in the hierarchy, which will be managed through Structure Plans and Development Plans, are:

- ▶ **areas of high environmental significance**, including protected public lands (such as National Parks and Conservation Parks), private/public lands under a Heritage Agreement, and land containing high-value native vegetation. These areas will be protected from development unless a specific regulatory exemption applies

- ▶ **areas of environmental significance**, including habitat areas and lands that have human uses, such as primary production, but also support biodiversity because the uses are of relatively low environmental impact. Higher impact land uses in these areas should be avoided. If development cannot be avoided, the impacts will be minimised and offsets provided

- ▶ **areas designated for human use**, where human use is the principal consideration. Development is to be consistent with Development Plans and existing legislation.

1.9 Recognise areas of high biodiversity value, and locate and design development to prevent the loss, degradation and fragmentation of native vegetation, and any loss of species and ecological communities.

1.10 Provide for environmental connections to link areas of high biodiversity value and create buffers as a means of managing the interface with conservation areas.

1.11 Avoid any adverse impact on biodiversity, where possible. If such impact is unavoidable, it should be minimised and offset. A comprehensive offset scheme, based on existing offset provisions and drawing on models such as bio-banking, will be developed to provide for a net gain to biodiversity through flexible offsets. Offsets could be made across regions or by funding designated rehabilitation programs.

Scenic landscapes

Attention must be given to the planning and design of development to ensure that significant landscapes and their associated views—both from the land and the sea—are retained. The incremental approval of individual developments, including minor additions and maintenance activities, has resulted in the degradation of scenic resources in the past. It is important that Development Plan updates reassess landscapes and associated views and devise measures to ensure their protection.

The region is defined by its landscapes, from the rugged mountains and Conservation Parks of the Southern Flinders Ranges eastward to rolling hills and rustic plains. The landscapes are an essential part of Aboriginal culture, and are also highly valued by locals and visitors.

Particular attention needs to be given to retaining the significant landscapes of the Southern Flinders Ranges and the Clare wine region when planning and designing development.

The concern for scenic landscapes should be balanced with the appropriate development of renewable energy via wind farms.

Policies

1.12 Acknowledge, protect and manage areas of significant landscape and amenity value, including landscapes that form attractive backgrounds and entrances to towns and tourist developments.

1.13 Avoid development in areas with significant landscapes that can be viewed from tourist routes, walking trails, the beach and the sea, unless the development requires such a location (for example, a development of state significance), in which case the scale, height, design and siting of buildings must:

▸ protect views to, from and along the ocean and scenic coastal areas

▸ minimise the alteration of natural landforms

▸ be visually compatible with the character of surrounding areas

▸ restore and enhance visual quality in degraded areas, where feasible.

1.14 Avoid adverse impacts of development on landscapes through site selection and design that reduces the height or bulk of structures. (Note that landscape screening to mitigate the visual impacts of development is not a substitute for re-siting or re-design).

Principle 2

Protect people, property and the environment from exposure to hazards

Hazards can occur naturally or result from development activity. Inappropriately located or designed development and land uses can increase the exposure to and impact of hazards, including flooding, erosion, disturbance of acid sulfate soils, bushfires, salinity, landslides, site contamination, and water, air and noise pollution. The impacts of climate change, such as sea level rise and extreme weather events, are likely to increase the risk of hazards. Better development planning and control measures can contribute to reducing risks and hazards, but cannot eliminate them.

2.1 Design and plan development to prevent the creation of hazards and to avoid naturally occurring hazards.

2.2 Decrease the risk of loss of life and property from extreme bushfires by creating buffers around new growth areas that are adjacent to native bushland.

2.3 Develop other policies to minimise the impact of extreme bushfires in line with the findings of the 2009 Victorian Bushfires Royal Commission.

2.4 Develop partnerships and agreements between state and local government (particularly with emergency services agencies) to address identified risks and hazards and protect the health and wellbeing of the community.

2.5 Integrate policies, standards and actions on adaptation to climate change, disaster risk reduction and hazard avoidance into Strategic Management Plans, Development Plan policies and development assessment processes using best practice models to:

▸ reduce the social, environmental and economic impacts arising from extreme events

▸ achieve more consistent and rigorous decision-making for long-term land-use planning aimed at reducing emergency and hazard risks

▸ enhance protection of critical infrastructure

▸ develop building standards and urban design approaches that create resilient environments for the future

▸ reduce risks and protect natural areas and biodiversity

▸ protect human health and the environment where contamination has occurred

▸ adopt appropriate processes and methods when remediating contaminated land and ensure its suitability for the proposed zoning

▸ address risk, hazard and emergency management for new and existing urban areas.

2.6 Protect people, property and the environment from exposure to hazards (including coastal flooding, erosion, dune drift and acid sulfate soils) by designing and planning for development in accordance with the following principles:

▸ Protection—establishing works to protect existing development or facilitate major development (including stormwater discharge management to accommodate higher tide levels)

▸ Adaptation—designing buildings and infrastructure to minimise risk in the long term

▸ Avoidance—avoiding permanent development in and adjacent to areas at unacceptable risk from hazards.

2.7 Identify and rehabilitate areas and sites where land is contaminated as part of development processes.

2.8 Ensure new development is appropriately sited to minimise the risk to people and property from landfill gas emissions. Continue to monitor emissions from landfill sites to ensure development is not placed at unnecessary risk.

Principle 3

Identify and protect places of heritage and cultural significance, and desired town character

Heritage and cultural buildings and places give the region a distinct character that is linked to its role in South Australian history. These sites enliven history, engender a sense of identity, and allow people to associate themselves with the past, which can help guide us in the future. It is essential that heritage places be identified, protected, managed and preserved to retain their heritage value.

Non-Aboriginal heritage places of national and state significance are generally readily identified because they are registered under various Acts. The community should be involved in determining the desired character of places of local and heritage significance.

The Aboriginal Affairs and Reconciliation Division (AARD) of the state government maintains a register of Aboriginal sites and objects. Although the list is not comprehensive, all sites are protected under the *Aboriginal Heritage Act 1988*, which prohibits any damage, disturbance or interference with the sites, objects or remains without authorisation from the Minister for Aboriginal Affairs and Reconciliation.

Aboriginal people and the AARD should be involved early in planning and development processes to assist in identifying and protecting sites of cultural significance and for guidance in relation to native title and Indigenous Land Use Agreement (ILUA) requirements.

Policies

3.1 Protect and conserve places of heritage and cultural value, including national, state and local registered sites.

3.2 Identify the desired character for towns and parts of towns, and ensure that the design of buildings and public places, such as streetscapes and entrances, supports the desired character.

3.3 Identify and protect sites that have Aboriginal cultural significance and seek guidance from Aboriginal people and the Aboriginal Affairs and Reconciliation Division in relation to native title and ILUA requirements.

Principle 4

Create the conditions for the region to adapt and become resilient to the impacts of climate change

Reduced rainfall in recent years is affecting the region's agricultural and horticultural activities, as well as the recharge of aquifers, and also may affect the tourism industry. It is predicted that the trend of diminished rainfall will continue.

There are opportunities to make positive, long-lasting changes to the region's water management. Economically and technologically feasible measures are readily available to provide the water needed for the future. A well-managed water supply includes water-efficient technologies and approaches that can save or reduce water consumption. While not yet mandated for country areas, WSUD principles should be incorporated into all new development. It is envisaged that by 2013 South Australia will have developed and implemented the best regulatory approach to mandate WSUD, as well as targets.

Energy supply is limited in many parts of the region. Building design and innovative local solutions (for example, solar, wind and co-generation) can make the best use of energy supplies. There are opportunities to further develop wind farms in several locations across the central and southern parts of the region, which would facilitate the achievement of SASP targets related to renewable energy development.

The increase of industrial, residential and tourism-related development will place further pressure on both energy and water supplies. It is important that Development Plan policy supports the natural resources management regime under the *Natural Resources Management Act 2004.* Raising awareness among residents and visitors about the need to manage demand for water and energy is also essential to achieving South Australia's water and energy efficiency targets (see box 4).

Policies

4.1 Promote carbon sequestration and greenhouse gas mitigation through land-use management practices (for example, reintroducing vegetation and restoring habitat), taking into account climate and soil suitability and species characteristics.

4.2 Provide buffer areas of sufficient width to separate development from the foreshore and coastal features and to accommodate long-term physical coastal processes.

4.3 Provide the opportunity for town- and settlement-level energy efficiency through the promotion of alternative energy supplies (for example, embedded generation).

4.4 Provide for the development of alternative and innovative energy generation (for example, wind, solar, marine, biomass and geothermal technologies) and water supply facilities, as well as guidance on environmental assessment requirements.

4.5 Support the incorporation of sustainable energy and water supply, conservation and efficiencies in the design of residential, commercial and industrial developments and subdivisions (for example, stormwater re-use, wind and solar technologies, green buffers, WSUD, building orientation to maximise solar access and shaded areas).

4.6 Set building standards and design guidelines to create more thermally and energy efficient buildings.

4.7 Plan for effective wastewater disposal through mains sewers and community wastewater management systems (CWMS), and maximise re-use opportunities.

Box 4—Improving water and energy efficiency

Many approaches to the design of buildings and subdivisions maximise the re-use of stormwater and wastewater in residential and industrial developments. For example, stormwater at Mawson Lakes in Adelaide is filtered and plumbed back into houses for use in toilets. Some industries also re-use wastewater and stormwater for cooling and washing down machinery.

Energy demand can be reduced through innovative housing design and methods such as co-generation, which produces electricity and heat in a single process. More information is available on the Energy SA website, at <www.sustainable.energy.sa.gov.au>. The Energy Smart Toolbox, at <www.energysmart.com.au/sedatoolbox>, provides tools for industry to help reduce energy costs.

ECONOMIC DEVELOPMENT

Overview

The South Australian Government is planning for an additional 13,787 residents in the Mid North region by 2036. Economic development will play a key role in facilitating this growth through providing employment opportunities. The creation of employment opportunities depends on a good supply of development land that is not constrained by a lack of infrastructure, as well as supporting opportunities in the primary production sector. The region has existing major rail and road freight transport networks that provide access to markets in Adelaide and the eastern states.

The region's economy is based on primary production: mainly horticulture including viticulture, cropping and associated processing, and livestock. Increasing the amount of value-adding has the potential to also lift employment. Growth is likely to occur in existing primary production sectors, while opportunities in emerging industries should be supported. Strong light industry, transport and services sectors support primary production and have the potential to also support other industries, such as mining.

The region is well positioned to expand export production, employment opportunities, and tourism numbers, as well as lead the development of the sustainable energy industry in South Australia.
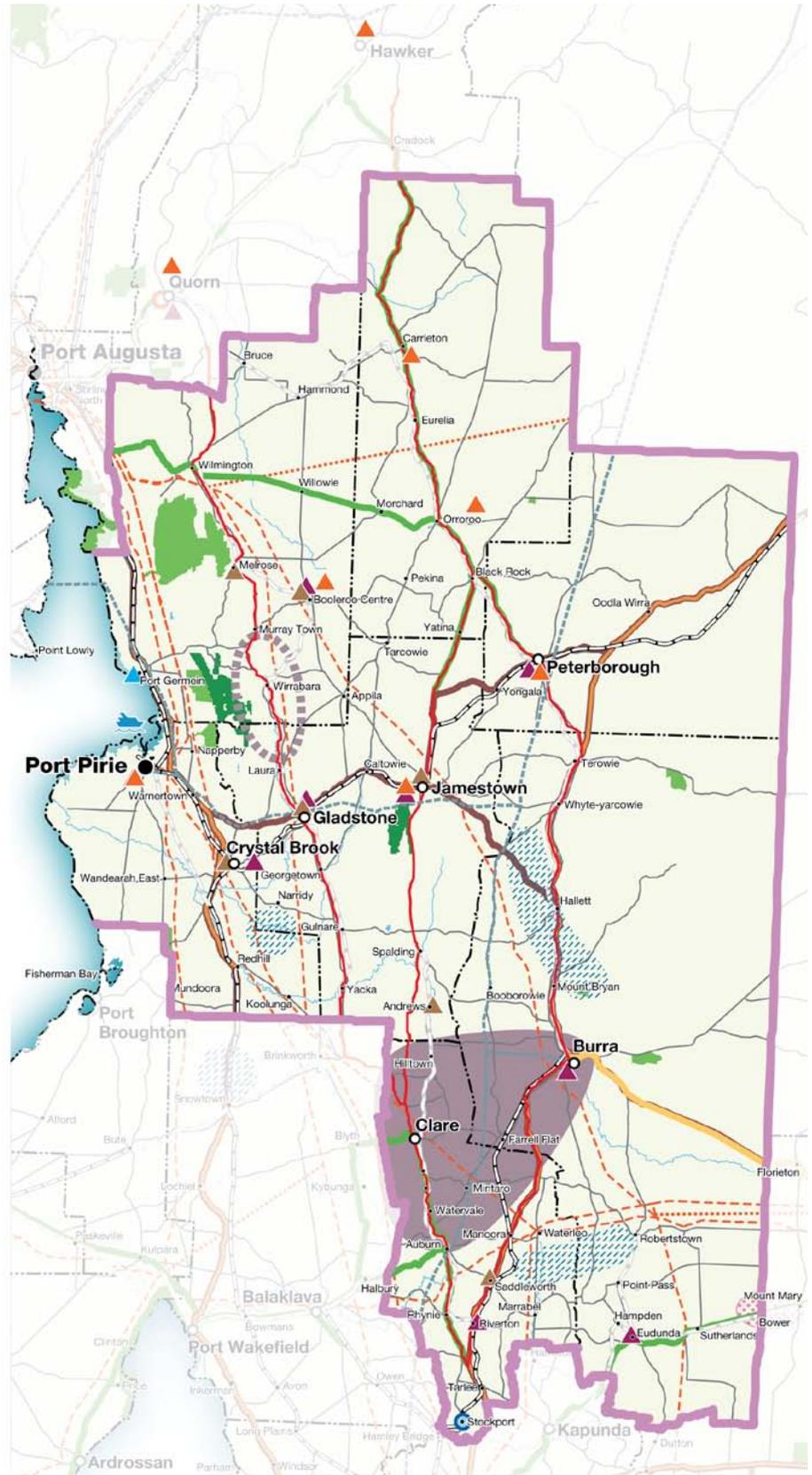
Primary production, health and social services, tourism-related industries (for example, retail, accommodation and food) and manufacturing are the region's largest employers. In recent years employment has grown in mining, construction, tourism and the services sector (for example, public administration, education, health care and social assistance). Jobs growth in these sectors is likely to continue as the population ages, and tourism and mining activities expand.

Economic development is underpinned by major freight transport networks and the close proximity in the south to the expanding industrial areas of northern metropolitan Adelaide, the Barossa Valley wine region, and livestock processing at Murray Bridge and Port Wakefield. In the north and east, new opportunities are arising due to the proximity to the expanding mine activities in the Flinders Ranges and the state's north-east, and the potential expansion of the services and industry sectors in Port Augusta and Port Pirie. The region is also the location of the world's largest integrated lead-zinc-silver smelter, at Port Pirie.

State government agencies are examining the impact of this potential economic growth and of climate change on the land and water resources to ensure that land use is sustainable. Research into the impacts of climate change is being conducted, with advice being made available to enable producers to modify their operations.

South Australia has the potential to be a 'green' energy hub and to help other states achieve the Federal Government's target of 20 per cent renewable energy by 2020. The region has significant geothermal, wind and wave energy potential, and is well placed in relation to power infrastructure and links to the eastern states. ElectraNet undertakes regular reviews of where the network requires upgrading and modification to accept power generated by renewable energy. This needs to be supported by further development of the high-voltage electricity transmission network, including planning for and investment in new powerlines and substations.

Service sectors associated with demographic change, particularly health and aged care, are also likely to grow. Education opportunities, especially at the tertiary level, are also vital to support and retain young people in the region and ensure a skilled workforce.

Legend

- ● Regional city
- ○ Major town
- · Minor town
- Road network
- Strategic road
- Primary freight road
- Secondary freight road
- National rail network
- Disused rail
- LGA boundary
- Planning region
- Water eco-systems and resources
- Forestry
- Intensive livestock production and processing
- Key viticulture area
- Potential horticulture/viticulture area
- ▲ Industrial land/hub (existing or future)
- ▲ Primary product processing and/or bulk handling facility
- Scenic tourist route
- Power line (existing)
- Power line corridor (potential)
- Gas pipeline
- Wind energy (existing or potential)
- ▲ Strategic airport or airstrip
- ⚓ Port (existing or potential)
- ▲ Coastal tourist town

N

0 10 20 30 40 50km

Hawker

Quorn

Port Augusta

Bruce

Hammond

Carrieton

Eurelia

Wilmington

Willowie

Morchard

Orroroo

Melrose

Pekina

Black Rock

Oodla Wirra

Booleroo Centre

Yatina

Murray Town

Tarcowie

Wirrabara

Appila

Peterborough

Yongala

Point Lowly

Port Germein

Napperby

Caltowie

Terowie

Port Pirie

Laura

Jamestown

Warnertown

Whyte-yarcowie

Gladstone

Crystal Brook

Georgetown

Narridy

Hallett

Wandearah East

Gulnare

Fisherman Bay

Redhill

Spalding

Mount Bryan

Port Broughton

Mundoora

Koolunga

Yacka

Andrews

Booborowie

Brinkworth

Burra

Hilltown

Snowtown

Clare

Farrell Flat

Alford

Bute

Blyth

Mintaro

Florieton

Lochiel

Watervale

Kybunga

Manoora

Waterloo

Robertstown

Kulpara

Auburn

Paskeville

Halbury

Saddleworth

Point Pass

Mount Mary

Balaklava

Bowmans

Marrabel

Hampden

Bower

Clinton

Rhynie

Riverton

Eudunda

Sutherlands

Port Wakefield

Owen

Tarlee

Avoe

Inkerman

Stockport

Kapunda

Long Plains

Hamley Bridge

Dutton

Ardrossan

Parham

Windsor

33

Tourism is another key economic driver in the region, and the natural and heritage assets offer potential for further growth. The region's tourism is centred on unspoilt natural landscapes and ecotourism, as well as coastal recreation, restaurants (particularly seafood) and adventure four-wheel driving.

In addition to supportive council Development Plan policies, investing in infrastructure, expanding local training opportunities, and attracting skilled labour will be critical to realising regional economic development opportunities. Detailed Development Plan policies will be informed by industry plans and consultation; the Regional Development Australia Yorke and Mid North; natural resources management (NRM) boards; and state government agencies, including the Department for Transport, Energy and Infrastructure (DTEI), Department of Trade and Economic Development (DTED), Primary Industries and Resources SA (PIRSA), and the South Australian Tourism Commission (SATC).

The Port Pirie Structure Plan gives direction on the development of the city.

Priorities for councils

- Reflect in local strategic planning and Development Plans—where relevant—the directions of The *Flinders Ranges and Outback SA Region Integrated Strategic Tourism Plan 2008–2014* and the *Clare Valley and Barossa Tourism Regions Integrated Strategic Tourism Plan* (2005), which address positioning and branding, tourism infrastructure priorities, partnerships and development opportunities

- Further investigate opportunities to use the extensive former railway corridors for walking and cycling trails and reflect these in Development Plans as required

- Strategically plan for the expansion of industrial land in towns along the corridor between Port Pirie and Peterborough

- Reinforce through Development Plans that development must not compromise ongoing operations at the astronomical observatory at Stockport.

- Identify and protect areas of primary production significance

- Strengthen the economic potential of primary production land and foster sustainable practices.

Principle 5

Protect and build on the region's strategic infrastructure

One of the Mid North region's competitive strengths is its proximity to major freight transport networks and storage facilities, crucial elements in the value chain (see Box 5). These facilities enable the region to build on the opportunities presented by close proximity to the expanding mining areas of the state's north and east, the growing industrial areas of northern metropolitan Adelaide (for example, Edinburgh Parks), the agricultural processing facilities in the Wakefield Plains and Murray and Mallee, and the neighbouring Barossa wine region. They also link the region to export facilities and interstate markets.

Protecting these assets and providing for the expansion of export-related and value-added industry near them will not only give existing industries support and certainty, but also draw other industry into the region.

Box 5—Supporting the value chain

The term 'value chain' refers to the various value-adding activities that occur along the supply chain of every industry sector—from primary production through processing and transport to marketing and sales. Competitive advantage is gained by improving the movement of goods and adding value at every link in the chain.

Combining spatial analysis with value-chain analysis is a powerful tool for strategic land-use planning. It involves identifying key infrastructure and synergies or potential conflicts between activities, and assists in deciding the best use of land and locations for development to maximise a region's economic competitiveness.

The region's key infrastructure and facilities are:

- the seaport and associated bulk handling facilities at Port Pirie

- the national rail and road corridors—the Sydney to Perth and Adelaide to Darwin/Perth/Sydney rail corridors; and the Princes Highway (from Adelaide to Port Augusta) and Stuart Highway (from Port Augusta to Darwin)

- the primary freight road corridors—Port Pirie to Sturt Highway (Riverland) via Jamestown/Burra, Port Pirie to the Barrier Highway (Broken Hill) via Peterborough, and the Sturt Highway to Barrier Highway via Burra

- the secondary freight road corridors—Port Augusta to Hawker (Northern Flinders Ranges) via Quorn, Orroroo to Port Augusta, Jamestown and Peterborough to Hawker, and Adelaide to Clare via the Port Wakefield Road and Sturt Highway

- inland bulk handling and grain processing centres, including key sites at Crystal Brook, Gladstone, and Saddleworth

- the wineries of the Clare Valley

- wind farms and associated electricity transmission infrastructure.

Policies

5.1 Encourage industry clusters (mining, primary production and aquaculture value-adding processing and storage activities) in strategic locations (such as freight transport nodes) to maximise transport efficiencies and support industry development.

5.2 Establish appropriate buffers to protect existing strategic infrastructure and sites, and corridors identified as potential infrastructure locations from encroachment that may compromise their operation or potential.

5.3 Support mining activities by providing for processing and storage activities on mining tenements.

5.4 Reinforce and protect the role of airports, aerodromes and airstrips to support economic and social development and the Royal Flying Doctor Service, and ensure surrounding land uses are compatible with their operation.

5.5 Identify land suitable for waste management and resource recovery facilities to optimise opportunities for re-use and recycling of waste while maximising economic efficiencies, and protect this land from encroachment by sensitive land uses such as housing.

5.6 Designate and protect road and rail corridors, including strategic freight corridors as identified on maps C1 and D2, through planning policy in Development Plans.

5.7 Identify land suitable to accommodate renewable energy development, such as wind farms.

Principle 6

Retain and strengthen the economic potential of primary production land

Retaining the region's productive primary production land is a priority. Its crops, wine grapes, cattle and sheep underpin the regional and state economies. Forestry and horticulture are important industries in the Southern Flinders Ranges area, and poultry and pork production in the south.

The Clare Valley's fertile viticulture lands must be protected for the viability of its internationally renowned quality wines.

Grain production is focused in the productive central and southern parts of the region, south of Goyder's Line. The grains industry continues to diversify in response to climate fluctuations and to capture emerging opportunities in export and domestic markets. The shift to lot feeding of livestock has increased local demand for grain, and industries such as hay processing, livestock feed mills and biofuel plants are moving to, and expanding across, the region's south and the neighbouring Wakefield Plains area.

Livestock production accounts for one-third of the region's primary production output. This export industry is also dependent on the continued availability of broadacre agricultural land. Cattle and sheep are the main products, with prime sheep studs located between Whyte Yarcowie and Burra. The region plays an important role in meeting strong ongoing demand in lamb export and domestic markets. It also supports growth in the beef sector, which is projected to become a $1.2 billion industry by 2015. Growth in lot feeding to increase production on a reduced land base is a key strategy to achieve this.

The chicken meat industry is aiming to triple gross food revenue from $324 million to $965 million by 2015 in South Australia, creating an additional 3600 direct and supporting jobs. Poultry sheds near Burra, Eudunda, Riverton and Rhynie are contributing to this target, capitalising on the proximity to feedmills and recently expanded processing facilities in northern Greater Adelaide.

The pork industry is also investing heavily to strengthen South Australia's share of growing domestic and export markets. Land has been specifically zoned for piggeries at Bower, which has easy access to reliable grain producers and is strategically located between processing facilities at Murray Bridge and Port Wakefield.

The conversion of productive land to residential and other sensitive uses through inappropriate town expansion or subdivision into rural living (large residential) allotments is strongly discouraged in the central and southern parts of the region, particularly in the Clare Valley and near intensive livestock industries, as this has the potential to create conflicts at interfaces and compromise farm operations.

Agriculture and horticulture

Policies

6.1 Prevent loss of productive agricultural land and potential conflict with incompatible land uses by:

- ▸ focusing housing (including rural living) and industrial development in towns and industrial estates, unless directly related to primary industry

- ▸ preventing fragmentation of agricultural land

- ▸ managing interfaces with residential areas and other sensitive activities through the use of buffers

- ▸ ensuring tourist-based developments are sited away from agricultural land where practical

- ▸ designating areas of primary production significance (in particular, high value agricultural land) in Development Plans and introducing a standard set of planning controls to protect their use.

6.2 Support new sustainable horticultural development primarily between Clare and Burra and Laura and Murray Town (as identified on Map D2), where good quality water is available, and ensure compatible land uses in this area.

6.3 Remove unnecessary regulatory barriers to the adjustment of primary production activities. Development Plans should be flexible enough to allow property holders to change agricultural practices or commodity type, particularly where the change would enable increased productivity or better environmental outcomes.

6.4 Encourage the development of small-scale, value-adding activity that complements primary production in the local area and large-scale, value-adding activity outside areas of primary production significance (see Box 5).

6.5 Maximise opportunities for value-adding of plant waste, for example, biofuel plant collocation with livestock enterprises.

6.6 Rehabilitate unproductive and degraded primary production land through revegetating with native species, increasing the vitality and integrity of remnant stands of native vegetation, and introducing perennial pastures.

6.7 Collocate intensive primary industries and compatible processing activities to reduce land-use conflict and achieve efficiencies in production, processing, distribution, energy use and waste recycling, taking into account environmental, infrastructure and rural amenity issues.

Livestock production and processing

6.8 Focus the expansion of intensive animal keeping where the use of existing and planned infrastructure (for example, water, energy and waste facilities) can be maximised.

6.9 Maximise opportunities for processing animal waste and establishing other 'downstream' activities.

6.10 Plan for intensive livestock production, including dairy, to meet biosecurity, environmental and public health requirements in accordance with PIRSA, Environment Protection Authority (EPA) and NRM guidelines, including maintaining buffers adjacent to residential areas.

Mineral resources

6.11 Establish and maintain buffers around mines and mineral resources to prevent encroachment by housing and other development that may affect the viability of the mine.

Renewable energy

6.12 Support the development of wind farms in appropriate locations, including the collocation of wind farms and existing agricultural land.

Principle 7

Reinforce the region as a preferred tourism destination

The Mid North region is a desirable destination for the touring market. It is home to some of the state's most valued natural and heritage assets, including picturesque landscapes and rustic towns that have a distinctively South Australian character.

These assets, as well as the region's clean and green image, reputation for fine wine and strong connection to food, attract tourists, particularly to the Clare Valley and Southern Flinders Ranges. As well, the northern and central areas are becoming known for rodeo and music events.

Planning controls are required to avoid inappropriate development that would compromise quality landscapes or the character and heritage of towns.

A fundamental issue affecting tourism is the availability of good quality accommodation, particularly:

- the development of quality, medium-scale accommodation
- the maintenance and upgrading of existing accommodation, including caravan parks and camping facilities, to contemporary standards and ensuring they provide for motor homes
- the provision of environmentally sound and affordable accommodation that is linked to the outback and character of towns
- the maintenance and enhancement of natural resources through appropriate tourism activities and the promotion of sustainable activities.

The *Responsible Nature-based Tourism Strategy 2004–2009* provides detailed guidance for the development of nature-based tourism. The *South Australian Tourism Plan 2009–2014* gives broader direction for the marketing and management of the industry.

7.1 Protect, enhance and promote the assets that attract tourists and are of value to the community, including:

▸ open space, hiking and cycling trails and scenic tourist drives

▸ natural landscapes, protected areas and parks and reserves

▸ heritage, culture and the built character of towns, including town approaches

▸ caravan parks and campsites, including those that provide effluent and rubbish facilities for large recreational vehicles.

7.2 Reinforce the desired tourism roles of towns and locations in the Mid North, including:

▸ Jamestown and Orroroo as service towns for tourists along the RM Williams Way

▸ Melrose, Laura, Wirrabara and Wilmington as centres for nature-based tourism, food and wine, and active adventure (hiking, on-road cycling and off-road mountain biking) on the Southern Flinders Ranges trails

▸ Port Germein as a scenic coastal town with the longest jetty in South Australia

▸ Clare, Auburn, Watervale, Mintaro, Seven Hills, Penwortham and Farrell Flat and their surrounding landscapes as the centre of the Clare Valley tourist experience, focused on good food and fine wine, culture and heritage

▸ Port Pirie, Peterborough, Burra, Quorn (in the Far North region) and other towns on the Heritage Copper Trail as showcases of our built, railway, cultural and mining heritage.

7.3 Facilitate tourist accommodation that is designed for sustainability and linked to the natural landscape and character of towns, including the upgrading of existing caravan parks and camping facilities to contemporary standards.

7.4 Facilitate tourism-related developments such as restaurants, specialist retail and accommodation that complement the character of towns and the natural landscape, and add value to existing economic activities.

Principle 8

Provide and protect serviced and well-sited industrial land to meet projected demand

Industries supporting primary production and processing and minerals processing play a critical role in the regional economy, providing local employment and strengthening the comparative advantage of the region. Industry activities are best located on identified freight routes, particularly in the central and southern parts of the region.

Industries range from major agricultural equipment manufacturing and maintenance to small-scale engineering firms and home-based trades. The identification of suitable sites for these activities and appropriate zoning to meet demand will give potential investors greater certainty and inform infrastructure planning. This is particularly important as the region prepares to take advantage of its proximity to emerging mining ventures in the state's north and east, and to build on its existing industrial base.

In addition to the strategic transport hubs described under Principle 5, major hubs identified for industrial activities are the towns along the corridors between Port Pirie and Peterborough, and Booleroo Centre and Quorn (in the Far North region).

Industrial activities supporting the wine industry and agribusiness in the Clare and Barossa valleys should be located in the Blyth industrial zone, Burra, Riverton or Eudunda to protect viticulture land and landscape amenity.

Many small local industries and small-scale niche primary product processors will continue to require suitable sites in towns throughout the region.

A priority is to build on the industrial focus of Port Pirie. Appropriate sites will be identified through a detailed structure planning process facilitated by the state government in partnership with the Port Pirie Regional Council and Regional Development Australia Yorke and Mid North.

Policies

8.1 Provide a supply of well-sited and serviced industrial land in Port Pirie (in accordance with the Port Pirie Structure Plan), Crystal Brook, Gladstone, Jamestown, Peterborough, Booleroo Centre, Burra, Riverton and Eudunda, and encourage clustering of related industries.

8.2 Foster the central western freight corridor centres of Port Pirie, Crystal Brook, Gladstone, Jamestown and Peterborough as the region's industrial focus.

8.3 Ensure an adequate supply of appropriately located industrial land to provide opportunities for small-scale and local industries in towns.

8.4 Site and locate industrial land to ensure:

▸ management of interfaces with residential areas and other sensitive uses, and protection from encroachment

▸ provision for future expansion

▸ accordance with Environment Protection Agency policies, codes of practice and guidelines

▸ proximity to an efficient road freight network that minimises the impacts of freight movements on neighbouring areas

▸ access to required energy and water.

8.5 Provide for the development of well-sited and appropriately scaled value-adding activities (for example, processing and storage) that complement local agriculture, including horticulture, livestock and dairying; fishing and aquaculture; and mining. Value-adding clusters and medium- to large-scale value-adding activities should be located in industrial or commercial estates where possible.

8.6 Retain and support industrial and commercial operations (for example, by providing appropriate buffers to minimise conflicts) and manage the impacts of external influences, such as noise, vibration and native vegetation disturbance.

8.7 Support the growth of 'green' technologies by setting aside employment lands and ensuring flexibility in zoning to allow new industries to establish.

8.8 Provide for the establishment in appropriate locations of facilities to support new markets and products for recycled materials and animal waste.

Principle 9

Ensure commercial development is well sited and designed to support the role and function of towns

Nearly 40 per cent of the region's workforce is employed in business and administrative services and the retail and wholesale sectors. Growth in tourism and an increase in population will drive further expansion of these sectors.

In development planning terms, these sectors are referred to as 'commercial activities' and include shops and showrooms, offices, banks, personal services and government services.

Focusing major commercial activities in selected towns enables people to take advantage of several services in one central location and supports the provision of public transport services.

Port Pirie and Clare, along with Port Augusta in the Far North region and Kapunda in the Barossa, Light and Lower North region, will continue to be the major commercial service centres for the Mid North region. Peterborough, Jamestown, Crystal Brook, Booleroo Centre, Burra, Eudunda and Quorn will be the preferred locations for secondary commercial activities. Local and small-scale commercial activities will continue to be located in other towns to serve their communities and visitors.

Policies

9.1 Reinforce the primary commercial and service roles of Port Pirie as the focus of major retail, commercial, administrative, education, health, justice and recreational developments in the region (in accordance with the Port Pirie Structure Plan).

9.2 Reinforce the major commercial and service roles of Clare as the focus of secondary retail, commercial, administrative, education, health and recreational developments in the region.

9.3 Reinforce the supporting commercial and service roles of Burra, Crystal Brook, Jamestown, Peterborough and Booleroo Centre.

9.4 Strengthen the local and visitor service and retail roles of Eudunda, Melrose, Orroroo, Gladstone and Wilmington.

9.5 Locate commercial uses in town centres or existing commercial zones, which should be expanded where necessary to support activity commensurate with the town role.

9.6 Commercial areas proposed outside town centres must demonstrate that they:

▶ will avoid adverse incremental or cumulative impacts on existing town centres

▶ are clustered rather than linear development and do not adversely affect the efficiency and safety of arterial roads

▶ are convenient and equitable to access, including by walking

▶ are supportive of the desired future character of the town

▶ are not using land of strategic importance to industry.

9.7 Proposals for major commercial areas in towns other than those identified in 9.1–9.4 must demonstrate that they support and complement the commercial functions of these towns, including incrementally or cumulatively in the long term.

9.8 Support an efficient road network by preventing linear or ribbon development along major roads.

Overview

The state government is planning for an additional 13,787 people in the Mid North region by 2036, based on the SASP population target described in Chapter A. The role of the *Mid North Region Plan* is to ensure that future land use can support the target population.

Table D1 indicates the number of dwellings that would be required, depending on the occupancy rate (that is, the average number of people living in each dwelling), and the land area necessary to accommodate them, depending on the overall density (that is, the average number of dwellings per hectare).

Table D1 – Land area required based on dwellings per hectare (dph) and occupancy rate (people per dwelling)

Required new homes (for 13,787 people)	Land area required (hectares)		
	at 8.5 dph*	at 10 dph*	at 13 dph*
5745 @ 2.4 people per home	676	574	442
6565 @ 2.1 people per home	772	657	505
7659 @ 1.8 people per home	901	766	589

* Dwellings per hectare.

With an ageing population, the region's occupancy rates are likely to decrease, while dwelling density will increase, as ageing people move into smaller homes. This could increase the number of new homes required to accommodate the target population.

There is also likely to be additional demand for new homes in towns, as retirees living in rural areas move closer to health and community services and aged care facilities.

Further investigation to provide more accurate detail will be necessary to inform the Plan in the future review process.

The region has a significant amount of undeveloped zoned land suitable for residential development, which includes: about 489 hectares (ha) zoned residential and 1066 ha zoned rural living. A further 23 ha of deferred urban land could in part be used for residential development, as shown in Table D2.

Legend

- ● Regional city
- ○ Major town
- · Minor town
- —— Road network
- —·—·— LGA boundary
- —— Planning region
- ● Regional city/centre
- ● Major commercial/service centre
- ● Supporting commercial/service centre
- ● Local and visitor commercial/service centre
- ▬ Water eco-systems and resources
- ◎ Tourist gateway to region
- 🚐 Retain caravan parks
- ⬠ Provide affordable and rental housing for temporary residents
- ⊕ Future aged care accomodation and services
- ▲ Coastal tourist town
- ◉ Stockport observatory

Hawker
Cradock
Quorn
Carrieton
Bruce
Port Augusta
Hammond
Eurelia
Stirling North
Wilmington
Willowie
Morchard
Orroroo
Melrose
Pekina
Black Rock
Oodla Wirra
Booleroo Centre
Murray Town
Yatina
Point Lowly
Tarcowie
Peterborough
Wirrabara
Appila
Yongala
Port Germein
Terowie
Napperby
Caltowie
Port Pirie
Laura
Jamestown
Whyte-yarcowie
Warnertown
Gladstone
Crystal Brook
Georgetown
Narridy
Hallett
Wandearah East
Gulnare
Redhill
Spalding
Fisherman Bay
Mundoora
Yacka
Mount Bryan
Koolunga
Andrews
Booborowie
Port Broughton
Brinkworth
Hilltown
Burra
Snowtown
Florieton
Alford
Bute
Blyth
Clare
Farrell Flat
Mintaro
Kybunga
Lochiel
Watervale
Robertstown
Kulpara
Auburn
Manoora
Waterloo
Balaklava
Halbury
Saddleworth
Point Pass
Mount Mary
Rhynie
Marrabel
Bowmans
Riverton
Hampden
Sutherlands
Bower
Clinton
Price
Port Wakefield
Owen
Tarlee
Eudunda
N
Stockport
Kapunda
Dutton
Hamley Bridge
Long Plains
Inkerman
Ardrossan
Parham
Windsor
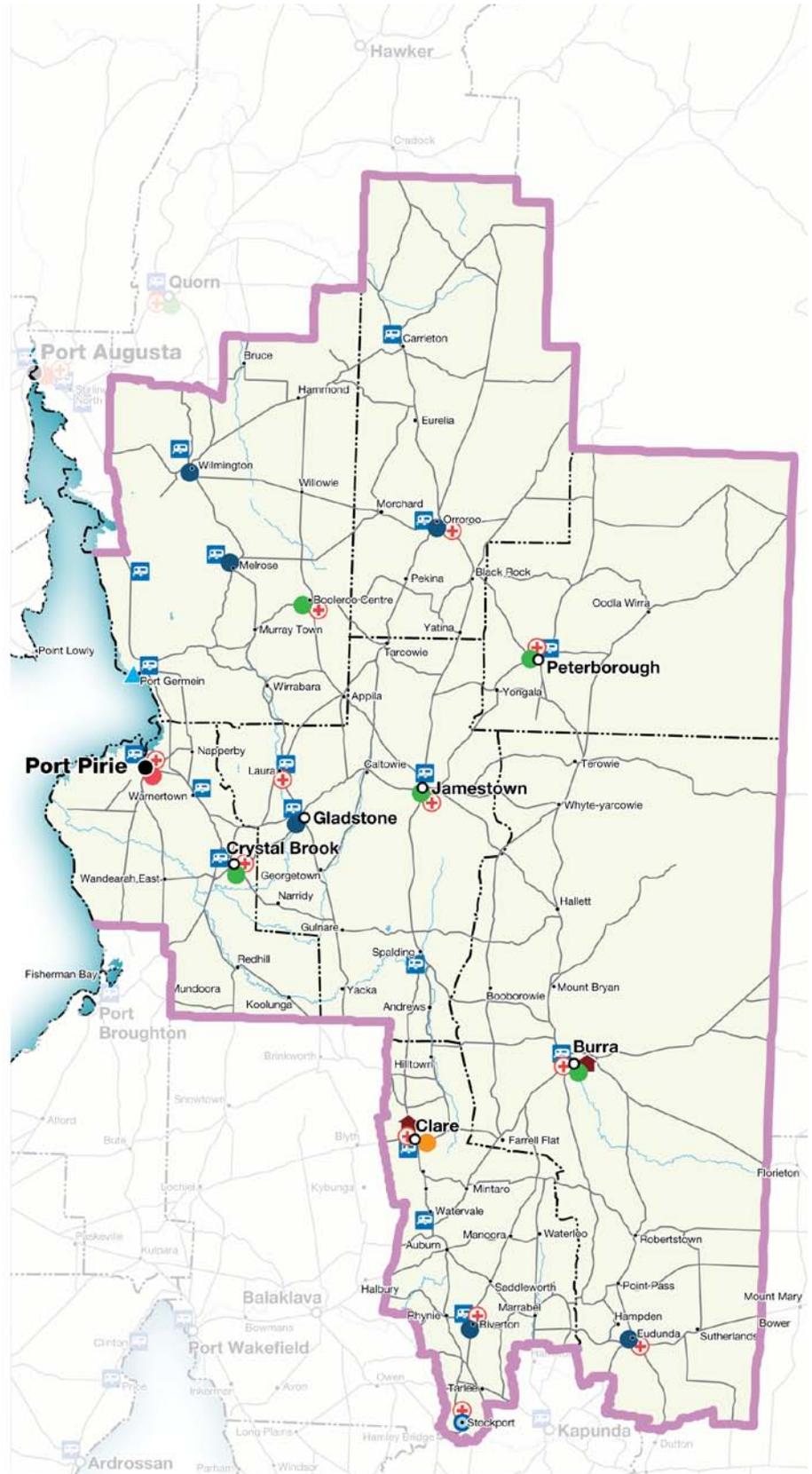Avon

0 10 20 30 40 50km

43

Table D2 shows that the Mid North region has a significant supply of land identified for future residential and urban use in all the major towns. This capacity should be enough to support the growth necessary to achieve the SASP population target.

While the Plan seeks to prepare for an ageing population, policies are also needed to attract and retain young and working-age people.

More housing is needed in the major regional centres to support industrial development. In more remote locations, housing is integral to attracting and retaining staff, especially professionals.

Social infrastructure needs include education and childcare facilities to service young families, as well as access to good health services. Broadband access outside major centres is essential to delivering distance learning and for business development and growth.

To guide land use in response to growth pressures, the Plan's principles and policies aim to ensure that:

- there is a supply of zoned land suitable for residential development

- growth occurs according to the roles and functions of towns

- growth is directed towards towns with health, community and aged care services and facilities

- there is a diversity of housing (including affordable housing)

- town growth is managed to preserve areas of primary production significance and environmentally sensitive areas.

Priorities for councils

- Undertake structure planning of the area between Clare, Burra, Stockport and Eudunda to manage growth while retaining town and landscape amenity

- Undertake an audit of the housing needs of older people and the current supply to identify gaps in this market segment

- Identify the desired character of towns (and parts of towns) to guide the design of buildings and public places

- Strategically plan approaches to strengthening agribusiness centres in the southern and central parts of the Mid North, such as Jamestown, Crystal Brook and Eudunda

- Explore mechanisms to support retiree farm families to age in place or relocate to towns.

Table D2 – Residential land supply in key towns

Town	Residential zones		Deferred urban zones		Rural living zones	
	Area (ha)	Dwell est.[a]	Area (ha)	Dwell est.[a]	Area (ha)	Dwell est.[a]
Port Pirie[b]	110	1100	–	–	124	248
Clare	176	1760	23	184	93	186
Burra	72	720	–	–	51	102
Crystal Brook	31	310	–	–	242	484
Jamestown	49	490	–	–	157	314
Peterborough	19	190	–	–	399	798
Booleroo Centre	32	320	–	–	–	–
Total	489	4890	23	195	1066	2132

[a] Dwelling estimate based on: residential zones = 10 dwellings per hectare; deferred urban zones = 10 dwellings per hectare less 15 per cent (to factor in land used for non-residential purposes); rural living zones = the average rural living allotment size for each council.

[b] The Port Pirie Structure Plan provides specific detail regarding the city's growth. The land area and dwelling estimate is derived from the figures in the Structure Plan (based on areas identified as 'land for residential development in the short to medium term' plus 'land for residential development in the longer term').

Principle 10

Strategically plan and manage town growth

Population growth in the region has chiefly occurred south of Clare and Burra. Housing development in this area is likely to continue, with planned economic expansion in neighbouring areas (for example, Wakefield Plains, the Barossa Valley and Roseworthy). Population growth in these areas needs to be managed carefully—while some modest growth may be appropriate, most will be in the adjoining Barossa, Light and Lower North and Northern Adelaide regions, as described in *The 30-Year Plan for Greater Adelaide*, or north in Clare or Burra.

Port Pirie is preparing to maximise opportunities from emerging mining activities in the state's north. As the Mid North's regional city, it should be a focus for population growth. The Port Pirie Structure Plan contains additional detail to inform directions for future town growth.

Clare is the major commercial and service centre in the region's south and it should accommodate most of the population growth in this area.

As supporting commercial and service centres, Burra, Crystal Brook, Jamestown and Booleroo Centre should also grow.

Other towns will need to respond to tourism and industry developments as these sectors expand, particularly in the Southern Flinders Ranges and the industry belt between Crystal Brook and Peterborough.

Attention also needs to be given to protecting scenic landscapes and productive agricultural land, and building on the strong structural form of the towns.

A planned approach to development seeks to balance competing interests. The *Mid North Region Plan* supports the focusing of development in existing settlements and towns to build on investment in business, service and infrastructure, while protecting the environment, including landscapes of value to communities and tourists, and primary production land of value to industry.

Policies

10.1 Focus growth and development in existing towns and settlements based on their roles and functions, as described in Principle 10 and shown on Map D3.

10.2 Expansion of towns should:

▸ ensure new areas are continuous with and form compact extensions of existing built-up areas

▸ prevent linear development along the coast and arterial roads

▸ not encroach on areas of importance to economic development

▸ not encroach on environmentally sensitive areas

▸ support the cost-effective provision of infrastructure and services (for example, health and education), avoiding unnecessary expansion or duplication of existing regional infrastructure and services

▸ promote strong links between all parts of the town, particularly between residential areas, town centres, sporting and recreational facilities, and open space

▶ promote development on vacant land, surplus government land and infill sites, and renewal of existing developed areas (where it does not compromise town character or heritage), before developing broadacre or greenfield sites

▶ locate land for rural living in towns in such a way that opportunities for future town expansion are retained

▶ retain a functional and visual separation between towns.

10.3 Ensure that development in areas remote from infrastructure are self-sufficient in energy, water supplies and wastewater management.

10.4 Build on the cultural and heritage tourist focus of Saddleworth, Mintaro, Burra, Laura, Peterborough, Melrose and Orroroo by strengthening their heritage and town character.

10.5 Manage waste in accordance with the Zero Waste SA hierarchy of waste management practices (from the most preferred to least preferred: avoid, reduce, re-use, recycle, recover, treat, dispose) by ensuring that settlements and developments have appropriate space, facilities, access and construction methods.

10.6 Restrict ad hoc construction of isolated rural dwellings and subdivision of rural lands through the planned expansion of towns, density increases within town boundaries, appropriate intensification of existing rural living zones, and designation of new rural living zones outside areas of primary production significance.

10.7 Prevent the expansion and intensification of existing, or creation of new, rural living zones in areas of primary production significance.

10.8 Manage the interface between primary production activities and urban areas and towns through appropriate separation buffers such as screening vegetation and alignment of allotment boundaries.

Principle 11

Design towns to provide safe, healthy, accessible and appealing environments

The way in which towns across the Mid North region are designed influences not only how they look, but also how well they function. The ease and safety of getting around town, the accessibility of services and facilities, and a sense of community and civic pride are all determined by the way a town is designed. The Port Pirie Structure Plan provides specific directions for achieving these characteristics.

Towns and parts of towns can develop a strong identity and sense of place which can build on local history, unique natural features (for example, ranges and coastline) and community aspirations. This identity should be determined, in part, by those who live there. Features such as building height, roof line, scale, and building setback in new developments can contribute to the character of the town.

Policies

11.1 Reinforce those elements (natural and built) that contribute to the unique character and identity of towns, including landscapes, building design, streetscape design and built heritage.

11.2 Establish and retain distinct and attractive entrances to towns.

11.3 Retain town centres as the focus of retail, commercial, recreation, entertainment, community and civic activities in accordance with the role and function of the town.

11.4 Locate health, community and education facilities and services where the community will have equitable access.

11.5 Provide strong links between coastal town centres and the coast, and between other town centres and key sites of tourism interest.

11.6 Manage interfaces between residential and industrial areas and town centres to avoid potential conflicts.

11.7 Encourage active lifestyles by providing:

▸ a range of open spaces and sport and recreation facilities in towns and throughout the region

▸ walking and cycling facilities in towns, giving consideration to the different needs of people in the community.

11.8 Develop safer towns by incorporating the principles set out in *Designing Out Crime: Design Solutions for Safer Neighbourhoods*, using Crime Prevention Through Design (CPED) principles and consulting with South Australia Police.

11.9 Design all developments in sympathy with cultural and landscape features and minimise their visual and physical intrusiveness.

11.10 Apply WSUD principles in all new developments and public open spaces, and encourage their application in existing developments.

Principle 12

Provide land for a supply of diverse, affordable and sustainable housing to meet the needs of current and future residents and visitors

Considered planning is required to ensure a supply of housing to meet the needs of people who live and work in the region, taking into account demographic changes such as higher numbers of older people. Population growth will be driven primarily by local and regional employment opportunities.

In the Southern Flinders Ranges and Clare areas, housing for seasonal and lower income workers needs to be considered to support the viticultural and horticultural industries. Other towns may experience pressure for rental accommodation from temporary workers such as those involved in mining exploration and wind farm construction.

People have different housing needs and preferences that depend on factors such as their age, health, income and cultural background. Across the region, towns need to provide a range of housing types that are compatible with town character, landscapes, the environment and industry needs, and close to infrastructure and services.

The Port Pirie Structure Plan provides more detailed direction on the city's growth.

Policies

12.1 Ensure a 15-year zoned supply of land for residential development in towns/centres identified for growth (refer Principle 10 and Map D3).

12.2 Ensure that towns that are appropriately serviced have a range of housing types and densities to enable people to stay in their community as their housing needs change and to cater for the region's changing demographics.

12.3 Provide opportunities for higher density housing near the centre of towns identified for growth, in particular Port Pirie (in accordance with the Port Pirie Structure Plan), Clare, Burra, Crystal Brook, Jamestown, Peterborough and Booleroo Centre.

12.4 Provide a range of accommodation for older people and people with a disability, and focus high-level care accommodation in towns with health services.

12.5 Ensure that land is made available for public and social housing in towns with a service role.

12.6 Encourage the provision of rental housing and accommodation for temporary workers in locations where there is high demand from professionals, tradespeople and labourers employed in various local industries.

12.7 Provide for 15 per cent affordable housing, including a 5 per cent component for high needs housing, in all new housing developments, in accordance with the *Housing Plan for South Australia* (2005).

12.8 Actively involve Aboriginal people and newly arrived overseas migrants in planning for housing supply to ensure their needs are met.

12.9 Retain caravan parks and support the use of some parks for affordable rental housing, particularly for temporary accommodation.

INFRASTRUCTURE AND SERVICE PROVISION

Chapter E

INFRASTRUCTURE AND SERVICE PROVISION

Chapter E

This chapter discusses the implications of the *Mid North Region Plan* for the provision and coordination of infrastructure and services in the region.

Government agencies are required to use the *Mid North Region Plan* to identify infrastructure priorities, such as health and education centres, and are encouraged to identify clear trigger points, such as population growth in a particular town, to indicate when new infrastructure is needed.

The state government recognises the importance of integrating land use and infrastructure planning. This approach aims to build strong and healthy communities and ensure industrial and commercial land supplies remain competitive by making the best use of existing infrastructure capacity and ensuring new infrastructure and services are strategically planned and developed in a timely manner.

The *Strategic Infrastructure Plan for South Australia* (2005) is the first step in developing a coordinated long-term approach to infrastructure and service provision throughout the state. It provides a strategy for the planning and delivery of infrastructure and services by all government and private sector providers.

The priorities identified for the Mid North region in the *Strategic Infrastructure Plan* are listed on the following pages. The *Mid North Region Plan* confirms these priorities, further clarifies where specifically in the region these infrastructure and services are most required, and identifies other potential demands on infrastructure and services.

Infrastructure, with the exception of major works, is generally the landowner's responsibility. Given the long lead times associated with industrial development, the state government and other providers need to plan, budget for, and coordinate the development of infrastructure. This is particularly important with larger parcels of land that have been identified as key future supply sites, but have significant constraints.

Further, infrastructure provision should link with the *Mid North Region Plan* to ensure industrial and commercial land is ready when needed, and that appropriate services are provided to support residents and visitors. This is crucial to ensure that funding is not prematurely invested in infrastructure and services that will be under-used. There is a need for ongoing information gathering and liaison with the private sector and local government on industry and community needs.

Priorities for the Mid North region identified in the *Strategic Infrastructure Plan for South Australia, Regional Overview, 2005-06–2014-15*

Land (economic development)

- Expand intensive animal-keeping and processing.
- Develop industrial estates at Port Pirie, Blyth and other regional centres to support the wine and agricultural industries.
- Develop accommodation and recreational facilities to cater for increased tourist demand.
- Continue investment in residential land regeneration at Risdon Grove (Port Pirie).

Natural assets

- Develop and implement works to improve biodiversity and land and water management.

Energy

- Increase the generation capacity of the Hallett Power Station and upgrade substations to improve the reliability of supply.
- Support the development of licensed wind-power generators.
- Identify the potential demand for gas to support economic development in Burra and Clare.

Water and wastewater

- Identify new sources of irrigation water for Clare and other centres.
- Identify off-peak storage opportunities, including aquifer storage and recovery techniques or the use of Baroota Reservoir.

Transport

- Develop a strategic needs analysis for a bypass at Clare, considering the needs of Blyth and Balaklava.

Information and communication technology (ICT)

- Develop a business case that identifies and aggregates sufficient broadband demand to support expanded services in Port Pirie.
- Encourage towns to aggregate demand for broadband and develop a business case to support its installation (underway).

Health

- Continue to upgrade health facilities to support the collocated delivery of primary health care services, including general practice, allied health, mental health and Aboriginal health programs.
- Redevelop the aged care facility at Port Pirie Hospital.
- Increase the use of telemedicine facilities.
- Provide more aged care and residential facilities and services to meet the increased number of retirees moving to the region.

Justice and emergency services

- Develop the courthouse at Port Pirie.

Arts, culture and heritage

- Upgrade the regional theatre at Port Pirie.

Education and training

- Rejuvenate local schools to support improved utilisation and integration of services.
- Undertake planned capital works at Booleroo Centre school and Peterborough preschool.
- Ensure that future infrastructure requirements of TAFE, including ICT, support the expected growth in the primary and allied industries.
- Expand the capacity of childcare facilities.

Housing

- Provide affordable housing for seasonal workers in the required areas.

Waste management

- Develop a regional waste management strategy including exploring the potential for a new central disposal site.

Further potential demands identified through the *Mid North Region Plan* process:

■ Improve the quantity and quality of water supply to towns in the region's north.

■ Improve east–west access between communities and for freight vehicles during harvest, and manage potential conflicts between cars and large freight vehicles.

■ Ensure that roads support increased numbers of visitor vehicles in major tourist areas.

■ Ensure that health services in the Southern Flinders Ranges have the capacity to cater for increased tourism.

■ Manage the increase in freight movements along the Bower–Boundary Road, a direct north–south freight route linking the Murray and Mallee region with the Mid North region.

■ Meet the growing industry demand to increase the capacity of gas supply to Port Pirie.

■ Manage the pressures to upgrade aerodromes and air services.

■ Develop practical solutions to meet the potential increase in demand for public transport services, particularly for access to education and training facilities and health services locally, regionally, and in Adelaide.

APPENDICES

APPENDIX 1
HOW THE PLAN WAS DEVELOPED

Figure 3 – The *Mid North Region Plan* process

Stage 1

Compile background data

Input from councils and relevant regional development board, natural resouces management board and South Australian Government agencies

Output

Issues paper, resource atlas

Stage 2

Interpret and analyse

Department of Planning and Local Government met councils to confirm issues and priorities

Workshop – SWOT analysis and map vision

Synthesis and analysis – DPLG, in discussion with councils and regional development board, natural resouces management board and SA Government agencies

Output

SWOT summary, vision maps, areas of focus

Stage 3

Test and refine

DPLG met councils to refine the spatial vision and determine priorities, which were then tested against strategic objectives and key government directions

Output

First draft *Mid North Region Plan* (including maps representing the future vision for the region and strategic priorities to guide actions)

Stage 4

Prepare final draft

DPLG presented draft *Mid North Region Plan* to workshop participants and sought feedback

Output

Draft *Mid North Region Plan* forwarded to Minister for Urban Development and Planning for consideration to release for public consultation

Stage 5

Release and consult

Draft *Mid North Region Plan* publicly released and feedback sought from community and industry

Output

Feedback from community consultation considered

Stage 6

Finalise and release

Draft *Mid North Region Plan* refined based on feedback

Output

Final *Mid North Region Plan* forwarded to Minister for Urban Development and Planning for consideration for approval and release

APPENDIX 2
INFORMATION ABOUT THE MID NORTH REGION

INFRASTRUCTURE AND SERVICES

Infrastructure and services supporting the region's communities and economy include:

Transport

Road and rail

Road and rail routes of the National Land Transport Network traverse the region, connecting it to Western Australia, the Northern Territory and the eastern states. The network is also linked to state strategic and primary freight routes. The Northern Expressway has significantly improved access to Adelaide for freight travelling south via the Stuart Highway.

Heavy vehicle movements, which are expected to increase Australia-wide, are already placing significant demand on the road network. This is likely to be exacerbated by greater tourist numbers. Transport operators are carrying heavier loads as a result of an increase in mass limits and new performance-based standards (PBS) will allow the use of larger vehicle combinations, including B-triple vehicles. The region's councils have reviewed local road priorities and these are detailed in the *Central Local Government Region Transport Strategy 2006*.

Port Pirie's harbour handles grain, fertiliser, metal ores and concentrates, and has some capacity for containers. Over the years the port's role has diminished, as its shallow channel limits its use by larger, modern vessels. The local council has recently redeveloped the foreshore near the port into an attractive public recreational space.

Air

Aerodromes are dotted across the region. Port Pirie airport is used extensively by the Royal Flying Doctor Service (RFDS), and is owned and operated by the council. Aerodromes that provide access to health services, mainly through the RFDS and other emergency services, are at Peterborough, Orroroo, Booleroo Centre, Jamestown, Carrieton, Quorn and Hawker. All are council owned.

Public transport

Public transport schemes vary from council to council, and include car pooling and local bus services operated by volunteers; however, the declining number of volunteers is putting a strain on these services. Buses stop at towns on the major highways along the Adelaide to Port Augusta and Adelaide to Broken Hill bus routes.

Sport and recreation

The Mid North has a significant amount of sport and recreation infrastructure throughout the region, including for sports such as football, cricket, netball, tennis, lawn bowls, basketball, swimming and golf. There is a wide network of children's playgrounds, and recreational activities including boating, fishing, cycling, walking and horse riding are popular.

Cycling

Councils and regional development boards are developing cycling plans, which will include trails through the region. The potential cycling/walking trails include the former rail corridors that traverse the region, which are ideal due to their relatively low gradients. The popular Clare Valley Riesling Trail is a good example of how these corridors can be used to attract tourists.

Health

There are health services at Booleroo Centre, Burra, Clare, Crystal Brook, Eudunda, Jamestown, Laura, Orroroo, Quorn, Hawker, Peterborough, and Riverton. There are major health services in three locations in the region: Port Pirie in the central area; Port Augusta in the north; and Adelaide in the south. Many specialist services require travel to Adelaide or Port Augusta. Although a volunteer Community Passenger Network operates in the region, accessing health support services remains a challenge for people who do not have private transport or are too ill to drive.

The aerodromes provide an option for emergency services, and much of the region is also accessible by the helicopter rescue service.

Education

The region's education facilities consist of 47 government and non-government schools and 39 childcare centres. TAFE SA campuses are located in Clare, Jamestown, Peterborough and Port Pirie, and provide training in, for example, tourism and hospitality, primary industry value-adding, aquaculture, and the aged care and retirement industries.

Waste management

Waste management facilities are located throughout the Mid North. The *Waste Management Strategy* (2008) produced by the Central Local Government Region (CLGR) resulted in the development of a Lower North/Southern Flinders regional waste management strategy, which includes the potential for a new central solid waste disposal site.

Water

Water availability and quality are critical issues. The River Murray supplies towns and settlements south of Peterborough, Booleroo Centre and Wirrabara; however, everything north of these centres relies on local groundwater.

The Clare Valley Prescribed Water Resources Area is the only prescribed water resource in the region. Water from this source is subject to an allocation plan overseen by the Northern and Yorke NRM Board. Additional water for irrigation is supplied from the River Murray under water irrigation licences. There is still capacity in the water networks to support some residential and industrial growth; however, any increase in irrigation would require an upgrade of the networks or development of an alternative source. Decisions on future development should take into account the outcomes of the South Australian Murray-Darling Basin and Clare water allocation plans.

Further information on the state of the region's water resources is critical for the sustainable management of groundwater and to secure quality water for the northern towns and Clare Valley. For example, the sustainability of supply from the Burra Mine Pool and the Bundaleer Reservoir needs to be considered. The CLGR and Northern and Yorke NRM Board have made water supply and quality, particularly in the northern towns, a priority.

Treated wastewater and stormwater are generally under-used in the region.

The Mid North has 15 community wastewater management systems (CWMS), with at least one in most of the major centres. Some systems are ineffective and have limited capacity, which may in turn limit future population growth unless they are upgraded.

Energy

Electricity

Despite a few pressure points, the Mid North is reasonably well serviced with electricity: several 132 and 275 kilovolt transmission lines cross its landscape. The region's closeness to the national grid and its topography make it ideal for wind farm development. Nearly $1.5 billion is committed to constructing wind farms and associated infrastructure, which will generate more than 750 megawatts of power. The first wind farms are being built at Hallett and Snowtown. Once all stages are completed, the Snowtown project will be the largest wind farm of its kind in the southern hemisphere.

Gas

The region's gas is supplied by the Moomba to Adelaide pipeline, although not all the towns that the pipeline passes through are connected. A spur line near Jamestown extends to Port Pirie and Whyalla on the Eyre Peninsula.

Information and communications technology (ICT)

Access to ICT varies throughout the region. ADSL broadband is available in only a few of the larger towns, although plans are being developed to deliver broadband across the region. Mobile phone coverage is good near most of the larger towns; however, there are significant gaps, particularly in the north.

THE ENVIRONMENT

The region is dominated by diverse and rich landscapes: the verdant agricultural land of the Clare and Gilbert valleys, the dramatic Southern Flinders Ranges that rise above the low-lying land bordering Spencer Gulf, and the plains to the east.

The region's environment is safeguarded in a range of strategies, including the *State NRM Plan*, *No Species Loss: A Nature Conservation Strategy for South Australia 2007–2017*, *Tackling Climate Change: South Australia's Greenhouse Strategy 2007–2020* and the *Living Coast Strategy for South Australia*.

Biodiversity

The region has been extensively cleared, although significant areas of native vegetation still remain. Native vegetation outside Conservation Parks is protected by the *Native Vegetation Act 1991*.

Conservation areas include the Mount Remarkable National Park and the Mokota, Clements Gap, Telowie Gorge, Spring Gully, Red Banks, Pandappa, Yalpara and Black Rock Conservation Parks. There are also three proposed Conservation Parks: Caroona Creek, Porter Lagoon and Hopkins Creek.

In *Directions for the National Reserve System – A Partnership Approach* (2005), the Natural Resource Management Ministerial Council listed the Mid North as a high priority for identifying land that could be protected in the reserve system.

DEH (now DENR) coordinates several biodiversity conservation programs in the region, including recovery of native grasslands of the Mid North, the Bounceback program n in the Flinders Ranges, recovery of grassy woodlands and Yorke Peninsula recovery. They focus on the recovery of threatened species and communities and the removal of threats from introduced plants and animals.

Coastal, estuarine and marine resources

The region includes about 200 km of Upper Spencer Gulf coastline, which is highly valued by local residents and visitors alike. Aboriginal people have strong historical links to the area.

The coastline is dominated by samphire scrublands and environmentally significant mangrove forests, which are vital for many species, are important fish nurseries and also protect the coast. The Upper Spencer Gulf wetland system is listed in *A Directory of Important Wetlands in Australia*[10] and has one of the state's largest remaining undisturbed stands of the grey mangrove (*Avicennia marina*). The system includes major wetland areas in the Winninowie Conservation Park and to the north and south of Port Pirie.

Development, particularly in marine environments, must be carefully planned and managed to minimise its impact on the environment. For this reason the state government is working with local government to develop and implement Development Plan policies to better manage coastal development.

Water resources

The region's two main watercourses, the Broughton and Wakefield rivers, are characterised by highly variable flows, ephemeral channels, permanent spring-fed pools and some continuously flowing sections.

Although rainfall is less reliable in the region's north, this area is prone to extreme weather events that can cause significant flooding. Rising groundwater levels in some cleared areas have resulted in dry-land salinity.

Management of dry-land salinity, water protection areas and flood risk will continue to be important to prevent further negative impacts on agricultural production, biodiversity and infrastructure. The Northern and Yorke NRM Board is working to better understand water limits and environmental water requirements to inform the future use and management of the region's water resources. Incorporating rainwater tanks and the treatment and re-use of water into the design of new developments and subdivisions will ensure that more efficient use is made of available resources.

Managing climate change

The state government is continually monitoring climate change, and its responses in relation to issues such as transport, housing design, natural resources and energy are detailed in *Tackling Climate Change: South Australia's Greenhouse Strategy 2007–2020*. A key objective of the strategy is to strengthen the resilience of primary industries to climate change.

PIRSA has been working with the grain and wine industries to better understand the potential impacts of climate change on specific crops and different climate zones. The state government is also investing in research to identify alternative primary production and adaptation techniques (for example, different cropping methods and crop types). The Department of Water, Land and Biodiversity Conservation (DWLBC)[11] is also contributing to the development of woody crops (for fodder and biomass) and to plantings for carbon sequestration, which should improve the land's resilience to climate change.

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10 Environment Australia, *A Directory of Important Wetlands in Australia, Third Edition*, Environment Australia, Canberra, 2001.

11 DWLBC ceased to be a state government department in 2010. Its responsibilities were allocated to the Department for Water and the Department of Environment and Natural Resources (DENR) in June 2010.

Other climate change actions relevant to the Mid North include:

- clustering industry value chains, particularly near major transport routes and junctures, to optimise efficiency in transport movements and minimise greenhouse gas emissions

- ensuring buildings are designed to suit the climate

- shifting transport towards low greenhouse gas emission modes, including walking, cycling, rail and shipping, where practical and commercially viable

- improving the management of water resources

- developing NatureLinks to provide for biodiversity adaptation

- increasing renewable and low emission energy generation (for example, wind farms).

THE ECONOMY

The Mid North economy is diverse. The services sector (including education, training, health care and social assistance) is the largest employer, at 21 per cent of jobs; followed closely by primary production, 20 per cent; tourism and related sectors (including retail, accommodation and food), 18 per cent; and manufacturing, 11 per cent. There has been sustained jobs growth in recent years, particularly in mining, construction, tourism and services.

The region's access to national road and rail networks supports continued growth and diversification of export industries. There are also opportunities for further development of tourism.

Primary production and processing

In addition to direct primary production, the region has significant and expanding agricultural support and processing industries, particularly in the centre and south. In 2005–06 the Mid North generated $543 million in gross food revenue[12], which had a farm-gate

(production) value of $318 million. Field crops, livestock and wine production account for about 90 per cent of gross food revenue.

Broadacre cropping generates about $160 million a year. The western and southern parts of the region are the most fertile and reliable. Grain storage facilities are located at Gladstone, Crystal Brook, Jamestown, Saddleworth, Melrose, Booleroo Centre and Andrews. Declining terms of trade over the years have resulted in greater efficiencies and the identification of niche Australian and overseas markets for crops. The South Australian Government is working with local producers to manage the adaptation of the industry to climate change.

Livestock production—primarily sheep, pigs and cattle—generates $150 million a year in gross revenue. It is focused on prime studs in the mid-east and pastoral properties in the far north. The Mid North produces 12 per cent of the state's sheep flock. There are major livestock trading facilities at Jamestown and feedlotting of cattle and sheep is expanding in the region to meet industry growth targets and market demand.

12 South Australian Food Centre, *Regional Food Scorecard 2005–06*, Mid North and Southern Flinders Ranges, SAFC, PIRSA, Adelaide. Gross food revenue takes into account the value of farm production (farm gate), value-adding, processing, packing and distribution, food service and retail sales.

Pig production is focused in the south-east. A specific area at Bower has been zoned for large-scale pig enterprises because of its proximity to freight routes that connect with pig processing facilities at Port Wakefield and Murray Bridge.

Poultry production is focused in the south-east of the region, around Burra, Eudunda, Riverton and Rhynie, which links to similar enterprises in the Wakefield Plains area and processing facilities in northern metropolitan Adelaide.

In the north-west, around Melrose and Jamestown, horticulture and forestry are prominent. Horticulture generates $40 million a year in gross revenue for the Mid North region. The first forestry reserves in South Australia were established at Bundaleer, near Jamestown, and Wirrabara around 1876. As well as historical importance, the forests have significant commercial and tourism value. About 3900 ha are under plantation and 6160 ha are conserved as native vegetation and open land.

The region's wine industry, which generates $39 million in farm-gate value, is a significant employer. Wine production and distribution in the Mid North add a further $150 million to the state economy. The Clare Valley has a strong reputation for the quality and diversity of its wine in Australian and international markets. Vines were first planted in the area in 1851 and more than 4500 ha are under cultivation. A wine industry is also emerging in the Southern Flinders Ranges, centring on Wirrabara, while some trial vineyards have also been developed around Jamestown.

Marine scale fisheries are prolific in Spencer Gulf waters: more than 50 licensed fishermen are located in Port Pirie and the Mid North has several fish processors.

Tourism

Tourism is a key and growing element of the regional economy, generating more than 3100 direct and indirect jobs in local shops, accommodation, cafés and restaurants.

There are three major north–south routes through the region, each offering tourists a diversity of experiences. The region's tourism assets include nature-based and active adventures, National and Conservation Parks, major rodeo and music events, railway and mining heritage, quality food and

wine, and character towns set in scenic rolling landscapes. A clear vision for the future character of towns and landscapes will further enhance the appeal of the region to visitors.

Mining and resource processing

The region has a long history of mining—Burra was established after the discovery of rich copper deposits in 1845 and Mintaro Slate Quarries, which has produced high quality slate since 1856, is the oldest continuing quarry in Australia.

Today, the region has many known mineral deposits and occurrences, including phosphate, magnesite, gypsum and, particularly in the east, gold and copper. The current commodity boom has led to the expansion of mineral, petroleum and geothermal exploration in the region. Diamonds, copper and gold are the main targets, and there are a number of applications for petroleum and geothermal exploration. The north-east part of the region contains many bodies of kimberlite, the rock type that hosts diamonds, and some initial findings are considered promising. Temporary mining contractors involved in exploration are providing an economic boost to nearby towns.

Nyrstar's Port Pirie smelter is the largest integrated lead-zinc-silver smelter in the world and has been the city's economic base for more than 100 years. In 2006–07 its production value was about $700 million. Mineral concentrate for the smelter is sourced from Broken Hill and other areas. The smelter employs almost 700 people and a significant industrial sector has grown to service it and the surrounding area.

The Adelaide Chemical Company plant at Burra produces specialty copper chemicals using concentrates from Mount Gunson, north of Port Augusta, and other Australian mineral deposits. The plant was originally established to treat ore from the Burra open-pit copper mine.

The region is the most direct route to several mines across the north-east of South Australia. Jamestown and Peterborough are the closest major towns to the mining activity north of the Barrier Highway towards Broken Hill, which includes the Honeymoon Uranium Project, White Dam Gold Mine and the Kalkaroo Project (copper, gold and molybdenum). Quorn (in the Far North region) and Wilmington in the Southern Flinders Ranges are within a two hour drive of Olympic Dam (copper, gold, uranium and silver). The region is also the most direct route to the Northern Flinders Ranges, which is host to mining activities including the Beverley Uranium Mine, near Lake Frome; the Beltana Mine, north of Beltana; and various geothermal explorations.

There are also numerous rock quarries and sandpits in the region, most used for local construction materials. Dimension stone (sawn stone for building and other uses) is produced from several sites, Mintaro Slate Quarries being the largest.

COMMUNITIES AND CHANGING SETTLEMENT PATTERNS

A changing region

During the past 20 years, the Mid North's population has been steadily declining as a result of the restructuring of primary production and manufacturing. However, in the five years between the 2001 and 2006 Censuses[13], the rate of decline slowed significantly, with only 500 people leaving the region.

The Clare Valley area is also experiencing steady growth whilst Quorn, Riverton, Laura, Saddleworth, Booleroo Centre, Port Germein, Napperby, Spalding and Auburn have grown or remained stable over the last decade.

Most of the region's permanent residents are aged over 40; 12 per cent of the population were born overseas; and about 1.5 per cent are Aboriginal. The number of people from overseas settling in the region may rise as industry seeks skilled labour. Supporting the diversity of people who live in the area will continue to be a priority.

13 Australian Bureau of Statistics, *Census of Population and Housing*, 2001 and 2006, ABS, Canberra.

The region also has a substantial number of temporary residents: for example, workers involved in grape harvesting and major construction projects, as well as tourists.

An ageing population

The region has one of the oldest populations in South Australia: 25 per cent of people are aged over 60, compared with the state average of 20 per cent. As the large baby boomer cohort heads towards retirement, the number of people in this age group is projected to increase substantially across the state. Figure 2.1 shows the region's demographic trends by age during the 10 years to 2006.

An ageing population will have implications for community services and facilities, including health care and public transport. Many towns across the region provide aged care accommodation, hostel living and nursing homes; however, more facilities are likely to be required to meet future needs and provide opportunities for people to stay in their local area as they age.

Figure 2.1 – Mid North Region, population by age, 1996–2006
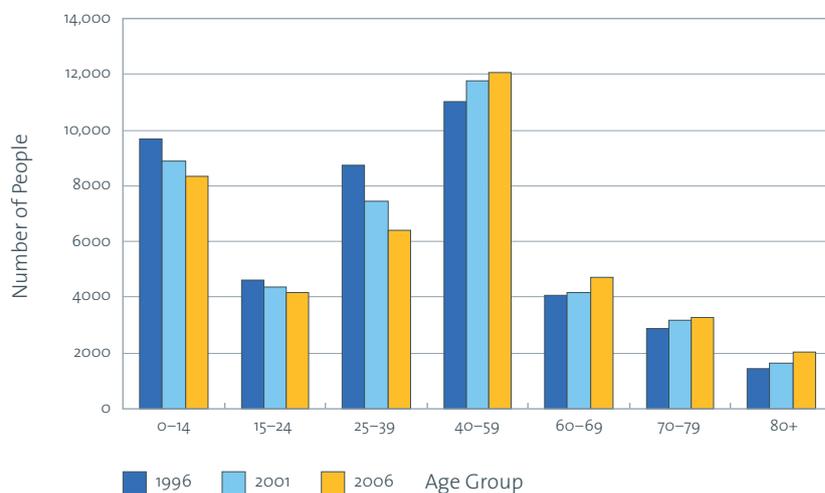
Source: ABS Census of Population and Housing, various years.

APPENDIX 3

CONTRIBUTION OF THE PLAN TO *SOUTH AUSTRALIA'S STRATEGIC PLAN* TARGETS

Table 3.1 – Linkages with *South Australia's Strategic Plan*

Mid North Region Plan Principles	*South Australia's Strategic Plan* Target
ENVIRONMENTAL AND CULTURAL ASSETS	
1. Recognise, protect and restore the region's environmental assets	T3.1 Lose no species, T3.2 Land biodiversity, T3.3 Soil Protection, T3.4 Marine biodiversity, T3.7 Ecological footprint, T3.9 Sustainable water supplies, T3.10 River Murray
2. Protect people, property and the environment from exposure to hazards	T2.4 Healthy South Australians, T2.7 Psychological wellbeing
3. Identify and protect places of heritage and cultural significance, and desired town character	T1.15 Tourism industry, T2.7 Psychological wellbeing, T6.1 Aboriginal wellbeing, T5.9 Regional population levels
4. Create the conditions for the region to adapt and become resilient to the impacts of climate change	T3.5 Greenhouse gas emissions reduction, T3.7 Ecological footprint, T3.9 Sustainable water supply, T3.13 and T3.14 Energy efficiency—dwellings and government buildings
ECONOMIC DEVELOPMENT	
5. Protect and build on the region's strategic infrastructure	T1.1 Economic growth, T1.14 Total exports, T1.21 Strategic infrastructure, T3.7 Ecological footprint, T3.8 Zero waste
6. Retain and strengthen the economic potential of primary production land	T1.1 Economic growth, T1.10 Jobs, T 1.14 Total exports, T1.17 Minerals exploration, T3.9 Sustainable water supply
7. Reinforce the region as a preferred tourism destination	T1.10 Jobs, T1.15 Tourism industry
8. Provide and protect serviced and well-sited industrial land to meet projected demand	T1.1 Economic growth, T1.5 Business investment, T1.14 Total exports, T1.21 Strategic infrastructure, T3.7 Ecological footprint, T3.8 Zero waste
9. Ensure commercial development is well sited and designed to support town role and function	T1.5 Business investment, T.10 Jobs, T1.21 Strategic infrastructure

Mid North Region Plan Principles	*South Australia's Strategic Plan* Target
POPULATION AND SETTLEMENTS	
10. Strategically plan and manage town growth	T1.21 Strategic infrastructure, T3.7 Ecological footprint, T3.8 Zero waste, T5.9 Regional population levels
11. Design towns to provide safe, healthy accessible and appealing environments	T2.4 Healthy South Australians, T2.7 Psychological wellbeing, T2.8 Statewide crime rates
12. Provide land for a supply of diverse, affordable and sustainable housing to meet the needs of current and future residents and visitors	T1.24 Overseas migrants, T5.9 Regional population levels, T6.7 Affordable housing, T6.8 Housing stress, T6.9 Aboriginal housing, T6.10 Housing for people with disabilities

APPENDIX 4
RELATED REPORTS, STRATEGIES AND PLANS

Various plans, strategies and research have been considered during the development of the *Mid North Region Plan*. Many of these reports were developed in consultation with industry and the local community. The detailed research and analysis contained in these documents underpin and complement the Plan.

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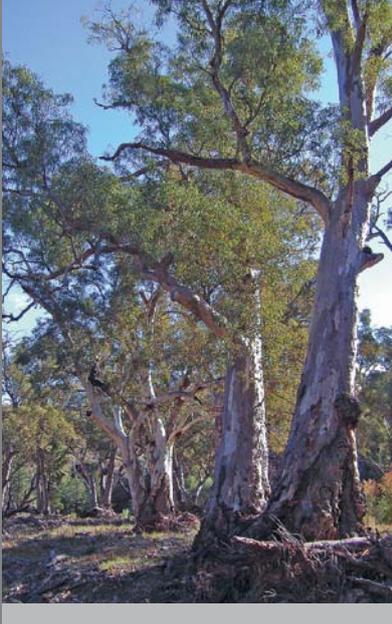
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GLOSSARY

GLOSSARY

Acid sulfate soils	The common name given to naturally occurring soils containing iron sulfides (predominantly pyrite). When exposed to oxygen due to drainage, excavation or disturbance, they produce sulfuric acid and trigger the release of iron, aluminium and heavy metals. Once mobilised, the acid and minerals can kill vegetation, destroy building materials and seep into wetlands, killing fish and other aquatic organisms.
Affordable housing	Affordable housing is housing that is appropriate to the needs of households with low and moderate incomes (that is, up to 120 per cent of gross annual median income). The indicative affordable house purchase price for these groups—currently $225,000—is determined by the affordability indicators gazetted on 8 October 2009 (p. 4818) or as amended from time to time under the *Development Act 1993* and South Australian Housing Trust (General) Regulations 1995.
Biodiversity	The variety of life in all its forms and at all levels of organisation, as well as the ecological and evolutionary processes through which genes, species and ecosystems interact with one another and with their environment.
Climate change	A change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer (*The Garnaut Climate Change Review*, 2008).
Community Wastewater Management System (CWMS)	A system or scheme that is installed and operated by an individual council for the collection, treatment and disposal (including by recycling) of wastewater.
Density	Density is a measure of the population (persons) or the number of dwelling units in a given area.
Development Plans	Development Plans should seek to promote the provisions of the Planning Strategy and may set out to include planning or development objectives or principles. They are the principal documents in South Australia used to assess development.
Distributed or embedded generation	Where a generating unit is connected to a distribution network and not having direct access to the transmission network.

Employment lands	Concentrated areas where people are employed on a full- or part-time basis in a wide range of employment industry categories including: agriculture; mining; electricity; construction; wholesaling; communication; finance; property; government; cultural and personal services; education, health and community services; manufacturing; retailing; accommodation; and cafes and restaurants.
Freight corridors	Road or rail corridors for the movement of freight.
Green industry	Green industries are primarily concerned with the supply of energy from renewable sources such as wind, solar and water (including waste), and those industries concerned with assisting other sectors of the economy to meet the climate change challenge by reducing their reliance on carbon-based energy supply.
Greenhouse gas emissions	Polluting carbon substances released into the atmosphere.
Gross state product (GSP)	Gross state product is the measurement of economic output of the state. It is the sum of all value added by industries in the state.
Indigenous Land Use Agreement (ILUA)	An Indigenous Land Use Agreement is a voluntary agreement between a native title group and others for the use and management of the land and/or water covered by the agreement.
Rural living	Large residential allotments outside towns that allow for minor primary production activity.
Strategic Management Plans	The *Local Government Act 1999* requires councils to apply a strategic approach in all actions they undertake through the preparation of Strategic Management Plans. These plans articulate council goals and objectives and the vision for the community and are intended to complement the regional volumes of the South Australian Planning Strategy.
Sustainable development	Forms of development that meet the needs of the present without compromising the ability of future generations to meet their needs.
Water demand	Water demand is taken to be the measurement of all water uses in the region from all water sources for the purposes of essential human needs, the economy and the environment.

Water infrastructure	Water infrastructure includes treatment systems (including wetlands), pumps, pipelines, storages (including aquifers) and other natural or constructed means of transferring water of appropriate quality from its source to the demand point.
Water security	Water security has been taken to mean the availability of an appropriate quantity of water at an appropriate quality to meet the needs of the community. This includes the provision of potable and fit-for-purpose water supplies, collection and treatment of wastewater and the management of stormwater and groundwater resources.
Water-sensitive urban design (WSUD)	Water-sensitive urban design (WSUD) is an approach to urban planning and design that integrates the management of the total water cycle into the urban development process. It includes: ■ the integrated management of groundwater, surface run-off (including stormwater), drinking water and wastewater to protect water-related environmental, recreational and cultural values ■ the storage, treatment and beneficial use of run-off ■ the treatment and re-use of wastewater ■ using vegetation for treatment purposes, water-efficient landscaping and enhancing biodiversity ■ using water-saving measures inside and outside domestic, commercial, industrial and institutional premises to minimise requirements for drinking and non-drinking water supplies. WSUD incorporates all water resources, including surface water, groundwater, urban and roof run-off, and wastewater.