

Overview

The Strategic Infrastructure Plan for South Australia (the plan) is about meeting South Australia's future needs.

Infrastructure is everywhere in the daily lives of South Australians. It is the state's roads and rail, the hospitals, schools and sports fields, the ports and parks, the water and waste management systems. It enables the state's economic and social systems to work well.

Infrastructure is expensive to build, operate and maintain. But it is long-lived and delivers benefits across generations. Today's South Australians are reaping the benefits of infrastructure investments provided by their parents and grandparents. The plan outlines what South Australians now need to do to build new infrastructure, overhaul and update existing infrastructure and avoid bottlenecks so that the state is left in good order for future generations.

This is a plan to take South Australia through the coming decade and beyond. It covers all aspects of the state's infrastructure – physical built assets, delivery of infrastructure for social services and natural heritage.

The plan sets both broad and specific priorities and marks the government's resolve to meet them, but it is not chiselled in stone. It is rather a living, unfolding plan that will grow and change over time to meet new challenges and take up new opportunities.

South Australia must invest in its infrastructure. That investment must come from the public and private sectors. There is no time to waste.

This plan sets out the state's infrastructure priorities – they are summarised below, and the details are to be found in the text of the main document.

Infrastructure Priorities

Invest in transport infrastructure

1. Develop and deepen Outer Harbor and substantially improve infrastructure at the Port of Adelaide
2. Improve the north-south transport corridor
3. Develop and maintain regional freight networks
4. Increase use of public transport

Invest in advanced technologies

1. Develop defence precincts
2. Extend South Australia's ICT capability

Invest in skills and innovation

1. Integrate and overhaul our education and training facilities
2. Build precincts for research and innovation

Manage our built assets well

1. Ensure efficient use of all public built assets
2. Invest in maintenance of our assets

Match our health and social services to community needs

1. Take primary health care into the community
2. Maintain technological excellence in our hospitals
3. Address social disadvantage

Ensure our energy, water and land supplies are sustainable

1. Better manage our water resources, including stormwater
2. Care for the Murray and reduce salinity
3. Supply affordable and reliable energy
4. Be energy efficient and reduce greenhouse gas emissions
5. Care for our land and protect our coastline

Context for the Strategic Infrastructure Plan

The need for this plan was recognised in South Australia’s Strategic Plan (SASP). Released in March 2004, the SASP called for the identification of infrastructure priorities over five and 10-year time frames to focus both government and business investment.

The SASP encompasses almost every facet of life in South Australia. It sets a pathway to a stronger economy and a more prosperous sustainable community. It embraces change and seeks to find ways to do things better – to create and seize new opportunities.

The SASP widens opportunities by focusing on six integrated objectives:

- growing prosperity
- improving wellbeing
- attaining sustainability
- fostering creativity
- building communities
- expanding opportunity.

The effective and efficient provision of infrastructure is a key to sustaining high rates of economic growth and productivity improvement. It is critical to achieving the central economic target of the SASP, which is to treble exports by 2013.

Equally important are those infrastructure investments that extend opportunity to all South Australians and create a stronger and fairer community.

South Australia must be well connected – through transport, information technology and communications – both nationally and globally. The availability of reliable and affordable energy and water supplies must be assured, as must access for all South Australians to education, health, housing and other social services. The state’s cultural and heritage assets must be protected and its natural assets conserved.

Because infrastructure assets have long lives and are expensive, it is important to plan, finance, deliver, manage and use them as efficiently and effectively as possible. Modern infrastructure will underpin the state’s progress by increasing its attractiveness and competitiveness as a place to do business and in which to live, work and to visit.

Strong economic growth without compromising the environment or quality of life is a key plank of the SASP. Everything South Australians do must be sustainable – socially, environmentally and economically. In supporting this, the Strategic Infrastructure Plan sets out new long-term strategic approaches to infrastructure to be pursued by government, industry and the broader community.

Infrastructure Priorities to support South Australia’s Strategic Plan

SASP Objectives		Growing prosperity	Improving wellbeing	Attaining sustainability	Fostering creativity	Building communities	Expanding opportunity
Infrastructure priorities							
Invest in transport infrastructure	1 Outer Harbor & the Pt of Adel.						
	2 North-south corridor						
	3 Regional freight networks						
	4 Public transport						
Invest in advanced technology	1 Defence precincts						
	2 ICT capability						
Invest in skills and innovation	1 Education & training						
	2 Research & innovation						
Manage our built assets well	1 Efficient use of assets						
	2 Maintenance of assets						
Match our health and social services to community needs	1 Primary health care						
	2 Maintain hospitals						
	3 Social disadvantage						
Ensure our energy, water and land supplies are sustainable	1 Manage water resources						
	2 River Murray						
	3 Affordable & reliable energy						
	4 Energy efficiency & emissions						
	5 Land and coastal waters						

Purpose of the Strategic Infrastructure Plan

The principal purpose of the plan is to guide new infrastructure investment by government and the private sector over the next five and 10 years and improve the management and use of the state's existing infrastructure assets.

The plan incorporates four broad strategies.

First, to **coordinate** infrastructure planning and construction across the state. This involves integrating infrastructure planning decisions for a growing and ageing population, and close collaboration between agencies and spheres of government on the management, use and co-location of assets. It requires strong participation in national programs to ensure that South Australia receives a fair share of Australian Government funding. Aggregation of demand at regional levels, and partnerships between infrastructure providers will help to bring forward infrastructure investment on a commercial scale.

Second, to pursue more **efficient** and competitive infrastructure systems. This requires timely investment in new capacity that is affordable and fit-for-purpose. It also requires South Australians to develop, promote and use measures to manage peak demands and congestion in water, energy and transport systems. Promoting shared and multiple uses of assets through co-location by agencies and governments has a clear role in this regard. Assuring appropriate and timely maintenance of existing strategic assets is essential.

Third, to pursue and promote **sustainable** development through sound planning and use of infrastructure. Effective governance arrangements for asset management and associated service delivery are critical, and a full lifecycle approach to asset development, management and maintenance is essential. The state also needs to protect and conserve its natural assets and protect and sustain its critical infrastructure facilities.

Fourth, to meet future demands in a timely and **innovative** manner. This requires management of facilities across the state to accommodate geographical shifts in population and industry and greater uptake of information and communication technologies to improve access to and lower the cost of delivering services. It involves exploring options for redevelopment and alternative uses for existing assets and design of adaptable multi-purpose facilities for shared use. It means utilising the full range of funding options, and employing advances in technology that offer innovative infrastructure solutions or new supply sources, e.g. in the case of energy and water.

The Planning Horizon

The plan incorporates a five and 10-year planning horizon. Over the planning period and beyond, the South Australian population is expected to increase and the profile of the population will continue to change in terms of family structure and the way people live, recreate and work. Families are getting smaller, and people are living longer and staying in their own homes longer than ever before. The needs and expectations of the rising proportion of older people will create new and additional demands on our society.

As the population ages, the proportion that is of working age will shrink. To meet the challenges of the future, maintain our quality of life and achieve the economic outcomes foreshadowed in the SASP, higher levels of workforce participation will be required. The state will need to be able to achieve higher levels of productivity from its human and physical resource base to deliver services more efficiently and effectively than at any time in the past.

The overall shift in the population towards coastal towns and major regional centres will continue. Technological advances and long-term changes in global markets will bring about structural changes in our industries as well as in the way businesses operate. The growing scarcity of resources, competing demands for land and projected impacts of climate change are just some of the additional pressures that will force us to look beyond traditional infrastructure responses and find innovative and sustainable alternatives.

Despite recent improvements in the state's economic indicators, a number of economic forecasters expect South Australia to record real Gross State Product (GSP) growth averaging just over 3% per annum over the first half of the planning period, slightly lower than the expected national growth rate. Current long-term trends in the pattern of industry growth are forecast to continue, with services industries experiencing above average growth rates and primary and secondary production recording slower than average growth.

Achievement of the SASP targets, however, will see South Australia record a rate and pattern of growth that exceeds many of the current economic forecasts. **In the SASP, GSP growth is targeted to exceed the national average within 10 years and exports are targeted to treble in value by 2013.** In particular, the plan targets growth in exports of minerals, food, wine, motor vehicles, defence and elaborately transformed manufactured goods and in services such as tourism and education.

This growth will give rise to new demands on the state's economic infrastructure, including energy, water, transport and communications services.

The Role of Government

The role of government in infrastructure provision has changed significantly following the micro economic reforms and privatisation of the last two decades. Social infrastructure continues to be delivered primarily by the government. Economic infrastructure today is often delivered through private providers operating in competitive markets and responding to consumer and shareholder interests.

While private infrastructure providers respond to commercial interests and seek to maximise private returns, government is responsive to community interests and seeks to maximise public returns. Accordingly, the government plays an important role as facilitator, coordinator and regulator of private industry involved in the provision of economic infrastructure. This involves the government working with industry to accommodate community interests and to secure broader community benefits from private sector infrastructure investment wherever possible.

The State Government also works in close partnership with other spheres of government where they have infrastructure responsibilities, to achieve the best possible outcomes in terms of access to essential infrastructure and high service standards.

Owners and operators of critical infrastructure (e.g. energy, water, telecommunications, hospitals) are working collaboratively with government to ensure the protection of infrastructure in the face of a range of potential natural and other hazards or threats. This includes the establishment of robust risk management standards and plans as well as emergency responses and rapid recovery arrangements supported by appropriate training and strong communication links.

The success of the plan over the next five and 10 years will rely on very close cooperation between the State Government, business and other levels of government. The Strategic Infrastructure Plan is a plan for the whole of South Australia, not just metropolitan Adelaide, and encourages a partnership of all players.

The government intends to work more closely with private infrastructure providers and local government to gather and disseminate information on the condition and use of infrastructure assets. This information will then be used to encourage growth where infrastructure needs are greatest and to identify and address, in a coordinated manner, potential infrastructure-related bottlenecks to growth.

Government processes will be changed to allow this cooperation to take place and to optimise private sector involvement. This involves significant changes to the way in which the state's infrastructure asset base is managed and

developed, particularly in relation to the State Government's capital investment process.

Importantly, this includes adoption of an integrated and more rigorous whole-of-government and whole-of-state approach to identifying and prioritising infrastructure requirements. This involves moving the State Government's approach to capital planning away from the annual bidding process by individual agencies. A culture of managing across rather than within portfolio structures will be fostered to support better outcomes for the state in a more strategic way.

The new approach, following acceptance by government of the advice of the Economic Development Board, will require the staged identification and appraisal of a proposal before decisions are made on funding. Various funding options will be considered, ranging from State Government appropriation and Australian Government funding through to alternative private sector arrangements.

A five-step planning and delivery framework is proposed:

Step 1: Strategic analysis and identification of infrastructure needs

Infrastructure priorities will be identified through an ongoing planning process, focusing on five and 10-year timeframes and responding to the objectives of SASP. This process begins with the preparation of the Strategic Infrastructure Plan and will be supplemented from time-to-time by a series of individual agency plans to be approved by the government.

Step 2: Project definition

This step involves the definition of the required services and initial scoping of a project, if appropriate, to meet service delivery objectives, including an analysis of the associated asset management implications.

Step 3: Business case

This step involves the development of a full business case, or justification of the project, considering whole-of-life costs, sustainability targets, the role of government and financing and procurement options.

Step 4: Funding method and resource allocation

This step leads to a decision on the funding method, which may involve an allocation of state capital funds or opportunities for private participation.

Step 5: Delivery of the project

This step is the detailed design and procurement stage for the project.

Once priority projects have been properly scoped and substantiated, the planning and delivery framework advocates consideration of a full range of public and private sector delivery options, capitalising on the strengths of the respective sectors.

Barriers to private sector investment will be removed where possible and appropriate. Projects will be properly structured to ensure best outcomes for the state. Processes will aim to minimise transaction costs for the private sector, consistent with the need for attention to be given to requirements for competition, regulation or service standards.

A fresh and more flexible approach is needed to the way government does business with business. South Australia must be truly 'open for business' to meet the state's infrastructure requirements. For this to occur, the government must have the capacity to consider unsolicited bids. Where a private firm perceives a commercial opportunity in solving a public infrastructure need, it may require assurances concerning protection of its intellectual property. In such circumstances, government should be able to provide them. It should also have the capacity to strike sensible, open and transparent deals involving a contracted lump-sum price, provided the public interest is protected by ensuring that the price agreed to is fair. This can be achieved where the public sector has independent data on costs of delivery, which can be obtained through market testing and a range of other approaches.

Another important factor is balancing of cost against risk. Where the private sector genuinely assumes a substantial set of risks with respect to the provision of an item of infrastructure, and is able to back those risks with a strong balance sheet, this will be traded off in the price charged to the public sector. This arrangement may represent 'value for money' to the taxpayer, depending on the assessment of costs and benefits.

Risk and cost of each case must be assessed on its particular circumstances and merits. The government must weigh up a range of factors when considering the best way to deliver major projects efficiently and in the public interest, ensuring always that arrangements satisfy rigorous standards of probity and propriety.

A more rigorous assessment process for identifying and analysing triple bottom-line considerations and for prioritising strategic infrastructure proposals will support the infrastructure planning and delivery framework.

Decisions between competing project priorities are ultimately the responsibility of government. The government will resolve these priorities and continue to identify and address new infrastructure issues as they arise.

The Strategic Infrastructure Plan for South Australia is the first major step forward in developing a more coordinated, efficient, sustainable and innovative approach to infrastructure provision. It provides leadership for other spheres of government and the private sector on the government's priorities for South Australia. It also provides a framework to guide more detailed infrastructure planning by state agencies.

Disciplined budget management in recent years has cut state debt by nearly a third to less than 5% of GSP, without resort to privatisation. Ratings agencies have restored the state's AAA credit rating. This provides scope and flexibility for judicious and responsible infrastructure investment by the public sector.

The state's balance sheet can accommodate quality investment in infrastructure that will lift the productivity and growth performance of the economy. An expert Infrastructure Finance Group chaired by Dr Barry Hughes, Chief Economist at Credit Suisse Asset Management, reached this conclusion. Its principal conclusions are reflected in the plan. Today, there is a broad range of options available for financing investment in public infrastructure. However projects will only be funded once their merits have been clearly established.

Regardless of the financial position of the government, only projects that satisfy cost - benefit and other project appraisal criteria should be considered for funding.

The government invites input on the proposals in this plan from all users and providers of infrastructure. Additional information on the plan can be obtained from www.infrastructure.sa.gov.au.

Progress in implementing the priority initiatives in the plan will be monitored closely. Additionally, the plan will be revised to incorporate new priorities as they emerge.

Infrastructure Sectors

The Strategic Infrastructure Plan presents strategies for 14 infrastructure sectors. The challenges, issues and opportunities currently faced in each of these sectors are discussed, as are the strategic directions and a number of potential projects to be pursued over the next five and 10 years.

Summary statements for each of the 14 infrastructure sectors follow. For a more detailed discussion on each of the sectors refer to the relevant section of the full plan.

Transport

Where we are now

Major improvements have been made to the State's transport infrastructure in recent years. Construction of the Adelaide-Darwin rail link – one of the largest infrastructure projects undertaken in Australia – was completed in late 2003. Construction of the new Adelaide Airport is on schedule for completion in October 2005. Nine new trams are being purchased and the Glenelg tram line will be upgraded by September 2005. The Port River Expressway Stage One, incorporating two new overpasses, is nearing completion. The City West Connector has been opened.

The government recognises the importance of regional highways and works have begun on the Sturt Highway, the Port Wakefield to Port Augusta Road, the Victor Harbor Road and Dukes Highway between Bordertown and the Victorian border. The new bus interchange at Reynella has opened and construction of the Mawson Interchange has started. The River Murray ferry replacement program is nearly complete and a new grain berth is being constructed at Outer Harbor.

Notwithstanding these achievements, passenger and freight transport loads on roads are rapidly increasing, adding to congestion. The freight load is predicted to double over a 20-year period and congestion is causing increasing delays on Adelaide roads. There is also an ongoing requirement for network maintenance throughout the state.

The state has four public transport modes: bus, heavy rail, light rail and O'Bahn. Patronage overall is low, as is the use of rail on long-haul routes.

Marine facilities at Outer Harbor are not able to accommodate new larger vessels. Around the state expanding fishing fleets exceed current wharf capacity, while access to regional ports does not support efficient export logistics.

Where we want to be in 2015

South Australia will have a sustainable transport system; one that is integrated, coordinated, affordable, efficient and safe, meeting the accessibility needs of all South Australians. Congestion on transport routes will be managed by a range of capital works projects and there will have been a shift to greater public transport use for peak-hour travel. A major improvement in freight movements will have occurred through greater use of rail. Gateways to the state will reflect vibrancy and be welcoming to visitors.

Land at Outer Harbor and Osborne will be developed for a range of export, defence and maritime services industries. The Port of Adelaide will be a busy import/export port for the state as a result of improved services to ensure the efficient transport of goods and passengers, while other regional ports will have the capacity to support expanded export

aquaculture and fishing industries. Efficient transport logistics will support the movement of grain from farm to port around the state and the transport of timber from the South East to the port of Portland.

How we will get there

Priorities for the road network include the completion of the link from the Sturt Highway to Outer Harbor, including the Port River Expressway and the upgrade of Port Wakefield Road to expressway standard and the upgrade of the north-south corridor through metropolitan Adelaide. Initial work on the north-south corridor will include upgrades to South Road between Port Road and Torrens Road, the construction of an underpass on South Road at Anzac Highway and tunnels under the Grange and Port Road intersections.

Other road improvement projects, such as the upgrade of the Britannia roundabout and replacement of the Bakewell Bridge, will be completed.

More emphasis will be placed on maintaining existing road assets rather than extending the network. Priority will be given to safety related maintenance and upgrades on roads with high crash rates.

Redevelopment of the state's ports will be advanced to ensure more efficient access to international markets. The channel to Outer Harbor will be deepened and priority will be given to completing development of the deep-sea grain port and associated terminal at Outer Harbor.

Appropriately located wharfing and associated facilities will be developed and maintained to support growth in the tourism, fishing and aquaculture industries.

The development of more efficient land-based freight transport links to overseas markets is critical. Priorities are the improvement to the Eyre Peninsula grain transport system, completion of the Port River Expressway rail link and upgrade of the Le Fevre Peninsula rail corridor. Consideration will be given to the standardisation and/or upgrade of our rail network through Adelaide and the Mid North.

A shift to rail transport for passenger and freight movements will be encouraged where it offers environmental and economic benefits. Adelaide's urban passenger transport system will continue to be a cost-effective, environmentally friendly and modern metropolitan network. An extension of the Noarlunga rail line to Seaford will be investigated. Selected transport interchange facilities will be developed at strategic sites, e.g. Marion shopping centre (Oaklands Park). The Glenelg tram network will be upgraded by the purchase of new trams and track refurbishment. The tram line will be extended to North Terrace to provide a link to the Adelaide railway station. Further extensions of the tram line will be considered.

Land

Where we are now

The public and private sectors both play significant roles in the release and development of industrial and residential land throughout the state. The majority of residential land development projects are undertaken by the private sector. Government, in some instances, undertakes joint-venture activities with the private sector to facilitate social and environmental outcomes that are considered important for the wider community.

Recent government initiatives to promote the development of land for either industrial, commercial or residential purposes include the agreement for the Port Waterfront Redevelopment, continued development at Holdfast Shores, City Central, Mawson Lakes, Edinburgh Parks and a number of urban regeneration projects north and south of the city. A number of major residential developments led by the private sector are planned or in progress, including several high-rise developments in the CBD and near city locations.

Industrial estates have been developed in several regional centres to support industry growth, particularly in value-adding to primary production.

Initial work has been undertaken to secure a sufficient long-term supply of industrial land and to integrate land and infrastructure development. Key precincts for future industrial growth will include Le Fevre/Pelican Point, Dry Creek and Edinburgh Parks.

Where we want to be in 2015

The state will have ensured the timely release of a well-located supply of industrial and residential land to the market. Adequate supplies of land inside the urban boundary will have been made available as required for development. Infrastructure will be provided in an integrated and timely manner to support existing and proposed developments.

Legislative changes will have brought about reform of the planning system, and timelines for approvals will be reduced. Other processes affecting development will be streamlined and transparent and provide a high level of certainty for developers.

How we will get there

A strategy to identify, protect and facilitate the development of a 15 to 20-year supply of suitable industrial land will be developed. Provision of suitable sites for the state's strategic industries that have site-specific requirements will be essential.

The staged development and release of strategic parcels of industrial land at the Port Adelaide/Dry Creek/Wingfield EcoIndustrial Precinct, Le Fevre Peninsula and Edinburgh Parks and the planned establishment of the Osborne maritime precinct for construction of naval vessels will help the expansion of key export industries.

The development of industrial precincts close to existing infrastructure networks will be encouraged e.g. Technology Park, the Cast Metals Precinct, Lonsdale and Seaford Industry Park. The government will negotiate access to surplus Port Stanvac land for industrial use and investigate other investment opportunities for industrial sites in the south. Industrial estates to support value-adding activities in regional centres, including Kingsford Estate (Gawler), Mount Barker, Strathalbyn and other regional centres, will also be developed.

Infrastructure audits will be conducted in areas being considered for infill housing or industrial use to ensure infrastructure is provided in an integrated and timely manner to support land developments.

To ensure that residential land supply is sufficient to meet the needs of the market, greater consideration of demographic changes will be required in residential land supply planning. Planning for residential developments will be more closely integrated with infrastructure planning.

State and local government will jointly identify options for more strategic use of public land to deliver community services more efficiently. Work to improve the efficiency of the planning system will continue to receive high priority to provide a competitive business climate for investment in the state. These improvements will ensure the timely release and development of industrial and residential land throughout the state by the development industry

Information and Communications Technology

Where we are now

The rapid development of computer and telecommunications technologies has brought about major changes in the way we live, learn and work. Information and communications technology (ICT) infrastructure is essential for the delivery of modern digital services, ranging from telephone calls to super computing.

The State Government is dependent on ICT for its day-to-day operations and to deliver services to businesses and the community. The government has made a substantial investment over time in ICT infrastructure and equipment and is currently moving into a multi-provider environment for delivery of ICT services to government.

Recent improvements to the state's ICT capabilities include construction of the SABRENet broadband network connecting research and education sites, upgrade to the state's advanced computing capability, establishment of the Broadband Development Fund for new broadband in regions, the EduConnect project to increase broadband in schools, the CineNet broadband network for the film and multi-media industry and the \$5m Optus cable rollout.

Most legislative and regulatory powers for communications rest with the Australian Government. The market has been progressively deregulated since the late 1990s and there are more than 100 licensed carriers, although Telstra is still by far the largest and dominant player in most market segments, particularly in regional areas.

South Australia presents a relatively small market to telecommunications carriers and is often placed toward the end of national telecommunications product rollouts. While a number of national carriers have a presence in the state, their networks are generally concentrated in major population centres where there is sufficient traffic to justify investment.

Where we want to be in 2015

The overwhelming majority of South Australians will have access to online ICT services provided by a range of carriers in a competitive market environment. Technological advances will have brought about a fall in price and significant improvement in the range and quality of services. The purchasing power of state and local governments will have been leveraged to the benefit of all South Australians. The community will have convenient access to government, research and educational information programs. State Government operations will be fully interconnected within and across agencies and regions, enabling the government to extend and improve access to services. The state will have world-class connectivity to the international advanced computing and telecommunications network.

How we will get there

The State Government will work to influence developments in national telecommunications policy and regulatory arrangements for the industry in the interests of South Australia, and will work to ensure that the state receives its fair share of Australian Government funding for telecommunications facilities.

The State Government's own ICT infrastructure will be upgraded regularly to facilitate effective and efficient delivery of government services. Maintenance of appropriate capacity and security of the State Government's telephony, critical data networking and other shared ICT infrastructure and radio networks will be essential to service government and public communications requirements.

The government's purchasing power will be used to stimulate investment in broadband infrastructure and facilitate delivery of competitive broadband services by the private sector. The government will implement an ICT purchasing policy requiring collaboration and regional demand aggregation by government agencies to leverage opportunities for infrastructure development, particularly in regional South Australia.

Aggregation of demand by private users will also be an important means of encouraging commercial investment in ICT infrastructure, particularly in rural areas. The private sector and local government have an important ongoing role in progressing the rollout of broadband to strengthen the state's ICT capabilities.

The deployment and use of ICT infrastructure, including broadband, will be coordinated more effectively with the state's other physical infrastructure priorities, including transport, new housing and industrial developments and other built infrastructure.

Education and Training

Where we are now

South Australia's future depends on its capacity to participate in the 'knowledge economy'. Education and training is fundamental to building a stronger community and economy.

The government has invested heavily in the state's education assets in recent years to improve the condition of schools and pre-schools, following years of neglect. Over \$150 million has been allocated to major capital projects since 2002. There has also been an increased focus on maintenance works with an injection of \$25 million through the School Pride Program to supplement the annual \$40 million program.

Nevertheless, the majority of public schools are between 25 and 50 years old and some are not well suited to support the most advanced learning and teaching methods. Some of the existing infrastructure is under-utilised and poorly located in relation to areas of current and future need.

Recent initiatives in the area of post-secondary education include action to increase the accessibility of vocational education by upgrading bandwidth across most TAFE campuses in regional South Australia and the purchase of an online education system that supports e-learning across the state. The government has also committed to a program of investing in TAFE infrastructure, which includes the renewal and upgrade of the TAFE video conferencing network as well as computing equipment and other building support systems in key campuses.

Some TAFE facilities in regional areas need improvement, but metropolitan assets are generally good. The wide dispersal of TAFE sites opens up the potential for an increase in shared use with other sectors.

Support has been provided to the state's universities, especially in areas of research. This includes the Australian Centre for Plant Functional Genomics at the Waite Campus and facilities such as Glenthorne, which has been made available to the University of Adelaide.

The state has three well-established universities with a fourth, Carnegie Mellon, due to be opened in 2006. Full fee-paying international students are becoming more numerous, creating increased demand for accommodation.

Where we want to be in 2015

Childcare, preschool, primary and secondary learning will embrace a more integrated approach to service delivery through, co-location of early childhood and education services, greater integration of information technology, more networking among campuses, access on a seven-day a week basis and self-paced learning, a move to specialist schools and curricula, and the forging of closer links between schools and communities.

South Australians will have improved their overall level of educational attainment and a culture of lifelong learning will be developing. More students will be completing Year 12 or its equivalent and hold post-secondary school qualifications. The state's excellence in education provision will be reflected in a doubling of its share of overseas students making South Australia their destination of choice. A management program will have ensured that educational assets will be better located, maintained, used and integrated with other forms of complementary community use. More interstate or overseas universities will have established branches in South Australia.

How we will get there

An holistic approach to infrastructure planning will be instrumental in improving future education outcomes for the state. All education and children's services providers will adopt a coordinated approach to asset provision. Innovative approaches will be used to plan, build and use multi-purpose facilities incorporating educational and related or complementary public services. Opportunities to offer a continuum of services from childcare to high school, on a single campus, will be pursued while building closer links with TAFE and universities.

The focus of activity for vocational training will be to develop and implement an infrastructure model that supports shared use of multi-purpose facilities across a broad spectrum of campuses, while consolidating more specialised activities on lead campuses to improve asset performance and strengthen the TAFE link to growing industry clusters. A stronger link between the senior secondary school system and the vocational education and training sector will be established to drive coordinated outcomes.

TAFE campuses at Elizabeth and Nuriootpa will be upgraded, a centre for veterinary and applied science will be developed at the Gilles Plains campus, the consolidation of building and furnishing trades at Marleston will be completed and facilities for hospitality training in the metropolitan area will be further enhanced. Aquaculture and wine-related training capabilities will be strengthened, in the case of aquaculture through the Marine Innovation SA initiative.

Priority will be given to the upgrade and renewal of the TAFE ICT systems and the provision of sufficient broadband capability, particularly in regional areas.

Adelaide's international student numbers will increase as a result of improved school facilities and teaching and research facilities in high-demand university courses such as business, information technology and engineering, supported by dedicated accommodation services. Flinders University will advance plans to establish a pre-university teaching centre for international students. Developing the opportunity for a prestigious fourth university in Adelaide will also add to the badging of Adelaide as an excellent destination for international students.

Science, Technology and Innovation

Where we are now

Science, technology and creativity are critical elements in fostering economic growth and prosperity. The government's 10-year vision for science technology and innovation, STI¹⁰, provides a framework for strengthening the state's research and development (R&D) and innovation performance.

Initiatives already transforming STI in the state include the newly-built Australian Centre for Plant Functional Genomics facilities at the Waite Campus, an incubator project at the expanded Thebarton Bioscience Precinct to accelerate biotechnology business development and the ICT initiatives discussed earlier. The Australian Government has recently provided funding for Cooperative Research Centres (CRCs) in automotive manufacturing, environmental, water and agribusiness R&D.

The Government has invested in the establishment of the Centre for Excellence in Defence Industry Systems Capability to research new systems-integration technologies for the defence industry, and help small-to-medium companies do more in systems and software engineering. This is part of the Government's push to further develop Adelaide as the defence capital of Australia.

Critical to realising the government's STI¹⁰ vision is building STI-related infrastructure, including buildings, facilities and major equipment that support organised research.

A series of initiatives from Thinker in Residence, Baroness Professor Susan Greenfield, including the National Science Media Centre, are being considered.

Where we want to be in 2015

South Australia will have an STI system that exceeds international standards. Cooperative investment and practices between business, the education and training sectors and government will have created a vibrant knowledge-based community. The state will have attracted high-calibre researchers and other STI professionals.

The Adelaide Innovation Constellation as described in STI¹⁰ will have taken shape. Public and private business partnerships and investments in world-competitive STI infrastructure will boost the state's economy and exports as well as help remediate its inland water, land and coasts.

Many more of the state's enterprises will be knowledge-based exporters. Industry associations and industry-led clusters in areas such as water, defence, environment and health will thrive, supported by precincts that act as communication networks and market channels for business people and academics alike.

How we will get there

Anchored on the high-speed broadband connections provided by SABRENet, the innovation, education and training precincts forming the Adelaide Innovation Constellation will be established. This will be facilitated by securing maximum possible funding for STI infrastructure from the Australian Government over the next five years.

The development of collaborative approaches by research organisations, industry and government to the building and use of STI infrastructure will be critical. Priorities for STI infrastructure development will be identified, consistent with the STI¹⁰ vision, following the completion of an audit of existing infrastructure.

Master plans for the development of each of the precincts will be completed and priority projects selected.

The building of new facilities at the Waite precinct to house the major R&D players in the wine industry in the one location is a high priority to support the growth of this key export industry.

The state's fishing and aquaculture industries will also be supported through the establishment of the Marine Innovation SA facilities.

Incubator facilities planned for the Mawson and Waite precincts will provide laboratory and office space for early stage defence, agriculture and wine firms.

A Southern Innovation and Technology Transfer Centre will be investigated for the Flinders Precinct to stimulate the development of new technology industries in southern Adelaide.

Co-location of manufacturing R&D activities will be pursued, including those of the CSIRO Division of Manufacturing and Infrastructure Technology and the University of South Australia, to form a new SA Mawson Centre for Advanced Manufacturing. A complementary proposal for the establishment of a Centre for Innovation to accelerate industry take up of emerging advanced manufacturing technologies will also be developed, with this capability networked across all precincts.

Justice and Emergency Services

Where we are now

Significant improvements to the state's justice and emergency services infrastructure have been made in recent years. Recent government initiatives include provision of a new court complex at Port Augusta; replacement police stations and courthouses at Victor Harbor, Berri and Port Lincoln, new police stations at Gawler, Golden Grove, Mount Barker and Aldinga, and a courthouse at Port Pirie. The government has supported improvements to prison infrastructure by approving additional capacity and support facilities at Mobilong Prison and funding projects designed to upgrade safety, security and building-code compliance.

Substantial investment has been made in ongoing replacement programs for fire appliances, equipment and buildings, including major Metropolitan Fire Service (MFS) facilities at Elizabeth and Golden Grove. In particular, significant support has been provided for the development of improved radio and data communications systems, including audio management and computer-aided dispatch systems designed to streamline emergency response capability.

Where we want to be in 2015

The provision of the necessary building and ICT infrastructure will help the police to provide greater security to the community, particularly in rural and remote areas, and enable the courts to operate more effectively. The operations of prisons will have improved to meet demand more effectively and provide a cost-effective prison system. Provision of appropriate appliances, equipment, stations and training will enable fire and emergency services to have a greater capacity to provide for a safer community.

How we will get there

Crime and disorder will be dealt with effectively in the state through the provision of an appropriate level of fit-for-purpose court, prison and police facilities, incorporating modern ICT systems.

There is a need to review the operations of the Supreme Court building.

The government will consider options for reconfiguring the prison system to achieve more cost efficient arrangements and a safer community through better rehabilitation outcomes.

Training infrastructure is critical to support the provision of efficient and effective police and emergency services. Options for the upgrade and integration of training facilities will be developed.

An ongoing program to upgrade ICT equipment and software for all justice and emergency services will be implemented.

Upgrades to a number of fire and emergency services stations are proposed across the state. In addition, ongoing upgrade and replacement of emergency services equipment will be required to maintain appropriate service standards.

Recreation and Sport

Where we are now

The government has recently developed a state-level Sporting Facilities Strategic Plan to help guide future infrastructure investment decisions. Other recent initiatives include an upgrade to the external netball courts at ETSA Park, construction of new safety baffles at State Shooting Park and installation of a new scoreboard and timing system at Adelaide Super-Drome.

Ageing infrastructure, increasing maintenance requirements and user expectations must be addressed if the state's sports and recreation facilities are to be maintained as fit for purpose and meet the needs of the community.

Infrastructure gaps in some communities include inadequate pool facilities, an inequitable distribution of indoor recreation and sport centres and a need for more developed walking trails to support recreational and tourism activity.

Where we want to be in 2015

Programs will have been implemented to increase the use and improve the quality of existing facilities, and to develop new infrastructure to meet needs and maximise opportunities. Expansion and greater use of key sporting hubs will have addressed the current gaps in elite and community-level sporting facilities. There will be increased use of government land and buildings, particularly education facilities, which will help meet community recreation and sporting needs.

How we will get there

A new approach to providing recreation and sporting facilities over the next five and 10 years will focus on the design, provision and distribution of fit-for-purpose facilities throughout the state to improve access and use at the community level. Coordinated action by State and local governments and the private sector will be used to develop sustainable, multi-use and adaptable facilities to meet changing community needs.

The government will work with the sports industry to attract and retain major sporting events. Partnership arrangements will be utilised to ensure facilities are developed that are capable of hosting international and national events and accommodating competitors and spectators.

Specific potential projects include a state aquatic centre, a permanent criterium cycling track and shelters for external courts at ETSA Park. The feasibility of South Australian Sports Institute's elite sporting facilities being redeveloped within a strategically located sports precinct will be investigated.

Cross-government policy and design guidelines to ensure local school sport facilities maximise school and community use will be developed. The shared use and take up of other publicly-owned sporting infrastructure through partnership opportunities between State and local government will be explored.

The focus of community-level funding should be towards areas with demonstrated needs and identified infrastructure priorities e.g. community-level swimming pools, indoor courts, recreational trails and soccer pitches.

Strategic plans for recreational and sporting infrastructure are being prepared, including a recreational trails strategy and a state sports park strategic plan. The recommendations in these plans will be prioritised and implemented as appropriate. In addition, local and regional recreation and sport and open space strategies will be developed and implemented.

Arts, Culture and Heritage

Where we are now

South Australia has a major investment in its arts and cultural infrastructure, which includes assets such as heritage buildings, entertainment venues, the nationally recognised collections at the Art Gallery of South Australia, South Australian Museum, State Library of South Australia, History Trust of South Australia museums and Tandanya. These assets together with organisations such as the Adelaide Festival Centre, Adelaide Entertainment Centre, South Australian Film Corporation and events such as the Adelaide Festival, Adelaide Film Festival, Fringe Festival and Womad will enable South Australia to initiate and promote major art works, a diversity of live performance and a series of world-class collections.

The state's achievements on the stage and its critically acclaimed festivals and events are supported by an ongoing program to manage and improve the state's arts and cultural infrastructure. The master plan for the Adelaide Botanic Gardens and Mount Lofty Botanic Gardens is being implemented. The upgrade and heritage refurbishment of the State Library of SA has been completed and a partnership with Adelaide City Council to redevelop the public realm of North Terrace is underway.

South Australia has some of the nation's best arts collections, heritage items, galleries and museums. Preserving, enhancing and showcasing these valuable assets requires significant ongoing investment.

Where we want to be in 2015

South Australia will have implemented a coordinated strategy to manage, preserve and add value to its heritage buildings, items and places. The condition of the state's art, cultural collections and public spaces will have been maintained and enhanced as a legacy for future generations. In addition, innovative ways will have been found to display and make art and cultural collections accessible to the South Australian community and international audiences. The capacity and output of South Australia's film and creative industries will have provided the state with a higher international profile, making a significant contribution to the economy.

How we will get there

Improved conservation and management strategies are needed to maximise the economic and social benefits of the state's heritage assets. A 10-year management plan will be developed to ensure best-practice conservation and maintenance of the state's heritage and cultural assets under the control of the State Government. Priority will be given to developing a strategy to bring heritage buildings to an acceptable standard for disability access. Plans to upgrade the Old Adelaide Gaol, the Thebarton Police Barracks, the Migration Museum and parts of the South Australian Museum will also be considered.

More than 90% of the state's art and cultural collections are currently stored away from public view. A strategy will be developed to improve storage facilities and develop new opportunities for displaying these collections more effectively and using more of them for improved tourism, educational and research outcomes.

Redevelopment of the Adelaide Botanic Gardens and Mount Lofty Botanic Gardens will be completed. Work with the Adelaide City Council to upgrade North Terrace will be completed.

To ensure ongoing public access to performing arts companies, the upgrade and refurbishment of the Adelaide Festival Centre and environs will be completed, as will the upgrade of the Adelaide Entertainment Centre and the state's regional theatres in Whyalla, Mount Gambier, Port Pirie and Renmark. High priority will be given to finding a new base for the South Australian Film Corporation.

Health

Where we are now

Responsibility for the health system in South Australia is distributed across three levels of government and the private sector, comprising a mix of public, private and not-for-profit service models.

The State Government has undertaken extensive redevelopment programs over recent years at the Lyell McEwin Hospital, the Queen Elizabeth Hospital and the Royal Adelaide Hospital, with further work being considered at the Repatriation General Hospital and the Women's and Children's Hospital. Redevelopment works and facility upgrades have also been undertaken at country hospitals and new aged care facilities have been constructed.

In the last three years the government has made a significant commitment to building the foundation for a modern mental health system through considerable investment in new acute services in mainstream hospitals, and has begun to build the capacity of community-based services.

The State's health infrastructure includes hospitals, emergency transport and retrieval services, the Institute of Medical and Veterinary Science, general practices, community health centres and clinics, mobile health clinics and a range of specialised facilities.

The health system is under pressure to contain costs in the face of rising demand due to population ageing, other demographic changes and technological advances.

Where we want to be in 2015

The health system will deliver more integrated, coordinated and localised services to meet the needs of an ageing population more effectively. The enhanced focus on primary health care, including better early intervention, prevention and management of chronic disease will begin to show in improvements in the health and well-being indicators for all South Australians. The state's economy will be stronger as a result of improved quality of life and better health outcomes. South Australia will be at the forefront in health service delivery, research, use of ICT and new treatment techniques, which are more accessible to the public through community-based health care services.

How we will get there

The initial focus of change is to reorient the health system by moving the emphasis to early intervention through primary health care centres while maintaining acute care capability. This will require the upgrade and expansion of infrastructure to enable integrated provision of community-based health services by government, private and not-for-profit service providers. The aim will be to maximise the use of existing infrastructure, minimise duplication and integrate the provision of services e.g. by establishing primary health care facilities in selected sites across the state close to transport links, schools and shopping centres.

In parallel with the development of primary health care networks, the quality and safety of hospital services will be maintained through redevelopment and major equipment repair and replacement. State-wide hospital infrastructure and equipment replacement and development programs will be implemented.

The government plans to create culturally appropriate primary health care facilities for Aboriginal people that include supported accommodation services for people in crisis or requiring support after periods of hospitalisation. New local primary health care facilities, child development and mental health community rehabilitation centres will be established.

To support the shift to primary health care, collaborative approaches to the provision of transport and health services will be developed to provide better access to health services throughout the state.

Better health connectivity through the use of improved ICT systems will be critical to the success of the shift toward primary health care. Use of more advanced systems will improve access to information needed for better clinical and consumer decision-making, as well as planning for future service delivery.

Redevelopment of infrastructure will be required to support medical and population health research, commercialisation and technology transfer in both the public and private sectors.

Community Services and Housing

Where we are now

The State Government is committed to the reform and renewal of the child protection system and there has been unprecedented collaboration and cooperation to improve and strengthen this system for children and their families. Additional housing has been purchased to provide transitional accommodation services and emergency care to children and young people. Extra houses for women and children fleeing domestic violence were obtained in June 2004.

Despite recent improvements, the state faces major challenges in addressing the needs of vulnerable children and families, people with disabilities and indigenous people, particularly in remote communities.

South Australia has a strong and efficient housing industry that works in partnership with government to provide high quality and affordable housing. South Australia has led the country in the creation of public housing, Aboriginal housing, community housing and home ownership programs. It has recognised the benefits of using land supply, planning policies and urban renewal to create an enviable lifestyle and to drive economic growth.

However, the state's housing system faces challenges arising from changing community needs and expectations and structural changes in the market. These include a targeted population growth of two million by 2050 combined with urban containment strategies, which will lead to higher residential densities in some areas; increased pressure on fringe areas and locations with limited infrastructure and services; the continued move to de-institutionalisation; and population ageing and the increase in the percentage of smaller households.

Historically, a significant proportion of public housing stock has been developed in high concentrations and in ways that do not meet modern needs. The government's capacity to continue to deliver public, community and Aboriginal housing services is constrained by declining Australian Government support, and increased costs associated with an ageing asset base and accumulated debt.

Where we want to be in 2015

South Australia will have strengthened its role as the provider of high need housing services through its social housing agencies. It will also be a leader in affordable housing innovation and a partner in providing and developing affordable housing in our community. Particular emphasis will have been given to improved services in the APY Lands. Innovative new approaches to improve the supply of affordable and high-need housing will be in operation. Accelerated urban regeneration projects in disadvantaged areas will have contributed to the achievement of SASP targets in education, employment, crime reduction and health. There will be increased attention to ecological sustainable development (ESD) principles in residential and urban design. Improved accommodation options will be available for seniors and people with disabilities, including adequate supported accommodation facilities.

How we will get there

The recently released Housing Plan for South Australia will provide the overarching direction for social and affordable housing initiatives in South Australia over the coming years.

It is critical that the supported accommodation needs of the homeless, people with disabilities and other high-needs groups be addressed. The supply of transitional and long-term housing options for Aboriginal people moving from rural areas and into regional centres will be expanded and coordination of infrastructure for essential services in Aboriginal communities improved. The Government's capacity to respond to the needs of homeless people will also be improved through the development of increased transitional, crisis and supported accommodation options. Innovative accommodation and support for people requiring assistance to maintain successful independent living in the community will be developed.

It will also be a leader in affordable housing innovation and a partner in providing and developing affordable housing in our community.

There will be increased support for ageing in the home and community-based accommodation options for people with a disability as an alternative to institutional care. Completion of the transition from institutional to community-based housing in the disability sector is a high priority.

The government will progress opportunities for the co-location of health, education and community services to achieve greater integration between agencies responsible for providing services to children. Coordination of infrastructure provision to support delivery of essential services in the APY Lands will be improved.

The State Government aims to use its housing assets and support services and infrastructure to improve the sustainability of communities and the quality and affordability of housing. Location, access to transport and services, community support and employment are crucial aspects of a healthy community.

The government aims to establish new joint-ventures between government, not-for-profit organisations, the private sector and local government to develop new affordable and high-needs housing and to support community aspirations for home ownership. In addition, affordability objectives will be incorporated in the planning system.

The government will work with local government and the private sector to stimulate market led responses to housing supply linked to rapid regional industry expansion and associated seasonal worker accommodation needs.

Urban regeneration in areas of disadvantage, including the Parks, Salisbury North and Playford North, will be accelerated to improve amenity for tenants and expand housing choice. Higher-density residential development near activity centres and transport nodes will be encouraged with support for more intensive infill redevelopment in appropriate urban areas through planning for land use and infrastructure augmentation. The greater uptake of ESD technologies in new residential developments will be encouraged.

Energy

Where we are now

The commencement of national energy markets and the privatisation of the South Australian energy industry have seen responsibility for energy supply transferred from government to the private sector. Under public ownership, supply augmentation costs were funded mainly by the community, partly through non-transparent cross-subsidies and/or long amortisation periods. Under private ownership, augmentation decisions are made on the basis of returns to shareholders and generally involve shorter payback periods. Electricity customers have experienced significant price rises following privatisation.

Although private companies now operate the electricity industry, the government has acted to reclaim a significant role in protecting the interests of the public.

The Essential Services Commission of South Australia (ESCOSA) has been established as a powerful regulator with a key objective of protecting the long-term interests of small energy customers. The government has also legislated for penalties of up to \$1 million for companies that breach licence conditions, and negotiated an agreement with the other states to support harsher penalties of up to \$1 million for electricity generators that spike prices in the electricity market by using inappropriate rebidding strategies.

The demand for electricity peaks on hot summer days primarily as a result of the increased use of air conditioning. The very high cost of meeting peak electricity demand increases the annual cost of supply to all consumers. Other states are also experiencing this peak-demand situation.

As a participant in the national electricity market (NEM), South Australia is supplied by a combination of local generation and energy imported from other states via the Murraylink and Heywood interconnectors. Forecast growth in demand for electricity shows that the state will need additional supply capacity toward the end of this decade. There are a number of options ranging from investment in new base-load generation or interconnector capacity through to increased use of renewable energy sources.

South Australia is highly dependent on gas for electricity generation and industrial use. The gas basins supplying the state are slowly depleting, signalling the future need for pipeline connections to new more distant basins.

The government worked with energy companies to ensure the completion of the SEA Gas pipeline from Victoria. The new pipeline has increased competition in the gas and electricity markets and improved security of supply.

The SASP targets an increase in the use of renewable energy to 15% within 10 years. South Australia leads the nation in wind capacity with nearly 500MW under construction or installed by 2006. The government approved the state's first wind farm at Starfish Hill and the Lake Bonney Stage 1 and Canunda wind farms are already supplying energy into the market. A number of other initiatives will contribute to the target, including a four-year extension to the government's subsidy for solar hot water systems; solar powering 250 schools by 2014; and the progressive installation of solar power in key government buildings, including Parliament House, the Art Gallery of South Australia and the South Australian Museum.

Other recent developments include facilitation of the state's first five-star green and energy-rated office accommodation through a government tenancy commitment, provision of government subsidies to minimise the impact of retail contestability in the gas market, provision of government funds to upgrade reliability of Kangaroo Island power, construction of a peaking plant in the Barossa and refurbishment of Playford power station.

Where we want to be in 2015

The NEM will have further developed and, as a result, South Australia will have a more reliable and affordable supply of energy to meet the needs of the state. New economic activity will have improved the load factor for base-load electricity generation, and the application of demand-side measures will ensure that the peak load is better managed. In keeping with the SASP target, government will have reduced its energy use by 25% while renewable technologies will be effective contributors to the state's energy supply. Plans will be well advanced to provide South Australia with access to more gas supplies at competitive prices and to position the state in the national gas grid with connections to gas fields to the north of Australia as well as the south and east.

How we will get there

The State Government will promote and play its part in the development of an open, efficient and fully competitive national energy market to strengthen investor confidence and improve the overall supply-demand balance for the state. Additional private investment to augment electricity generating capacity in South Australia will be encouraged.

The electricity transmission and distribution network throughout the state will need to be upgraded and expanded to meet growth in industry, residential and commercial demand. The supply-demand balance for electricity will be improved through the adoption of demand-side measures that contribute to more efficient energy use and improved use of existing infrastructure.

Steps to improve the security of South Australia's gas supplies will be achieved, in particular connection of the SEA Gas pipeline to the South East gas system and to the Moomba-Adelaide Pipeline (MAP). In the longer term, further investment in gas infrastructure to connect South Australia, via the Moomba area, to gas basins to the north and north-west will be encouraged.

Research and development into promising renewable technologies will be encouraged including support for investigations for geothermal power opportunities currently being evaluated in northern South Australia

The government is committed to reducing greenhouse gas emissions and will work with the Australian and other state governments and industry to grow the renewable energy sector.

Water

Where we are now

The South Australian Government has introduced a range of measures to improve the management of water resources. The government was the first to establish a designated Minister for the River Murray and enact specific legislation, the *River Murray Act 2003*, to protect, restore and enhance the River Murray. Further, the South Australian Government played a key role in securing a national agreement to return 500 gigalitres per annum of environmental flow to the river. Significant funds have been allocated to a River Murray rescue package to undertake environmental works and other measures along the river.

Decisive action has been taken by the government to protect the water resources of the Mount Lofty Ranges. Significant progress has also been made in improving the management of the waters of the Lake Eyre Basin, Great Artesian Basin, Eyre Peninsula and the South East.

Permanent water conservation measures introduced for all SA Water customers are helping to reduce per capita consumption. Several recycling water schemes, stormwater and wastewater re-use schemes have been implemented to reduce stress on the state's freshwater resources.

There is increasing pressure on the long-term viability and sustainability of South Australia's water sources as a result of past poor land and water management practices, which will be strained further by population increases and a projected reduction in rainfall as a result of climate change. For South Australia, the health of the Murray-Darling river system is a top priority.

Past stormwater management practices and a poorly maintained network of stormwater drains have left some areas of Adelaide and other regional centres vulnerable to flooding.

While significant advances have been made in the re-use of treated wastewater in the Northern Adelaide Plains and the Willunga Basin, reducing the discharge of treated effluent into the sea, many parts of regional South Australia require improved wastewater disposal systems.

Action has also been taken over recent years to place water within the wider context of natural resources management. Under the *Natural Resources Management Act 2004* water resource management is now being integrated with other issues, such as dryland salinity and wetland ecology, as well as soil conservation and pest plant and animal control.

Where we want to be in 2015

Sustainability of the state's water supplies will have been enhanced through substantial progress toward an additional 1500 GL of environmental flow for the River Murray and the

effective management of the impact of saline water on the river system, as well as the successful management of the state's other water resources. The National Water Initiative will have been implemented and the pricing of urban and irrigation water addressed. Water will be allocated toward uses of greatest benefit to the state. Improved water-use efficiencies will have been achieved among all water users, particularly water-intensive primary industries. Metropolitan Adelaide stormwater systems will have been upgraded through our water proofing Adelaide initiative with greater beneficial re-use of stormwater and wastewater. The impact of coastal sewage treatment plants on adjacent environments will be reduced. Wastewater will be managed effectively throughout South Australia.

How we will get there

High priority will be given to the sustainable use of the River Murray by targeting future irrigation developments away from the river basin or to low salt impact areas, and developing further salt interception schemes. Barriers to water trade will be progressively removed through the National Water Initiative.

Sustainable use of the Mount Lofty Ranges Water Catchment will be achieved by allowing only land uses that have beneficial or neutral impacts on the quality of water harvested from the catchment. The government's Water Proofing Adelaide strategy and urban stormwater initiative will improve water management in urban environments.

The State Government, working closely with local government, will develop a program of priority stormwater works, based on appropriate flood management standards, to reduce flood risk and improve the quality of stormwater discharged to the environment as well as promoting cost-effective stormwater re-use opportunities. Improvements will be made to the management and operation of the Patawalonga and the Barcoo Outlet.

Joint State and local government action will be taken to reform the septic tank effluent disposal scheme (STEDS), including the establishment of works priorities, funding options and innovative management arrangements to improve its performance.

Opportunities for further re-use of wastewater from Bolivar, Glenelg, Christies Beach and other wastewater treatment plants will also be examined.

The development and evaluation of options, including desalination, to augment water supplies in regional and remote areas will be pursued.

Ongoing investment in refurbishing and upgrading the state's water infrastructure, including reservoirs, dams, water and wastewater networks will improve operational efficiency and service quality.

Natural Assets

Where we are now

Sustainable use of natural assets is vital for South Australia's future development. The 2003 State of the Environment Report provides an assessment of the condition of the state's natural assets, the pressures on them and current responses to these pressures.

The recent introduction of the *River Murray Act 2003* and the *Natural Resource Management Act 2004* provide the basis for major reform of the way the state develops its natural assets. Under this natural resource management framework, new management practices and investment strategies will enable long-term improvements to natural assets and provide a sound basis for a sustainable future.

More than 20% or 20 million hectares of South Australia has been set aside for conservation under the parks system and a further half a million hectares are protected by voluntary heritage agreements, largely as a result of South Australia's landmark vegetation laws. Improved land management practices have helped reduce soil loss and better irrigation techniques have increased the efficiency of water use. The declining health of the River Murray is now high on the public agenda and the recovery of a number of threatened species, including the Yellow-footed Rock-wallaby, Glossy Black Cockatoo, Tamar Wallaby and the Brushtailed Bettong have been success stories.

Where we want to be in 2015

South Australia will have made significant progress in conserving and replenishing its natural assets, regardless of ownership. Public lands across the state will showcase nature conservation and attract widespread visitor interest. Regional natural resource management boards together with government agencies will be delivering management programs and investment strategies that improve the condition of natural assets. Consideration of the long-term effects on the state's natural assets and sustainability principles will be integrated into daily decision-making.

How we will get there

It is necessary to develop and implement long-term plans for the conservation of key environmental areas. The government will establish five biodiversity corridors linking public and private lands and implement regional natural resource management strategies for the conservation and sustainable use of natural assets across the state.

The state's natural assets will be managed by both public and private landholders, and success will depend on the development of strong partnerships between the community and all spheres of government.

The drainage program in the upper South East and the salt interception schemes along the River Murray will be completed.

Infrastructure will be developed to protect and conserve parks and reserves and to maximise the benefits from increased tourism. An extensive redevelopment of Belair National Park to preserve its heritage values and improve visitor facilities has already begun. Tourism activity will be encouraged through the establishment of iconic sites for promoting the conservation of natural and cultural heritage. Investment in tourism accommodation in regional areas will be promoted to facilitate access to strategic tourism assets.

The Heysen Trail will be upgraded as an internationally renowned walking trail. Improved environmental and planning frameworks will be established to manage the increasing and often competing demands on coastal, estuarine and marine assets. This will be critical to the successful implementation of the Living Coast Strategy.

Waste Management

Where we are now

Measures taken by the South Australian Government were successful in ensuring that the state did not become a radioactive waste dump for the rest of Australia. South Australians are now leading the way in efforts to manage the state's waste responsibly. The state's first comprehensive waste plan is being developed to improve practices further.

The State Government is also working closely with local government to support the development of regional waste management plans, which will address waste infrastructure issues.

At present, metropolitan and regional communities rely on landfills to dispose of household and business waste. This practice is not sustainable. Waste disposal in landfills creates greenhouse gas emissions and other adverse environmental impacts, as well as removing the potential to derive higher value from materials through resource recovery and recycling.

Currently, about 65% of all recyclable materials are diverted from landfill, placing South Australia at the forefront of waste recycling in Australia. Approximately 88% of South Australian councils provide a kerbside recycling collection service and/or a drop-off recycling centre.

Where we want to be in 2015

Metropolitan Adelaide and regional South Australia will have integrated waste management partnerships and facilities in place that minimise waste destined for landfills and maximise recycling opportunities. South Australia will also showcase best-practice ecological industrial precincts with supportive planning policies and infrastructure, encouraging operators to extract and convert waste into valuable resources for domestic and export markets.

How we will get there

The state waste strategy will provide direction on the management of waste, including the planning and coordination of the supply of appropriately zoned, located and serviced land to accommodate waste recovery and recycling infrastructure.

The maintenance of an appropriate range of high-quality private sector waste material recovery, recycling, treatment and disposal facilities will be encouraged. Additional enclosed organic processing facilities will be required in the northern and southern metropolitan area, as well as additional domestic and industrial material recovery and recycling facilities to complement existing operations. New open windrow-composting facilities to service the metropolitan area and nearby rural communities will also be developed.

Approvals for new landfills to service metropolitan Adelaide will be discouraged while investigations into opportunities for alternative waste treatment and processing technologies to replace landfills are undertaken. Investigations and planning for the release of land at the EcoIndustrial Precinct will be completed.

Collaborative regional waste management strategies involving local councils and industry will need to be developed. Partnerships with the transport industry and new transport opportunities to encourage and increase the level of resource recovery and recycling in regional areas will be explored.

The government will promote the maintenance of an appropriate range of high-quality private sector recycling, treatment and disposal facilities for hazardous waste and will take steps to implement Environmental Protection Authority (EPA) recommendations to ensure appropriate management of radioactive material.