



InfrastructureSA

# CAPITAL INTENTIONS STATEMENT 2021

[infrastructure.sa.gov.au](https://infrastructure.sa.gov.au)



Image courtesy of South Australian Tourism Commission  
Photographer: Michael Waterhouse

# SUMMARY CONTENTS

<b>Introduction</b>	<b>2</b>		
Infrastructure SA	2	Barossa Valley Region New Water Supply	13
Capital Intentions Statement (CIS) scope	2	Digital infrastructure	15
CIS framework and methodology	2	Gawler River flood mitigation	15
		Sturt Highway and Truro Bypass	16
<b>Review of the 2020 CIS</b>	<b>5</b>	Augusta Highway	16
		Hydrogen export facility	17
<b>Existing infrastructure commitments</b>	<b>7</b>	Curtis Road duplication	17
Impact of COVID-19 and economic stimulus response	7	<i>Social infrastructure</i>	18
Forward funding commitments	8	Barossa Hospital	18
		Forensic Mental Health Services facilities	18
<b>Infrastructure Priority List</b>	<b>9</b>	Northern Adelaide Older Persons Mental Health Facility	19
		South Australian Sports Institute	19
<b>Key project recommendations</b>	<b>11</b>	Correctional Services' rehabilitation facilities	19
Projects recommended for investment decision	11		
Rostrevor High School	11	<b>Attachments</b>	<b>20</b>
SA Pathology facilities	12	1: Current forward estimates	20
Inner city multi-purpose arena	12	2: Infrastructure Australia Infrastructure Priority List – South Australian projects	26
Recommendations for business case development	13		
<i>Economic infrastructure</i>	13		
Northern South Australia Productive Water Security	13		

## Acknowledgement of Country

Infrastructure SA acknowledges and respects Aboriginal people as the State's first people and nations, and recognises Aboriginal people as traditional owners and occupants of South Australian land and waters.

Infrastructure SA acknowledges that the spiritual, social, cultural and economic practices of Aboriginal people come from their traditional lands and waters, and that Aboriginal people maintain cultural and heritage beliefs, languages and laws which are of ongoing importance today.



# INTRODUCTION

## Infrastructure SA

Infrastructure SA (ISA) was established and operates under the Infrastructure SA Act 2018 to serve as an independent advisory and assurance body in relation to major State infrastructure projects.

ISA is required to issue a 20-Year State Infrastructure Strategy (Strategy) assessing the needs, strategic goals and priorities for infrastructure in the State for the following 20 years. In conjunction with the Strategy, ISA is required to prepare a Capital Intentions Statement (CIS), updated annually, focusing on infrastructure priorities within the following five years.

ISA's role is to promote the adoption and use of policies, practices, information and analysis to support sound decision-making in relation to infrastructure.

The Statement of Expectations issued by the Premier of South Australia outlines several matters in relation to the CIS, including monitoring implementation of recommendations made in the preceding CIS and the development of a revised assessment framework.

## Capital Intentions Statement scope

The CIS identifies major infrastructure projects or programs which, in ISA's assessment, should be given specific consideration or implemented in South Australia as a priority within the next five years. Projects that are already underway or have been allocated funding are specifically excluded from consideration in the CIS. In order to provide greater context and background, this document outlines major projects that have been funded, appear in the current forward estimates and are currently being implemented.

In preparing this CIS, ISA has regard for the first Strategy prepared by ISA and adopted by the Premier in May 2020. ISA has also undertaken consultation with the relevant public sector agencies, councils and industry to determine projects currently under consideration and the respective priorities and timeframes for each. ISA is committed to ongoing engagement with relevant stakeholders to understand the major infrastructure needs for South Australia.

This CIS examines only those new projects that are large in terms of capital value, generally greater than \$50 million. All smaller capital value projects or those which are anticipated to commence business case development or implementation beyond the five-year time horizon have been excluded from consideration and may not appear in this document. It is recognised that further planning work is required on many of the identified priorities before specific solutions can be identified.

In preparing this CIS, ISA has been mindful of the impacts that COVID-19 has and will continue to have on the economy and the role infrastructure can play in the recovery phase. This includes direct investment and employment in infrastructure projects as well as positioning the economy to rebound quickly through efficient supply chains. The COVID-19 crisis has had significant impacts on government budgets across the globe and, going forward, this will make the efficient prioritisation of capital budgets even more important.

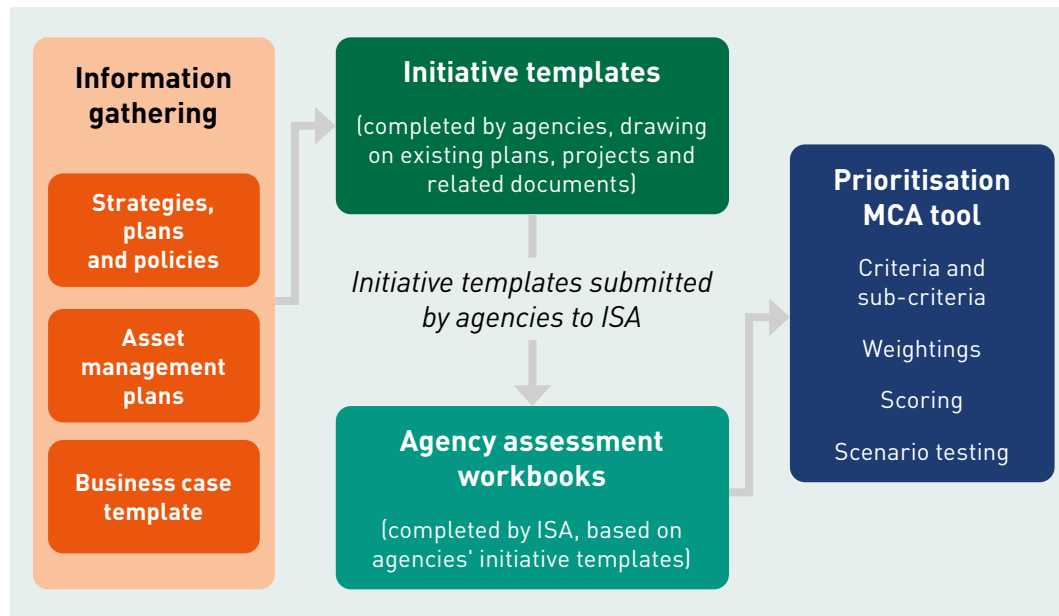
The CIS will also further inform the State's future submissions to Infrastructure Australia (IA) and the Infrastructure Priority List (IPL).

## CIS framework and methodology

The CIS represents an opportunity for ISA to provide a well-informed, contemporary view on which infrastructure initiatives should be prioritised to deliver improved outcomes for South Australia. This document draws on a diverse range of projects, initiatives, strategies and plans to provide a consolidated view of initiatives to be advanced as a priority over the subsequent five-year period. The CIS will serve to inform State Government (Government) and assist its infrastructure prioritisation and efficient allocation of capital through the budget process.

ISA has developed a framework, guidance material and a prioritisation tool to support the CIS process. This framework is designed to assist agencies in formulating submissions and ensure these are compiled in a standardised format. This has assisted ISA in undertaking a systematic assessment and prioritisation of all submissions.





**Figure 1:**  
CIS framework

As one of the aims of the CIS framework is to improve the visibility of the pipeline of projects under development, the design of the framework also caters for those initiatives which may not have been submitted through ISA's assurance framework and that are in their early stages of development.

ISA has used a weighted Multi-Criteria Analysis (MCA) process to inform the prioritisation of initiatives for inclusion in the CIS. This sets out key strategic, economic, financial, environmental and social criteria against which proposals were measured. Emphasis was placed on problem/opportunity identification, specification of desired outcomes and strategic alignment supported by evidence.

It is anticipated that over time there will be greater depth of evidence and quality of business cases for prospective major infrastructure projects, thereby allowing more granularity, rigorous assessment and prioritisation.

The CIS represents ISA's view of the significant infrastructure projects that should be prioritised for consideration. However, there may be many credible, feasible projects that are not specifically recommended in the CIS, but which may have considerable merit. These projects will be considered in future versions of the CIS as the evidence base is strengthened.



Image courtesy of South Australian Tourism Commission.  
Photographer: Mark Lane

# REVIEW OF THE 2020 CIS

ISA published the first CIS in May 2020. This initial CIS made several recommendations which are summarised below. Significant progress has been made in addressing several of these recommendations in the past year.

## **Greater investment in asset maintenance in accordance with well-developed asset management plans.**

Agencies have demonstrated increased focus on asset maintenance; however, more work is still needed to improve the maturity of strategic asset management across all sectors of government. In particular, the condition of the existing asset base needs to be understood and detailed asset management plans developed, which are then monitored for ongoing compliance. ISA recommends this becomes a key agency reporting metric.

IA has included a priority initiative in the IPL for a program of works to invest in maintenance upgrades across the South Australian road network, which addresses the significant backlog. Further funding for road maintenance was announced as part of the economic stimulus package.

## **Government develops detailed investment cases for private sector investment in water infrastructure to expand production to meet global demand for produce from the Barossa, and copper and other minerals in the Far North.**

ISA, in conjunction with Primary Industries and Regions SA (PIRSA), Department for Energy and Mining (DEM), Department for Environment and Water (DEW) and SA Water, is progressing further analysis on several water projects, in support of funding for detailed business cases. Two of these projects are now included on the IA IPL (refer to **Attachment 1**).

## **Liase with industry to identify and prioritise incremental improvements to key transport corridors that make the greatest contribution to economic growth.**

The Department for Infrastructure and Transport (DIT) has commenced a range of planning studies that will help identify key corridors and preferred solutions; however, further work is still required.

## **Identify a preferred freight access solution for Kangaroo Island.**

The Economic Impact Statement (EIS) for the proposed port at Smith Bay was still under consideration at the time of writing. DIT will commence planning studies in relation to improvements to the Playford Highway and North Coast Road and freight connectivity to Kangaroo Island in 2021/22. DIT has also commenced the tender process for the Kangaroo Island ferry service that will continue to provide an important freight service.

## **Complete an updated business case which incorporates wider economic benefits derived from upgrades to the Strzelecki Track.**

An updated business case for this project is expected to be completed by DIT in the first half of 2021. ISA has undertaken an initial assurance review in accordance with its assurance framework and will review the final business case when completed. Further funding for this project was announced as part of the Government's economic stimulus response package.

## **Complete necessary planning studies to identify the preferred mass transit solution to Mount Barker and the Adelaide Hills, as well as the necessary transport solutions to support the forecast increased activity in the north-west of Adelaide.**

DIT has committed to and commenced a significant program of planning studies. ISA supports this approach in order to develop a sound evidence base to justify future investments.

As part of the suite of studies, DIT is undertaking a planning study to investigate integrated, multi-modal transport problems and opportunities for north-west Adelaide. DIT will also complete mass transport planning studies in relation to the CBD tram loop, North Adelaide Tram Extension and the rapid transit Adelaide to Mount Barker bus corridor in mid-2021.



**Develop a place-based program of level crossing removals to improve efficiency of key public transport corridors.**

DIT has developed a program of identifying, prioritising and removing level crossings in Adelaide. This project has also been added to the IA IPL as a priority initiative. DIT has identified 31 level crossings as posing the highest risk to users and creating the greatest disturbances on the network.

**Identify solutions for additional capacity for corrections and forensic mental health.**

ISA has received submissions in relation to both prison capacity and forensic mental health facilities and has recommended in this CIS that business cases be developed. The Department for Correctional Services (DCS) received \$500,000 in the 2020/21 budget to prepare a business case for additional correctional facilities as an outcome of the recommendation in the 2020 CIS.

**Develop business cases for new tourism infrastructure and product that supports the growth targets for the visitor economy and leverages private sector investment.**

Government has committed to a \$20 million Tourism Development Fund and announced the first tranche of projects to receive co-investment grants from the fund in December 2020.

**Develop business cases for any major capital works supported by the State Sport and Active Recreation Infrastructure Plan.**

Significant funding was allocated to works related to the State Sport and Recreation Infrastructure Plan in the State's economic stimulus response package. ISA also recommends that further business case work be undertaken in relation to the South Australian Sports Institute (SASI) following a CIS proposal from the Office for Recreation, Sport and Racing (ORSR).

**Complete necessary planning studies and develop business cases consistent with the Arts and Culture Plan South Australia 2019–2024 as required.**

The Government is progressing with the Aboriginal Arts and Culture Centre. In conjunction with the economic stimulus response package, the 2020/21 State Budget included \$86.5 million in funding for a new purpose-built storage facility to house collections from the South Australian Museum, Art Gallery, State Library and History Trust. An initial scoping study into the potential for a concert hall is in progress.

The Arts and Culture Plan also recommended expanding Adelaide's small-to-medium-sized theatre capacity. The Queen's Theatre in the west end of Adelaide is being redeveloped to deliver additional capacity as a performing arts and events space.

# EXISTING INFRASTRUCTURE COMMITMENTS

## Impact of COVID-19 and economic stimulus response

The Government has committed to a significant economic stimulus package in response to COVID-19 and the effects of the 2019-20 bushfire season. As part of the Government's \$4 billion State stimulus package, a range of funds has been established or provided, together with additional funding to provide support and relief to different sectors of the economy and community. Those aspects of the economic stimulus response package that relate to significant infrastructure initiatives include:

- \$250 million over four years to deliver traffic improvements at Hahndorf, including improving access from the South Eastern Freeway.
- \$210 million over two years to improve road safety across South Australia. Priority roads are being considered to submit to the Commonwealth Government in accordance with their guidelines.
- \$185 million over five years to provide improvements for road safety and traffic flows south of the existing duplication works on Main South Road and Victor Harbor Road.
- \$144.5 million to deliver infrastructure projects and urgent road safety upgrades including \$59.5 million for a package of road safety works, including intersections, improved lighting, shoulder sealing and audio tactile line markings; \$52 million for a regional road network package, including upgrades to the Stuart, Dukes, Spencer and Riddoch Highways; \$15 million to upgrade the Heysen Tunnels; \$12 million for heavy vehicle access works on the North-South Freight Route; and \$6 million towards sealing the Adventure Way (from Innamincka to the Queensland border).

- \$135 million over three years towards sealing the Strzelecki Track. Additional funding will be required to complete the project.
- \$58 million of State funding over two years to undertake road maintenance works on high priority roads in metropolitan areas.
- \$204 million over four years towards implementation of the Sport and Recreation Infrastructure Plan.
- \$86.5 million over five years for a new purpose-built consolidated storage facility to relocate part of the State's collections held under the custodianship of the major South Australian cultural institutions from existing facilities.

The above stimulus infrastructure measures align with several of the transport-related recommendations outlined in the Strategy, including the need for improved road safety measures across the network and increased freight corridor efficiency. In addition, stimulus funding was allocated to address the significant backlog in road maintenance as well as maintenance of government schools, public transport, public housing and public buildings.

## Forward funding commitments

The CIS does not specifically address projects that have commenced implementation, or are currently included within the forward estimates or those solely funded by the private sector. However, it is worthwhile outlining large capital projects that are currently funded. This provides additional context and background to the recommendations made.

The priority for the Government is to create an expanded pipeline of infrastructure projects over the current forward estimates to support jobs and economic growth. This has resulted in the four-year investment program now totalling an unprecedented \$16.7 billion over the period 2020-21 to 2023-24.

Of particular note, the forward estimates include significant funding allocations in relation to the Queen Elizabeth Hospital and Women's and Children's Hospital, the North-South Corridor (Torrens to Darlington), Gawler Line electrification, road safety, regional road maintenance, upgrade of the Strzelecki Track and affordable housing initiatives. ISA is working closely with agencies and will review the final business cases for the Women's and Children's Hospital and North-South Corridor when they are completed later this year.

Refer to **Attachment 1** for further details.



# INFRASTRUCTURE PRIORITY LIST

IA prepares an IPL for nationally significant investments, which is updated regularly. It contains both projects (specific, well-defined solutions to defined problems or opportunities for which a full business case has been developed) and initiatives (early stage solutions to potential problems or opportunities for which a business case has not yet been developed).

The list is compiled in close collaboration with proponents and jurisdictions and includes data from the Australian Infrastructure Audit. The IPL is a live document and updated regularly to reflect changes and additions. The CIS will inform South Australia's future submissions to IA.

In 2020, ISA coordinated submissions to IA for inclusion in the IPL for 2021. As a result, several new South Australian initiatives have been added to the list:

- SA High Productivity Vehicles (HPV) Freight Network – to improve efficiency in the regional freight network by facilitating the use of HPV.
- Adelaide Outer Ring Route – to relieve congestion and improve efficiency in six corridors that operate as the key freight route connecting the South Eastern Freeway, the Port of Adelaide, Adelaide Airport and intermodal terminals in northern Adelaide.
- SA Road Network Maintenance – to target the reduction in the road maintenance backlog and improve road efficiency and safety.
- Adelaide Level Crossing Congestion and Safety – to improve network efficiency, safety and amenity for commuters and provide place-making opportunities.

- Northern South Australia Productive Water Security – to unlock economic opportunities for industry in the Upper Spencer Gulf and Far North through the sustainable supply of new water to the region.
- Barossa Valley Region New Water Supply – to address water security and resilience and expand economic activity in the region through the supply of new water.

In addition, one further initiative relating to Melbourne to Adelaide Freight Rail Improvements has been included on the basis of a submission from the Australian Rail Track Corporation (ARTC).

The current IPL includes 14 South Australian projects. Further details are set out in **Attachment 2**.

The IPL also highlights several national initiatives relevant to the State, which include:

- enabling infrastructure for hydrogen exports
- regional telecommunications transmission strategy
- mobile telecommunications coverage in regional and remote areas.





Image courtesy of Department for Innovation and Skills



# KEY PROJECT RECOMMENDATIONS

ISA received a wide variety of submissions from agencies and other stakeholders. Many of the submissions were in relation to projects very much in their formative stages and which have not undergone rigorous analysis or business case development. However, several submissions identified specific, well-defined problems or opportunities that could be addressed by an infrastructure response.

For this reason, ISA has made recommendations in two categories, namely:

- Those projects which ISA believes should be considered for an investment decision in the near term. These projects are well documented and have clearly demonstrated a need, desired outcomes and options to address the problem together with supporting evidence.
- Those projects which ISA believes have demonstrated a need but require further work to define the intended outcomes, analyse possible options to address the need and gather evidence to support a business case.

ISA received many submissions which have merit but did not provide sufficient evidence of the need or clarity of intended outcome to be prioritised. ISA encourages ongoing engagement regarding these projects with a view to further assessment for inclusion in future CIS prioritisation.

## Projects recommended for investment decision

The following projects are recommended for investment decisions having demonstrated well-progressed business cases.

### Rostrevor High School

A forecast gap between demand and supply in school capacity has been identified in Adelaide's eastern metropolitan high school network, demonstrating the need for additional school capacity in the near term. A well-documented strategic business case has been undertaken to demonstrate that the existing Rostrevor Campus should be utilised to address that need. Further work needs to be undertaken to refine and justify the best solution, which may include refurbishment or building new facilities or a combination of both. A final business case is currently being developed that should identify the preferred solution to be implemented to address the need, which ISA will review in accordance with its assurance framework.



### SA Pathology facilities

Currently SA Pathology operates a dispersed laboratory model across metropolitan Adelaide, predominantly in major public hospitals. Its capacity to further optimise operations and continue to adapt to the changing needs of the community and enhancements in medical science is inhibited by this fragmented operating model and footprint.

A strategic business case has been prepared which identifies the preferred solution as a new purpose-built central pathology laboratory within the Adelaide BioMed City Precinct and 500 m from the Royal Adelaide Hospital and proposed new Women's and Children's Hospital. This would address inefficiencies across the business and ensure that SA Pathology is adaptable to changing future operational environments and resilient in the event of external shocks (e.g. a pandemic or large-scale trauma event). It would also enable optimisation of configuration of facilities, services and functions, reduce operating costs and improve patient outcomes.

A final business case is currently being prepared to detail the preferred solution, which ISA will review in accordance with its assurance framework.

ISA recommends exploring any possible synergies in relation to pathology and forensic science facility requirements to determine if they should be implemented as a joint project.

### Inner city multi-purpose arena

Currently South Australia struggles to attract, retain and grow services pertaining to contemporary live entertainment, conventions and exhibition and court sports. In the main, this has been attributed to facilities that lack capacity, are outdated, not functionally suitable for modern events or inconveniently located.

It is anticipated that an updated arena would generate a sharp increase in event demand in its opening year, followed by a steady increase over time. It will also support the promotion and development of the key Growth State industries through an improved ability to attract conventions and exhibitions.

A comprehensive needs analysis has been undertaken and several options considered. Through this process it was determined that only an infrastructure-based response would properly address this issue and capitalise upon the opportunity. Further work has been undertaken to determine and refine the preferred option, which comprises a new arena adjacent to the Adelaide Convention Centre that includes both an arena and exhibition space.

ISA has undertaken a review of the initial business case, together with supplementary information which responded to ISA's review recommendations. A well-developed business case has been documented; however, further work is required to refine the costs in order to proceed to a final investment decision. While this project is aligned with the Government's Growth State agenda, further analysis is required to determine the project timing in the light of the significant capital commitment required and current State budget priorities.

## Recommendations for business case development

The following projects are recommended to be prioritised for further planning study and/or business case development, having demonstrated a strategic case for change with a degree of clarity and considered possible options to address the need.

### *Economic infrastructure*

#### **Northern South Australia Productive Water Security**

The Gawler Craton region holds more than two thirds of Australia's copper reserves. Furthermore, the Upper Spencer Gulf is already home to major steel and manufacturing industries and is now fast emerging as a regional hub for clean energy and related industries, including hydrogen and 'green steel' with the possibility of further minerals processing.

These regions are currently reliant on limited water supplies from the Murray River or the Great Artesian Basin and other aquifers. The significant State and national benefits and opportunities offered by these regions cannot be realised without first finding new sustainable water to meet future needs while enhancing environmental and cultural values and resilience of the region.

A desalination plant and associated pipeline to deliver water to the Gawler Craton and Upper Spencer Gulf has been identified as a potential option. Several studies have previously been undertaken and recent work completed in order to support development of a final business case to confirm economic viability and identify the preferred solution.

This project has been identified by IA as a priority initiative in the IPL and is strongly aligned with the recommendations of the 2020 Strategy and CIS, and the Government's Growth State plan.

#### **Barossa Valley Region New Water Supply**

The Barossa is an important economic region for South Australia. Across the Barossa, the regional demand for irrigation water for vines has roughly doubled in the past 20 years, mainly due to a decline in annual average rainfall and the need to maintain crop quality and quantity. Overall, grape yield in tonnes per hectare has halved since 2000, with significant decline in the last three years.

While growers have invested in various techniques to increase water retention, the volume of water currently available for viticulture in the Barossa region is not considered sufficient to sustain optimal yields from existing plantings or to increase production with new plantings. Increased water availability could help to produce stable grape tonnages from year to year and increase the viability of new plantings, adding significantly to the economics of the region.

The project aims to deliver recycled water from the Bolivar Wastewater Treatment Plant to meet industry demand in the Barossa region. This will provide not only increased water volumes, but also increased water security and resilience, and reduce reliance on River Murray water.

A preliminary business case has been developed and stakeholder engagement has indicated an appetite for demand. ISA recommends funding for a business case, including further technical studies to confirm the economic case and identify the preferred solution.

This project has been identified by IA as a priority initiative in the IPL and is strongly aligned with the recommendations of the 2020 Strategy and CIS, and the Government's Growth State plan.





Image courtesy of Department for Innovation and Skills



## Digital infrastructure

Ultra-high-speed digital connectivity is a critical enabler in the South Australian economy. Digital connectivity is of particular importance as the economy transforms to a modern, outward-facing economy built on creativity, innovation and advanced industrial capabilities. Digital connectivity will be central to the State's economic growth aspirations. Expanding access to digital infrastructure will be critical for South Australia's future to enable new service delivery and business models, connect to Australian and global markets and facilitate social inclusion and equity.

To enable this transformation, investment in the expansion of high-speed internet infrastructure throughout South Australia beyond the initial nbn™ network rollout is essential.

Further work is required as a priority to provide the evidence base to inform strategic planning, identifying areas across South Australia where investment in digital infrastructure should be prioritised to maximise socio-economic benefits. Planning should take account of the critical role that the nbn™ and private sector play in investing in digital infrastructure. ISA supports greater coordination between the different parts of our current digital infrastructure assets.

This aligns with the Strategys' priority to develop a statewide digital connectivity strategy.

## Gawler River flood mitigation

Flooding has been recorded in the Gawler River on average every decade since the 1850s, with the most recent events occurring in 1992, 2005 and 2016. The 2016 flood event impact resulted in a cost to the local community and horticulture industry of \$51 million. Following construction of a flood control dam on the North Para River in 2007 (the Bruce Eastick Dam) and modification of the South Para Reservoir Dam and spillway in 2012, the need for further flood mitigation works has been identified, in particular along the lower Gawler River.

Reducing flood risk in the Gawler River catchment is a complex problem. No single mitigation approach will treat the 1% Annual Exceedance Probability flood risk.

This project will encourage investment in the region by removing risks associated with horticulture and urban expansion in flood prone areas. Further design and investigations, as well as cost benefit analysis, are required for the most feasible mitigation options (the Northern Floodway, levee banks for Virginia and Gawler and the Bruce Eastick flood control dam upgrade) to complete a comprehensive business case to detail the most effective economic solutions to address the flood risk.

### Sturt Highway and Truro Bypass

The absence of a fully developed HPV road network is constraining productivity and the realisation of opportunities in the South Australian economy. The Sturt Highway is part of the National Land Transport Network, providing the main route between Adelaide and Sydney. Freight growth on the Sturt Highway is steadily increasing, resulting in reduced speed, increased travel time and costs. This negatively affects business competitiveness and productivity. Without the proposed Truro bypass, DIT is unlikely to realise the strategic objective to allow the use of triple road train vehicles (up to 53.5 m length) along this highway, and the crash potential within Truro township and 'Truro curves' would remain.

A planning study is underway to determine precise realignment of the Sturt Highway through the Truro Hills, including a bypass of the town of Truro. ISA recommends this is used to inform the development of a full business case to be completed as a priority to enable works to commence in a timely manner.

IA has endorsed the proposed South Australian Highway HPV Freight Network Access project as a priority initiative on the IPL. This project forms a key part of that initiative. The project is also aligned with the Strategy in regard to improving the efficiency of key economic and freight transport corridors.

### Augusta Highway

The Augusta Highway is the key road corridor between the town centres of Port Wakefield and Port Augusta. The highway forms part of the National Land Transport Network, providing critical connectivity to regional South Australia and interstate to Western Australia, the Northern Territory and Queensland. It is a vital transport corridor for regional industries, including agriculture, forestry and fishing, mining, renewable energy, tourism and defence, which collectively contribute over \$1.3 billion in economic value to South Australia.

The duplication of the Augusta Highway will correct deficiencies in road geometry, improve safety and operational efficiency and maximise freight vehicle productivity.

DIT has undertaken a planning study of the Augusta Highway between Port Wakefield and Port Augusta to identify priority sections requiring duplication. ISA recommends this is used to inform the development of a full business case to be completed as a priority to enable works to commence in a timely manner.

This project also forms part of the South Australian Highway HPV Freight Network Access project listed on the IA IPL.

### Hydrogen export facility

The Australian Government is seeking to develop a clean hydrogen export industry. A critical piece of infrastructure required to enable this outcome is a suitable port that hosts the necessary infrastructure to enable hydrogen exports.

South Australia has competitive advantages in the production of green or blue hydrogen and is known to have several potentially favourable hydrogen exports sites; however, none of these currently host the infrastructure required to enable hydrogen exports. This is a key constraint to the development of a clean hydrogen export industry in South Australia.

By addressing this barrier, South Australia has the potential to become the first state in Australia to export clean hydrogen internationally and solidify its position as a world-class clean hydrogen supplier.

DEM has undertaken detailed analysis to determine the potential to develop a new hydrogen industry. Based on the State's competitive position, South Australia is forecast to capture 25% of the national hydrogen exports. There is significant potential for the growth of the local industry, provided appropriate hydrogen port infrastructure is in place.

This is aligned with the Government's Growth State agenda. ISA recommends further analysis be undertaken to determine the required infrastructure solution.

### Curtis Road duplication

Curtis Road runs east-west from Main North Road, Munno Para to Angle Vale Road, Angle Vale. Over time the function of Curtis Road has changed, particularly with the establishment of the Playford Urban Growth Area. The construction of the Northern Expressway has especially impacted the function of the road and the nature of traffic.

Strategic planning studies have identified the need to duplicate Curtis Road and a traffic study has identified upgrades required. Playford Council has proposed that Curtis Road be transferred to DIT.

Further studies need to be undertaken to validate the traffic analysis, substantiate the need and determine the most appropriate solutions. In addition, funding options and the road classification need to be resolved.

## ***Social infrastructure***

### **Barossa Hospital**

The design and delivery of a new purpose-built health facility incorporating community-based allied health and acute care services would consolidate a number of existing Barossa Hills Fleurieu Local Health Network services on a new single greenfield site in the Barossa.

Existing facilities are in poor condition, present access issues, are unsuitable for delivering contemporary care and require extensive ongoing maintenance and refurbishment. Services are currently delivered inefficiently across multiple sites.

A single new facility will generate significant operational efficiencies, cater for future demand, enable better healthcare service quality (including obstetrics, dialysis and rehabilitation services which are not currently available) and minimise the risk to State hospital assets, staff, patients and residents from the threat of bushfire.

Preliminary planning has determined site requirements and an outline business case has been prepared. ISA recommends development of a full business case to identify the preferred solution.

### **Forensic Mental Health Services facilities**

The Forensic Mental Health Service (FMHS) facilities at James Nash House at Oakden are considered by SA Health to be outdated and not conducive to facilitating positive rehabilitation outcomes by modern standards. It is considered that the facility is correctional in nature and does not provide the therapeutic and rehabilitative environment required to deliver contemporary models of care. The Mental Health Services Plan 2020 identified new facilities as a key priority.

Preparation of a business case is recommended. This should consider future demand and the options for the development of FMHS facilities that address therapeutic concerns and consider opportunities for consolidation of services from other sites.

Consideration of new infrastructure for FMHS was recommended as a priority in the 2020 Strategy and CIS.

### Northern Adelaide Older Persons Mental Health Facility

This initiative proposes to co-locate both older persons acute mental health services and Tier-7 dementia services. The co-location of these services alongside geriatric and palliative care services could provide centralised older persons health and wellbeing facilities in Northern Adelaide.

The provision of a fit-for-purpose specialist facility is consistent with the Chief Psychiatrist's response to recommendations arising from the 2017 Oakden Report.

Potential solutions may also address long-standing clinical safety risks associated with the continued operation of Woodleigh House.

A planning study has been completed. ISA recommends the development of a full business case to clearly articulate the functional requirements and the most suitable solution.

### South Australian Sports Institute (SASI)

Established in 1982, SASI was Australia's first state sports institute and is South Australia's principal body responsible for the key State and Commonwealth Government objective of achieving sporting excellence. SASI supports and works with predominantly Olympic, Paralympic and Commonwealth Games athletes and sports.

Currently SASI operates a centralised facility located at Kidman Park, the former Kidman Park High School built in the mid-1950s. SASI facilities are aged and not of contemporary standards to meet the needs and aspirations of world-class athletes and sports programs.

The need for an upgraded and/or purpose-built facility for SASI has been identified and prioritised in the State Sport and Recreation Infrastructure Plan and the ORSR's Strategic Plan 2021-25.

A full business case is recommended in order to determine the most suitable solution and location.

### Correctional Services' rehabilitation facilities

Many prisons in South Australia are currently operating above their designed capacities, with 80% of prisoners sharing a cell. The projected prisoner beds required for the next decade will further burden the system beyond its current planned capacity.

To assist in slowing the growth in prisoner population, some alternatives to custody have been introduced in recent years; however, these measures cannot adequately address future projected growth. To accommodate the growing prison population, strengthen security, improve productivity and system performance, and drive down the rate of reoffending, additional correctional services facilities are being explored.

South Australia maintains a commitment to rehabilitation services and outcomes for the prisoner population, with ongoing targets to reduce recidivism. Additional facilities with a rehabilitation focus will address both ageing infrastructure and associated inefficiencies, risks and costs, while safely and securely managing prisoner cohorts. This is anticipated to improve rehabilitation outcomes and reduce the burden and risk on the overall system.

Investigation of new correctional services facilities have previously been identified as a priority initiative in both the 2020 Strategy and CIS. Further work is required to understand the rehabilitation service model, quantify demand and consider delivery options. A business case is currently being developed and should be completed to identify the preferred solution.



# ATTACHMENTS

## Attachment 1: Current forward estimates

The table below sets out significant infrastructure projects for which funding has been approved in the budget for the forward estimate period to 2023-24.

	2019-20 Outcome	2020-21 Budget	2021-22 Estimate	2022-23 Estimate	2023-24 Estimate
<b>General government sector</b>	2,460	2,748	3,559	3,230	3,930
<b>Non-financial public sector</b>	2,619	3,628	4,423	4,046	4,615

**Table 1:**  
**Investing expenditure aggregates as at the 2020-21 Budget (\$ million)**

Source: Department of Treasury and Finance

	Actual Expenditure \$'000	2020-21 Budget \$'000	2021-22 Estimate \$'000	2022-23 Estimate \$'000	2023-24 Estimate \$'000	Total over four years \$'000	Spend beyond Forward Estimates \$'000	Total Project Cost \$'000
<b>General government sector</b>								
<b>Attorney-General</b>								
SA Government Radio Network	101,123	33,403	—	—	—	33,403	—	<b>134,526</b>
<b>Correctional Services</b>								
Yatala Prison – 270 additional beds	13,816	93,269	42,915	—	—	136,184	—	<b>150,000</b>
<b>Education</b>								
Improved internet services for South Australian Government schools (Stage 1, implementation of high-speed fibre-optic carriage services to public schools, operating expenditure only)	26,309	14,546	14,406	14,410	14,416	57,778	5,427	<b>89,514</b>
Northern & Southern Adelaide Schools Public Private Partnership (budget profile shown in this table includes associated stormwater, water/sewer and road infrastructure works delivered by other government agencies to reflect total capital cost only)	35,100	196,209	45,185	—	—	241,394	—	<b>276,494</b>

Continued next page >

	Actual Expenditure \$'000	2020-21 Budget \$'000	2021-22 Estimate \$'000	2022-23 Estimate \$'000	2023-24 Estimate \$'000	Total over four years \$'000	Spend beyond Forward Estimates \$'000	Total Project Cost \$'000
Sustainable enrolment growth and other school projects	68,584	490,635	333,922	26,851	—	851,408	—	<b>919,992</b>
Whyalla secondary education renewal	10,895	66,450	22,655	—	—	89,105	—	<b>100,000</b>
<b>Environment and Water</b>								
South Australian Riverland Floodplains Integrated Infrastructure Program	83,301	7,445	—	—	—	7,445	—	<b>90,746</b>
<b>Health and Wellbeing</b>								
Country Health SA Sustainment and Compliance	25,311	30,772	19,000	9,000	9,000	67,772	54,246	<b>147,329</b>
Lyell McEwin Hospital Emergency Department Expansion	13,252	20,470	18,380	5,891	—	44,741	—	<b>57,993</b>
Modbury Hospital – Upgrades and Additional Services	31,664	40,150	25,946	—	—	66,096	—	<b>97,760</b>
Repatriation Health Precinct Reactivation	16,875	59,552	29,100	2,000	—	90,652	—	<b>107,527</b>
The Queen Elizabeth Hospital Redevelopment Stage 3	27,054	11,800	61,729	142,215	67,749	283,493	—	<b>310,547</b>
Upgrade to existing Women's and Children's Hospital	39,050	19,610	4,430	—	—	24,040	—	<b>63,090</b>
New Women's and Children's Hospital	4,517	47,470	84,483	200,000	350,000	681,953	TBA	<b>TBA</b>
<b>Infrastructure and Transport</b>								
Adelaide Festival Centre Precinct – Plaza and Integration	52,581	30,000	40,000	18,272	—	88,272	—	<b>140,853</b>
Brighton Road, Hove Level Crossing Upgrade	2,618	15,000	15,000	138,382	—	168,382	—	<b>171,000</b>
Bus Fleet Replacement Program (annual program)	283,307	25,366	21,112	21,325	21,996	89,799	NA	<b>NA</b>
DIT Annual Program	528,298	131,021	128,257	127,873	132,206	519,357	NA	<b>NA</b>
Duplication of Joy Baluch AM Bridge	12,332	55,000	94,500	33,000	5,168	187,668	—	<b>200,000</b>
Extension of the Tonsley Railway Line to the Flinders Medical Centre	101,592	37,208	2,200	—	—	39,408	—	<b>141,000</b>
Fleurieu Connections Improvements Package	—	1,250	57,250	59,250	45,500	163,250	21,750	<b>185,000</b>
Fullarton and Cross Roads Intersection Upgrade	910	14,000	20,000	26,090	—	60,090	—	<b>61,000</b>
Gawler Line Electrification	204,113	210,000	279,097	20,000	1,790	510,887	—	<b>715,000</b>
Goodwood, Springbank and Daws Road Intersection Upgrade	26,739	22,461	12,200	—	—	34,661	—	<b>61,400</b>
Hahndorf Traffic Improvements	—	—	—	37,500	87,500	125,000	125,000	<b>250,000</b>
Horrocks Highway Corridor	906	8,000	29,500	14,500	2,094	54,094	—	<b>55,000</b>
Main South Road Duplication from Seaford to Aldinga	3,202	10,000	82,000	127,000	61,170	280,170	—	<b>283,372</b>

Continued next page &gt;

	Actual Expenditure \$'000	2020-21 Budget \$'000	2021-22 Estimate \$'000	2022-23 Estimate \$'000	2023-24 Estimate \$'000	Total over years \$'000	Spend beyond Forward Estimates \$'000	Total Project Cost \$'000
North East Public Transport Park 'n' Ride	17,656	9,500	30,715	—	—	40,215	—	57,871
North-South Corridor – Darlington Upgrade	685,730	20,000	3,000	45,770	—	68,770	—	754,500
North-South Corridor – Northern Connector	821,687	6,000	3,000	36,313	—	45,313	—	867,000
North-South Corridor – Regency Road to Pym Street	144,102	120,000	36,050	2,000	51,998	210,048	—	354,150
North-South Corridor – Torrens River to Darlington	10,721	30,500	151,400	394,800	1,384,900	1,961,600	6,927,679	8,900,000
Oaklands Rail Crossing Grade Separation	130,751	818	614	18,000	—	19,432	—	150,183
Port Bonython Jetty Refurbishment	27,727	1,000	19,000	10,000	—	30,000	—	57,727
Port Wakefield Overpass and Highway Duplication	11,002	50,000	40,000	22,000	1,498	113,498	—	124,500
Portrush and Magill Roads Intersection Upgrade	37,623	28,000	13,000	19,377	—	60,377	—	98,000
Princes Highway – Augusta Highway duplication	2,176	4,000	25,000	38,500	10,324	77,824	—	80,000
Princes Highway Corridor	26,513	30,500	28,000	47,000	37,987	143,487	—	170,000
Regional Road Network Package	6,407	38,000	7,593	—	—	45,593	—	52,000
Road Maintenance Stimulus	—	20,000	38,000	—	—	58,000	—	58,000
Road Safety Package	—	104,625	105,375	—	—	210,000	—	210,000
Road Safety Package – Regional	32,906	52,000	22,000	36,094	—	110,094	—	143,000
Roads of Strategic Importance – Cockburn to Burra	1,240	8,000	25,000	23,000	5,260	61,260	—	62,500
Roads of Strategic Importance – Eyre Highway, Port Augusta to Perth	369	12,000	42,000	34,000	4,631	92,631	—	93,000
Roads of Strategic Importance – Renmark to Gawler	5,763	9,000	19,000	32,000	21,737	81,737	—	87,500
South Eastern Freeway and Heysen Tunnels Renewal	530	25,600	23,870	—	—	49,470	—	50,000
Sport and Recreation Infrastructure Plan	—	79,000	40,000	50,000	35,000	204,000	—	204,000
Strzelecki Track	3	41,247	62,500	31,250	—	134,997	—	135,000
Targeted Road Safety Works	189	31,000	28,311	—	—	59,311	—	59,500
Torrens Road (Ovingham) Level Crossing Upgrade	6,056	24,000	80,000	73,000	47,944	224,944	—	231,000
Victor Harbor Road Duplication	717	7,000	34,000	37,000	13,283	91,283	—	92,000

Continued next page &gt;

	Actual Expenditure \$'000	2020-21 Budget \$'000	2021-22 Estimate \$'000	2022-23 Estimate \$'000	2023-24 Estimate \$'000	Total over four years \$'000	Spend beyond Forward Estimates \$'000	Total Project Cost \$'000
<b>Premier and Cabinet</b>								
Aboriginal Art and Cultures Centre	—	5,395	56,605	68,000	70,000	200,000	TBA	<b>TBA</b>
Adelaide Festival Centre Precinct	58,420	10,049	7,823	—	—	17,872	—	<b>76,292</b>
Cultural Institutions Storage Facility	—	2,162	31,930	40,280	8,500	82,872	3,628	<b>86,500</b>
International School of Culinary Excellence, Hospitality and Tourism	—	5,000	25,000	30,000	—	60,000	TBA	<b>TBA</b>
<b>Public non-financial corporations sector</b>								
<b>SA Water</b>								
Eyre Peninsula Desalination Augmentation	4,858	36,850	52,000	5,867	—	94,717	—	<b>99,575</b>
Mount Bold Dam Safety	6,862	537	2,874	35,999	55,908	95,318	—	<b>102,180</b>
Murray Bridge Wastewater Treatment Plant Relocation	52,293	618	—	—	—	618	—	<b>52,911</b>
Northern Adelaide Irrigation Scheme	123,491	1,620	988	29,027	—	31,635	—	<b>155,126</b>
Tea Tree Gully Wastewater Works	—	3,842	23,414	27,381	9,504	64,141	—	<b>64,141</b>
Zero Cost Energy Future	222,612	145,588	—	—	—	145,588	—	<b>368,200</b>
<b>SA Housing Authority</b>								
Affordable Housing Initiative	265	53,269	106,122	129,014	71,221	359,626	22,706	<b>385,297</b>
Better Neighbourhoods Program	239,107	29,712	15,759	16,153	16,557	78,181	NA	<b>NA</b>
Neighbourhood Renewal Program	405	11,093	14,578	13,278	6,253	45,202	8,316	<b>53,923</b>
Playford North Urban Renewal	125,376	8,474	6,737	7,448	—	22,659	—	<b>148,035</b>
Public Housing Maintenance (includes operating expenditure)	NA	149,891	130,391	131,528	132,913	544,723	NA	<b>NA</b>
Remote Indigenous Housing	199,403	14,151	7,108	4,257	12,930	38,446	TBA	<b>237,849</b>

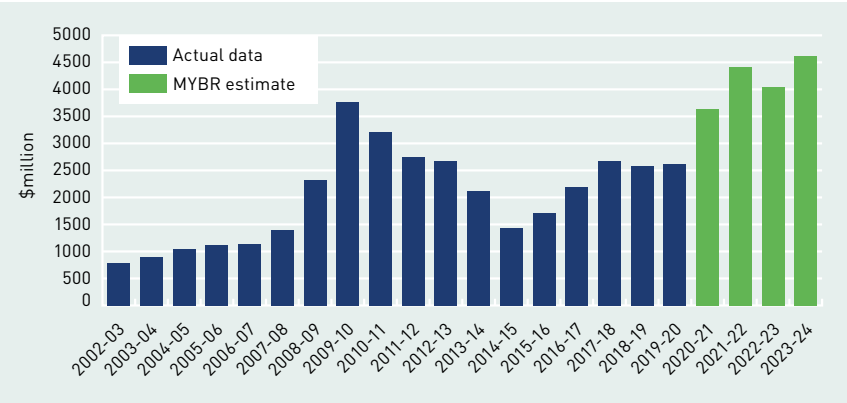
**Table 2:**  
**Infrastructure spending – Total project cost greater than \$50 million and other significant programs**

Source: Department of Treasury and Finance

\* Table includes both investing and operating maintenance spend for housing and education infrastructure assets. Consequently, table will not reconcile to tables summarising investing spend only.

Figure 2 below shows the comparative government infrastructure spend over a 20-year period. It excludes the Royal Adelaide Hospital (RAH) in 2017. The last four periods equate to the current forward estimates and demonstrate a considerable increase in spend over and above the previous five-year period.

Note: Non-financial public sector represents government investment in non-financial assets.



**Figure 2:**  
**Purchases of non-financial assets**

Source: Department of Treasury and Finance

\* Excludes the new RAH finance lease (\$2.8 billion)





Image courtesy of Department for Innovation and Skills



## Attachment 2: Infrastructure Australia Infrastructure Priority List – South Australian projects

### 1.1 Priority projects

Priority projects are defined by IA as those for which a full business case has been completed and positively assessed by the IA Board.

Currently there is one priority project listed for South Australia, which is the Eyre Infrastructure 'Iron Road' Project, comprising development of an iron ore mine in the central Eyre Peninsula and export port facilities at Cape Hardy. IA recommended the business case as a priority project, subject to the mine development proceeding. Development may be implemented in stages, with the initial stage being the development of a deep-water port at Cape Hardy. The proposed infrastructure would be available for other users (open access), including grain exporters and other miners in the region. This is a private sector development.

### 1.2 Priority initiatives

Priority initiatives are defined by IA as potential infrastructure solutions for which a business case has not yet been completed. Currently there are 13 South Australian projects listed as priority initiatives, two of which are designated as high priority.

### High priority initiatives

**Adelaide Outer Ring Route** – The route loops the city and consists of six major arterial roads including South Road, Portrush Road, Hampstead Road, Grand Junction Road and Cross Road. Together these connect the South Eastern Freeway, the Port of Adelaide, Adelaide Airport and intermodal terminals in northern Adelaide. Potential options to address the initiative include optimising existing infrastructure through traffic management technology, intersection upgrades, bus network improvements and targeted HPV access improvements. An options analysis is to be completed.

**South Australian Road Network Maintenance** – Potential options to address the initiative include a program of works to prioritise and invest in maintenance upgrades across the South Australian road network, which addresses the significant maintenance backlog. The prioritisation of road maintenance projects will consider technical, economic, risk, safety and policy criteria to optimise economic benefit and economies of scale.

### Priority initiatives

**Adelaide North-South Corridor upgrade, remaining sections** – Upgrades to Anzac Highway to Darlington; River Torrens to Anzac Highway; and Regency Park to Torrens Road. When completed, the North-South Corridor will be the major transport spine for Adelaide's north-south traffic over a total distance of 78 km. The next step is to complete the final business case for submission to IA.

**Adelaide public transport capacity and access** – The initiative is for public transport network improvements to and from the Adelaide CBD. This could include recommendations from the City Access Strategy being developed by the City of Adelaide and State Government detailing public transport requirements. The South Australian Government has established the South Australian Public Transport Authority to coordinate and improve public transport services. The next step is to identify options for further assessment by IA.

**Spencer Gulf crossing capacity** – Improving the crossing capacity of the Spencer Gulf at Port Augusta. This could be achieved by developing alternative routes, upgrading the existing Joy Baluch AM Bridge or by constructing a new crossing. There has been \$160 million committed by the Commonwealth Government and a significant amount is included in the State Government forward estimates. Planning work has been completed, procurement is underway and construction is expected to be completed in 2022.

**Strzelecki Track upgrade** – Upgrading 426 km of the Strzelecki Track between Lyndhurst and Innamincka, and 26 km of the Nappa Merrie Access Road. The South Australian Government commenced works to seal the first 50 km of the Strzelecki Track in October 2020, beginning immediately north of Lyndhurst. The business case is currently being finalised.

**Gawler Craton resources access** – The initiative proposes that infrastructure corridors are developed in the region to support access to resources, efficient processing and export pathways. Options analysis is to be completed.

**South Australian regional bulk port development** – Options for the development of bulk commodity port capacity in the Spencer Gulf region. There are a range of sites for ports and associated investment/operating models that could meet potential demand. The next step is to complete an options analysis and business case.

**South Australian Highway High Productivity Vehicle Freight Network Access** – The initiative will include options to address improving mass limits and road geometry, improving bridge capacities and duplicating lanes on the South Australian regional freight network including the Augusta Highway, Dukes Highway and the Sturt Highway. The next step is to complete an options analysis.

**Adelaide Level Crossings Congestion and Safety** – A program of identifying, prioritising and removing level crossings in Adelaide to improve network safety, efficiency and amenity. The South Australian Government has identified 31 level crossings as posing the highest risk to users and creating the greatest disturbances on the network.

**Melbourne to Adelaide Freight Rail Improvements** – Potential options to address the initiative include removing or adjusting structures that impact clearance to enable double stacking of containers. The proponent of this initiative is the ARTC.

**Barossa Valley Region New Water Supply** – Providing improved water security and additional water to the Barossa Region. This includes optimising and upgrading existing water infrastructure assets and the provision of new infrastructure to enable access to non-climate-dependent water supply sources. The next step is to develop the business case.

**Northern South Australia Productive Water Security** – Potential options to address the initiative include new sustainable water sources such as desalination, and associated pipeline and distribution infrastructure to the Gawler Craton and Upper Spencer Gulf regions. A business case is to be developed.

# CONTACT

**Infrastructure SA**

Level 15, Wakefield House  
30 Wakefield Street  
Adelaide SA 5000

GPO Box 2343  
Adelaide SA 5001

E [infrastructure@sa.gov.au](mailto:infrastructure@sa.gov.au)

Published March 2021.

No responsibility for any loss or damage caused by reliance on any of the information or advice provided by or on behalf of the state of South Australia, or for any loss or damage arising from acts or omissions made, is accepted by the state of South Australia, their officers, servants or agents. Produced by Infrastructure SA © March 2021. Content correct, to the best of Infrastructure SA's knowledge, at time of printing.

**INFRASTRUCTURE.SA.GOV.AU**