



## **AGENDA**

**FOR ASSET MANAGEMENT SUB COMMITTEE MEETING TO BE HELD ON  
13 NOVEMBER 2023 AT CONCLUSION OF THE ENVIRONMENTAL  
SUSTAINABILITY AND TREES SUB COMMITTEE  
IN THE LITTLE PARA CONFERENCE ROOMS, SALISBURY COMMUNITY HUB,  
34 CHURCH STREET, SALISBURY**

### **MEMBERS**

Cr A Graham (Chairman)  
Mayor G Aldridge (ex officio)  
Deputy Mayor, Cr C Buchanan  
Cr D Hood  
Cr P Jensen  
Cr S McKell (Deputy Chairman)

### **REQUIRED STAFF**

Chief Executive Officer, Mr J Harry  
General Manager City Infrastructure, Mr J Devine  
Deputy Chief Executive Officer, Mr C Mansueto  
General Manager Community Development, Mrs A Pokoney Cramey  
General Manager City Development, Ms M English  
Team Leader Council Governance, Ms J O'Keefe-Craig

### **APOLOGIES**

### **LEAVE OF ABSENCE**

### **PRESENTATION OF MINUTES**

Presentation of the Minutes of the Asset Management Sub Committee Meeting held on 11 September 2023.



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## **MOTIONS ON NOTICE**

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## **QUESTIONS ON NOTICE**

*There are no Questions on Notice*

## **OTHER BUSINESS**

*(Motions Without Notice, Questions Without Notice, CEO Update)*

## **CLOSE**





**MINUTES OF ASSET MANAGEMENT SUB COMMITTEE MEETING HELD IN  
WITTBER & DR RUBY DAVY ROOMS, SALISBURY COMMUNITY HUB,**

**34 CHURCH STREET, SALISBURY ON**

**11 SEPTEMBER 2023**

**MEMBERS PRESENT**

Cr A Graham (Chairman)  
Mayor G Aldridge (ex officio)  
Deputy Mayor, Cr C Buchanan  
Cr D Hood  
Cr P Jensen  
Cr S McKell (Deputy Chairman)

**STAFF**

Chief Executive Officer, Mr J Harry  
General Manager City Infrastructure, Mr J Devine  
General Manager Business Excellence, Mr C Mansueto  
General Manager Community Development, Mrs A Pokoney Cramey  
General Manager City Development, Ms M English  
Manager Governance, Mr R Deco  
Team Leader Urban & Recreation Assets, Mr J Hosking  
Personal Assistant, Executive Office, Ms M Healy

The meeting commenced at 6.56pm.

The Chairman welcomed the Elected Members, members of the public and staff to the meeting.

**APOLOGIES**

Nil.

**LEAVE OF ABSENCE**

Nil.



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## PRESENTATION OF MINUTES

Moved Cr D Hood  
Seconded Cr S McKell

The Minutes of the Asset Management Sub Committee Meeting held on 14 August 2023, be taken as read and confirmed.

**CARRIED**

## REPORTS

### AMSC1 Future Reports for the Asset Management Sub Committee

Moved Cr D Hood  
Seconded Cr A Graham

That Council:

1. Notes the report.

**CARRIED**

### AMSC2 2024/25 Strategic Asset Management Plan Development

Moved Cr S McKell  
Seconded Cr C Buchanan

That Council:

1. Notes the report.

**CARRIED**

### AMSC3 Playspaces Survey Results Recommendations

Moved Cr C Buchanan  
Seconded Mayor G Aldridge

That Council:

1. Notes the financial information and consultation recommendations highlighted in the report.
2. Notes that the recommended process improvements related to community consultation will be considered in the revision of the Playspace Policy that will be submitted to Council in November 2023.

**CARRIED**



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**QUESTIONS ON NOTICE**

Nil.

**MOTIONS ON NOTICE**

Nil.

**OTHER BUSINESS**

*(Questions Without Notice, Motions Without Notice CEO Update)*

Nil.

**CLOSE**

The meeting closed at 7.07pm.

CHAIRMAN.....

DATE.....







<b>ITEM</b>	<b>AMSC1</b>
	<b>ASSET MANAGEMENT SUB COMMITTEE</b>
<b>HEADING</b>	Future Reports for the Asset Management Sub Committee
<b>AUTHOR</b>	Corina Allen, City Infrastructure Administration Coordinator, City Infrastructure
<b>CITY PLAN LINKS</b>	4.2 We deliver quality outcomes that meet the needs of our community
<b>SUMMARY</b>	This item details reports to be presented to the Asset Management Sub Committee as a result of a previous Council resolution.

**RECOMMENDATION**

That Council:

1. Notes the report.

**ATTACHMENTS**

There are no attachments to this report.

**1. BACKGROUND**

- 1.1 A list of resolutions requiring a future report to Council is presented to each Sub Committee and standing committee for noting.
- 1.2 If reports have been deferred to a subsequent month, this will be indicated, along with a reason for the deferral.



### 3. REPORT

- 3.1 The following table outlines reports to be presented to the Asset Management Sub Committee as a result of a previous Council resolution:

Meeting - Item	Heading and Resolution	Officer
22/03/2021	<p><b>Sustainable Verge Development</b></p> <p><b>This report will address the following resolutions:</b></p> <p><b>22/03/2021 - 4.0.2-AMSC4 - Verge Maintenance Trial and Streetscape Improvement Program</b></p> <p>8. A report on the outcomes of the Streetscape Improvement Program be submitted to Council in late 2023 after completion of the two-year trial.</p> <p><b>23/08/2021 - 4.0.3-AMSC3 - 2021/22 Street Tree Renewal Program, Streetscape Renewal Program, Verge Development Program and Verge Maintenance Trial</b></p> <p>2. Approves that staff present a draft Resident Verge Incentive Scheme policy to the Asset Management Subcommittee in October 2021.</p> <p><b>Due:</b> November 2023</p> <p><b>Deferred:</b> December 2023</p> <p><b>Reason:</b> Administration is continuing to finalise ideas for various initiatives and will report back to council in December 2023.</p>	Craig Johansen
27/2/2023	<p><b>Playspace Program</b></p> <p><b>This report addresses the following resolutions:</b></p> <p><b>27/02/2023 - AMSC-OB1 – Playspace Program</b></p> <p>1. Requests that Administration bring back a report to the March 2023 Asset Management Sub Committee meeting detailing the current Playspace program, including 4 years of proposed works.</p> <p><b>27/03/2023 – AMSC2 – Playspaces Survey Results</b></p> <p>2. Requests Administration bring back a further report to the September 2023 Asset Management Sub Committee on the recommendations identified in the survey results as outlined in paragraph 3.19 of the report (Item AMSC2 – Playspace Survey Results – Asset Management Sub Committee, 14 March 2023), and with specific examples of potential improvements to the playgrounds included in this survey (including costs) with a view to the recommendations being included in Council's</p>	Jamie Hosking



Meeting - Item	Heading and Resolution	Officer
<b>Due:</b> <b>Deferred:</b> <b>Reason</b>	Playspace Policy and being incorporated in the Strategic Asset Management Plan for 2024/25. November 2023 December 2023 Administration have now received the Audit results and this resolution along with the resolution relating to "Playspaces - Outcomes of Level 3 Compliance Audit" have been combined and are to be presented to ASMC in December 2023.	
<b>22/5/23</b>	<b>Golding Avenue, Para Vista</b>	Jamie Hosking
AMSC-MWON1	1. Requests the Administration present a report to the Asset Management Sub Committee regarding: <ol style="list-style-type: none"> <li>the recommissioning of the lights at Golding Avenue, Para Vista to extend the usage of the area into the evening hours, and</li> <li>a review of the current playspace elements.</li> </ol>	
<b>Due:</b> <b>Deferred:</b> <b>Reason:</b>	November 2023 December 2023 Administration continue to investigate alternative timed lighting options and will report back in December 2023.	
<b>24/7/23</b>	<b>Asset Management Improvement Plan - Update (Pathways)</b>	Jamie Hosking
4.0.1	2. Requests the Administration to review the below criteria for level of service for pathways and requests the Administration to provide costings on different levels of service with consideration to the following: <ol style="list-style-type: none"> <li>2.1 Width</li> <li>2.2 Surface Finish – Material</li> <li>2.3 Location</li> <li>2.4 Functionality (could be defined as usability including DDA)</li> <li>2.5 Lighting</li> <li>2.6 Signage</li> </ol> 3. Requests the Administration to review the footpath policy and provide advice, costings and service levels including types of footpath material for further consideration by the Asset Management Sub Committee by October 2023.           4. Notes the 2023 footpath audit and requests the Administration to bring back a repair/replacement upgrade program including a proposed budget based on \$500,000 for 23/24 and 24/25 for further consideration by the Asset Management Sub Committee by October 2023.	



Meeting - Item	Heading and Resolution	Officer
	7. Requests the Administration to present a proposed public and street lighting policy to the Asset Management Sub Committee by December 2023.	
<b>Due:</b>	December 2023	
<b>24/7/23</b>	<b>Asset Management Improvement Plan - Update (Lighting)</b>	Jamie Hosking
4.0.1	7. Requests the Administration to present a proposed public and street lighting policy to the Asset Management Sub Committee by December 2023.	
<b>Due:</b>	December 2023	
<b>24/7/23</b>	<b>CCTV Policy and Procedures - Community Safety CCTV</b>	Andrew Hamilton
4.4.1	Council has previously resolved this resolution to be confidential.	
<b>Due:</b>	January 2024	

#### 4. CONCLUSION / PROPOSAL

- 4.1 Future reports for the Asset Management Sub Committee have been reviewed and are presented to Council for noting.



<b>ITEM</b>	<b>AMSC2</b>
	<b>ASSET MANAGEMENT SUB COMMITTEE</b>
<b>DATE</b>	13 November 2023
<b>HEADING</b>	Traffic Management Improvements - Settlers Farm Primary
<b>AUTHOR</b>	Jarred Collins, Manager Infrastructure Delivery, City Infrastructure
<b>CITY PLAN LINKS</b>	1.3 People are valued and they feel safe, included and connected
<b>SUMMARY</b>	This report provides the preferred solution for a kiss and drop zone and associated additional parking and traffic improvements, for the Settlers Farm Primary School.

## RECOMMENDATION

### That Council:

1. Approves the proposed traffic management options surrounding the Settlers Farm Primary School as outlined in paragraph 3.4 of the report (Item AMSC2 – Traffic Management Improvements – Settlers Farm Primary School, Asset Management Sub Committee, 13 November 2023).
2. Authorises Administration to proceed with the improvements, including any appropriate modifications following consultation with the Settlers Farm Primary School, to the value of \$106,282 should the variation to grant funding be approved under the Local Road and Community Infrastructure, Phase 4 Grant Funding Program.

## ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. Settlers Farm Primary School Concept Plan [↓](#)

## 1. BACKGROUND

1.1 At its meeting held on Monday, 23 October 2023 it was resolved that Council:

- “1. Notes resolution number 0443/2023 from the Council meeting held on 28 August 2023 approving the Local Roads and Community Infrastructure, Phase 4 Grant Funding project submission relating to the School Transport Framework to the value of \$683,846.
2. Notes that the Funding Application has been submitted and is currently being reviewed by the funding body.
3. Approves for an Application Variation to be submitted to the funding body requesting that \$106,282, previously allocated to Gulfview Heights Primary School refuge crossing, be redirected to Settlers Farm Primary School traffic management upgrades.



4. *Requests that staff provide a report to the November 2023 Asset Management Sub Committee meeting with options and associated costings for a kiss and drop zone or additional carparking at Settlers Farm Primary School."*

*Resolution Number 0505/2023*

## **2. EXTERNAL CONSULTATION / COMMUNICATION**

- 2.1 Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

## **3. DISCUSSION**

- 3.1 Settlers Farm Primary School has received upgrades to Koala Crossings on Barassi Street (2018/19) and Ronaldo Way (2019/20).
- 3.2 Fencing upgrades were undertaken on Barassi Street in 2021/22.
- 3.3 The School currently has an informal drop zone/carpark on Ronaldo Way which can be formalised to improve vehicle movements.
- 3.4 The proposed upgrade will include the following elements:
  - 3.4.1 Upgrade and formalization of the kiss and drop zone to Ronaldo Way.
  - 3.4.2 Minor traffic improvement via signage restriction on Ronaldo Way and Barassi Street.
  - 3.4.3 New indented parking bay on Ronaldo Way and path.
  - 3.4.4 Timed parking restrictions on Ronaldo Way along the existing carpark.

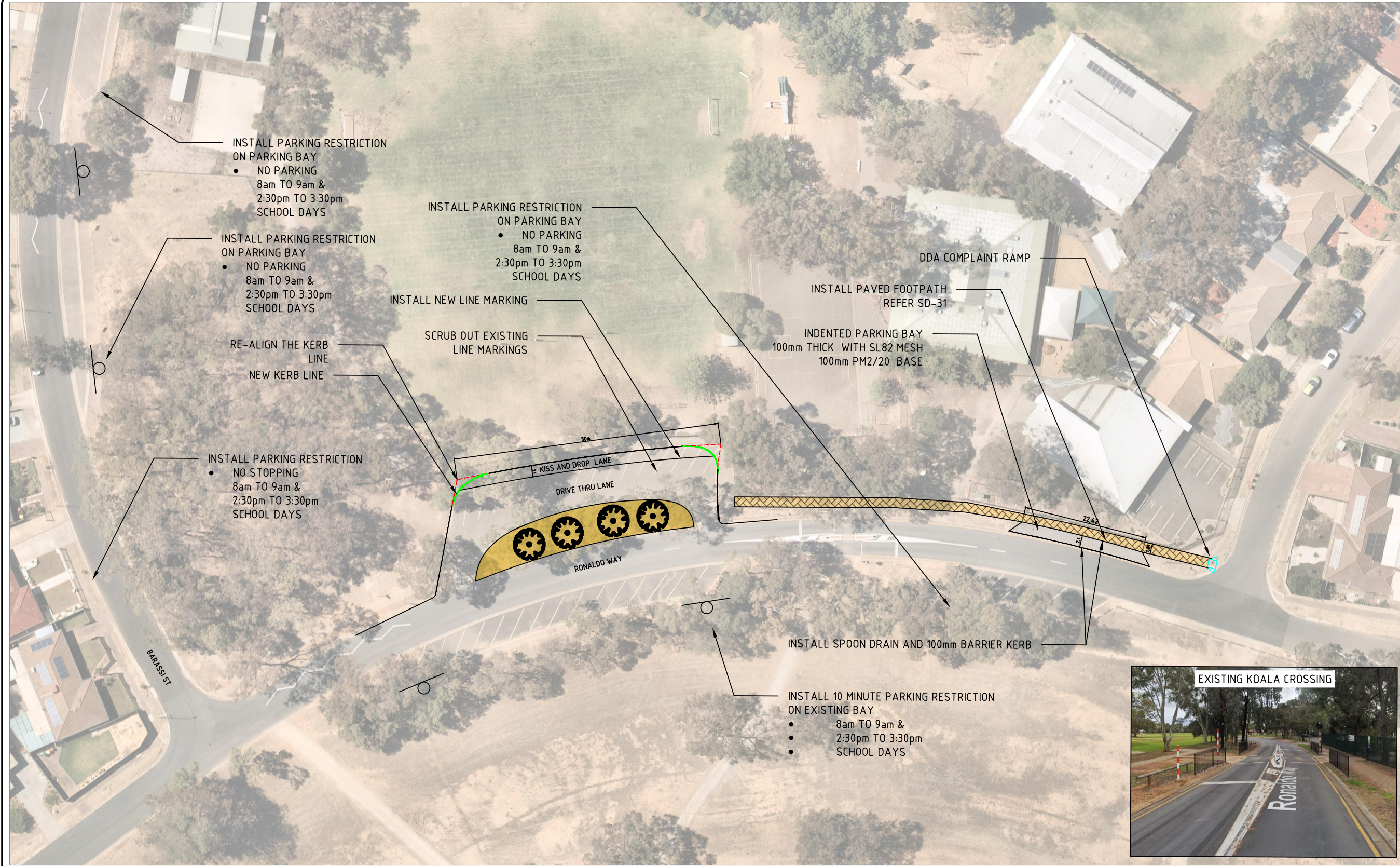
## **4. FINANCIAL OVERVIEW**

- 4.1 The estimated cost for the works including, construction, project management and contingency is \$105,000.
- 4.2 This fits within the proposed budget allowance of \$106,282.

## **5. CONCLUSION**

- 5.1 The Administration will liaise with Settlers Farm Primary School with regard to the proposed upgrade to the kiss and drop zone incorporating additional parking and include any appropriate modifications to the option outlined in paragraph 3.4 above to the value of \$106,282.
- 5.2 Following approval from the Federal Government, the upgrade will be included in the program of delivery.





REVISIONS AND ISSUES			
REV	ISSUE/DESCRIPTION	DATE	APPROVED
A		-	

SCOPE OF WORK	
•	RE-ALIGN KERB
•	LINE MARKING
•	SIGNS
•	FOOTPATH
•	INDENTED PARKING BAY
•	KERB AND SPOON DRAINS
•	RAMP
COST ESTIMATED:	
•	\$105,000

APPROVAL	
NAME	MANAGER INFRASTRUCTURE MANAGEMENT
SIGNATURE	DATE
Jarred Collins	
NAME	MANAGER INFRASTRUCTURE DELIVERY
SIGNATURE	DATE

SIGNATURE		DATE	
DRAFTER			
DESIGNER			
COORDINATE SYSTEM		MGA94	
PR No.		PR0000 FARM SETTLER PRIMARY SCHOOL.DWG	
CAD FILE NAME		PR0000 FARM SETTLER PRIMARY SCHOOL.DWG	

SETTLERS FARM CAMPUS R-6			
KISS AND DROP MODIFICATION & PARKING CONTROLS			
OPTION 2			
PR NO.	26917	SHEET	C02
PR NO.		SHEET C02	

CITY OF SALISBURY	
REVISION	A
NOT TO SCALE	



<b>ITEM</b>	<b>AMSC3</b>
	<b>ASSET MANAGEMENT SUB COMMITTEE</b>
<b>DATE</b>	13 November 2023
<b>HEADING</b>	Infrastructure SA Strategy Discussion Paper
<b>AUTHOR</b>	Sally Jenkin, Team Leader Strategic Urban Planning, City Development
<b>CITY PLAN LINKS</b>	3.3 Our infrastructure supports investment and business activity
<b>SUMMARY</b>	Infrastructure SA has released a Discussion Paper seeking comments to inform its next iteration of the 20 Year State Infrastructure Strategy that will assess the state-wide infrastructure needs, strategic goals, and priorities to 2045. The response is due on the 13 November, and as such it is proposed to seek the endorsement of the Asset Management Subcommittee. Council has made a recent submission on the Greater Adelaide Regional Plan Discussion Paper, and a joint submission with the City of Playford on the Greater Adelaide Regional Plan, while the CEOs of both Councils have responded to the SA Water Regulatory Business Plan. These have been used to provide the basis of the responses to the Discussion Paper.

## RECOMMENDATION

### That Council:

1. Notes the Administration's submission to Infrastructure SA on the 20 Year State Infrastructure Strategy Discussion Paper, contained in Attachment 4 (Item No. AMSC3, Asset Management Sub-Committee, 13 November 2023).
2. Notes the CEO joint submission with City of Playford CEO on the SA Water Regulatory Business Plan 2024-2028, contained in Attachment 3 (Item No. AMSC3, Asset Management Sub-Committee, 13 November 2023).

## ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. State Infrastructure Strategy Discussion Paper[↓](#)
2. Summary SA Water Regulatory Business Plan 2024-2028[↓](#)
3. Joint Submission to ESCOSA on SA Water Regulatory Business Plan[↓](#)
4. Submission to Infrastructure SA - Discussion Paper 2023[↓](#)



## 1. BACKGROUND

- 1.1 Infrastructure SA is preparing the next 20 Year State Infrastructure Strategy to assess statewide infrastructure needs, strategic goals, and priorities to 2045.
- 1.2 A Discussion Paper has been released that seeks comments by 13 November.
- 1.3 Infrastructure SA was established in 2018 under the *Infrastructure SA Act 2018*, and is tasked with:
  - 1.3.1 Issuing a 20 Year State Infrastructure Strategy on a 5-year update cycle
  - 1.3.2 Providing project monitoring for Government projects and programs greater than \$50 million.
  - 1.3.3 Preparing an annual Capital Intentions Statement which represents its view on priority infrastructure initiatives (This is a 5 year rolling annual plan that identifies the major projects or programs to be undertaken as a priority. They are limited to those submitted by agencies and councils, over \$50m, and dependent upon state funding. Projects can be submitted by Councils through a registration process).
  - 1.3.4 Providing strategic advice to the Premier as needed.
- 1.4 It should be noted that Infrastructure SA does not provide any infrastructure itself, nor does it oversee the works of the Agencies. It promotes the improvements and policies to the State and Premier to support sound decision making.
- 1.5 Infrastructure SA defines infrastructure as:
  - 1.5.1 "... the physical assets and structures that enable the services necessary to sustain or enhance the economy and liveability of South Australia."
  - 1.5.2 This includes roads, rail, ports, housing and facilities associated with health, culture, sports, tourism, education, energy, water and waste utilities. It also includes digital connectivity infrastructure and other physical assets that can act as enablers for industry and other sectors of the economy.
- 1.6 The Discussion Paper identifies megatrends, provides economic context and identifies six Key Objectives.
- 1.7 The attached draft Submission to the State Infrastructure Strategy Discussion Paper 2023 has considered the recent Council submissions on the:
  - 1.7.1 Greater Adelaide Regional Plan, and
  - 1.7.2 Joint submissions with the City of Playford on the Greater Adelaide Regional Plan and on the SA Water Regulatory business proposal.
- 1.8 Responses are due by 13 November. The Draft Submission is presented to the Asset Management Sub Committee for its information.
- 1.9 If necessary, the City of Salisbury submission will be adjusted to reflect the Asset Management Sub Committee's position, and provided to Infrastructure SA following Council's decision.



### 3. DISCUSSION

- 3.1 The Infrastructure Discussion Paper has identified five megatrends that are considered to impact on the future delivery of infrastructure. These are worth highlighting as they will be relevant to Salisbury over the next 20 years.
1. Climate change mitigation and adaptation
  2. Accelerated digital transformation and data vulnerabilities
  3. Shifting population, workforce and skills base
  4. Increasing global instability and challenges of connectedness of economies
  5. Push towards an inclusive society and economy.
- 3.2 The Discussion Paper then identifies six Key Objectives:
1. Enabling Infrastructure unlocks higher productivity and economic growth to improve our living standards
  2. Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities.
  3. Accessible and inclusive infrastructure supports social inclusion and economic participation
  4. Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities
  5. Improved resilience to shocks and events helps avoid or respond to disruptions that impact our economy, services and supply chains.
  6. A stronger infrastructure industry optimises our infrastructure investment through better planning and prioritisation.
- 3.3 The key infrastructure matters that have been raised in the recent submissions and are raised in the response to this Discussion Paper are:
- 3.3.1 The Planning system is an enabler to growth opportunities and responds to emerging trends.
  - 3.3.2 Well planned and coordinated infrastructure delivery is essential.
  - 3.3.3 The difficulty in bringing State Government Agencies on board to supply services that aligns with land rezoning demand and needs.
  - 3.3.4 Transport upgrades for east-west movements are required.
  - 3.3.5 Future industries growth and development ready land that recognises the current investment in defence, green energy, the circular economy and synergies.
  - 3.3.6 Strategic employment lands need to be future proofed by ensuring sufficient infrastructure provision that is an appropriate capacity at the right time, and recognise climate change implications.
  - 3.3.7 Transport and transit systems and investment must be linked to employment lands and growth areas and recognise future poly-centric models, not limited to the Adelaide mono-centric model.



- 3.3.8 Greenspace supply must be incorporated into infrastructure provision to supply quality streetscapes, playspace and sporting provision and capability, biodiversity enhancement, drainage as well as the carparking, energy and infrastructure supply and waste requirements.
- 3.3.9 Stronger recognition of civil and defence airports and their contribution to the economy, and their impacts on the surrounding urban areas.
- 3.3.10 High demand for development ready employment lands is limiting business growth.
- 3.3.11 Salisbury and Playford residential growth is anticipated to grow to 400,000 over the life of the Infrastructure Strategy, and greater focus must be considered to serve the population with places to work, health care (including hospitals and emergency services), and education services (eg universities).
- 3.3.12 The growth of the North West Economic Corridor in Salisbury and Playford, and the other growth areas identified by the State will require immediate action by SA Water to plan for essential infrastructure in water supply and waste systems. It has been noted for example that the SA Water 2024-28 Regulatory Business Plan does not identify any capital expenditure on the expansion of the sewer network.
- 3.3.13 The Infrastructure Plan must recognise the importance of natural assets such as the mangroves, environmentally significant areas, the International Bird Sanctuary, the Dolphin Sanctuary and the like, and their contribution to the significant biodiversity and carbon sequestration for the northern region. Protection and enhancement of the green and circular economy offer opportunities for investment.
- 3.3.14 Likewise, the need to retain and enhance food production lands as an obvious and integral element of the Infrastructure Plan and its integral link to the population and workers.
- 3.3.15 A new comment should be made that highlights the need to recognise the value of the less skilled employee in the employment network, and that skilled migration can be used in conjunction with work skill training programs to improve workers' availability and business creation in being a part of a vibrant and strong community.
- 3.4 In a State Government meeting to discuss infrastructure issues for the Code Amendment proposals in Salisbury and Playford, SA Water advised that it had submitted its Regulatory Business Plan 2024-2028 to the economic regulator, the Essential Services Commission of South Australia. (ESCOSA.) The summary document is Attachment 2 to this Report. The full report can be found at [https://www.sawater.com.au/\\_data/assets/pdf\\_file/0011/747074/Regulatory-Business-Plan\\_RD24-submission.pdf](https://www.sawater.com.au/_data/assets/pdf_file/0011/747074/Regulatory-Business-Plan_RD24-submission.pdf)
- 3.5 SA Water's Business Plan submission did not seek significant funds for sewerage infrastructure for the north, and generally allocated resources to the residential fringe growth. SA Water advised that it was unaware of the needs to service upcoming employment lands previously identified in the Strategic Growth Framework, as it allocates resources when triggered by developers.



- 3.6 It should be noted that SA Water was consulted with during the Strategic Growth Framework development, but did not provide comments.
- 3.7 On being made aware of an opportunity to comment on the SA Water Regulatory Business Plan, the CEOs of Salisbury and Playford made a submission on behalf of their Councils. The joint submission is Attachment 3 to this Report for the information of Members.
- 3.8 The recommended comments on the 20 Year State Infrastructure Strategy Discussion Paper are in Attachment 4 of this report.

#### **4. CONCLUSION**

- 4.1 A number of recent submissions considered and approved by Council have been used to inform the draft response to the SA Infrastructure 20 Year State Infrastructure Strategy Discussion Paper as they reflect the position of Council on key strategic infrastructure matters.











# Acknowledgement of Country

We acknowledge and respect the First Peoples of this land and their deep ongoing spiritual and cultural connection to Country.

We will work together with our First Nations people to share our collective knowledge and recognise the enduring impact of infrastructure on Country.

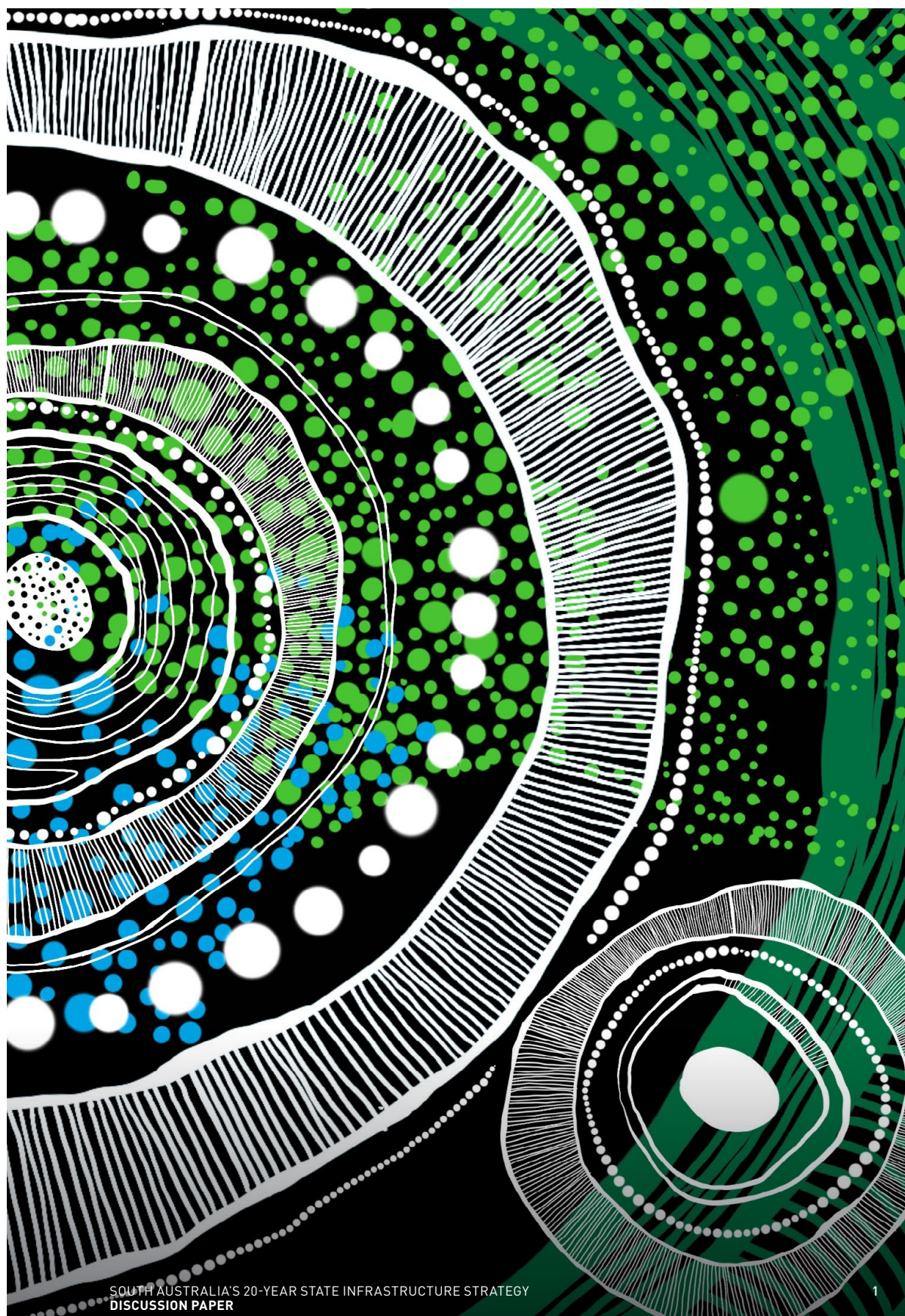
**Cover image: Adelaide Entertainment Centre Tram Stop**  
*Image courtesy of Department for Infrastructure and Transport*

**Image this page:**  
Artwork created for Infrastructure SA by Eastern Arrernte artist Patrick Caruso. Patrick is the founder of We Create Print Deliver, a South Australian based advertising and business agency.

The artwork represents Infrastructure SA and our people, knowledge and skills, the projects and communities impacted by our work and the people travelling through the landscape via the work that we do.

SOUTH AUSTRALIA'S 20-YEAR STATE INFRASTRUCTURE STRATEGY  
DISCUSSION PAPER







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# Foreword by Chair



This Discussion Paper presents an opportunity for South Australians to engage with us on the infrastructure we need for the next 20 years, to support a growing economy that improves the prosperity of all South Australians.

Infrastructure SA was established in 2018 and in its first five years of operation has demonstrated value as an independent advisor to Government. Infrastructure SA provides an external review of all major infrastructure projects and a view on which infrastructure projects should be prioritised, through the annual Capital Intentions Statement.

Developing a 20-year Infrastructure Strategy is a key part of Infrastructure SA's responsibilities. The Strategy will inform future decisions on infrastructure by assessing the needs, strategic goals and priorities for infrastructure for the next 20 years.

Infrastructure SA presented its first Strategy to the Government of South Australia in May 2020. The Strategy identified 38 priorities to guide government policy and investment in infrastructure. A key priority identified at the time was the investigation of water infrastructure to unlock economic opportunities, which led to the creation of the Northern Water Supply Project. Infrastructure SA has leveraged its expertise in infrastructure planning to lead delivery of a business case, with a final investment decision expected in 2024.

Infrastructure SA is required to review the Strategy every five years and is now in the early stages of preparing its next Strategy. It is a timely opportunity to consider how our infrastructure needs have evolved given the landscape has changed significantly, with the COVID-19 pandemic, the transition to net zero and increasing digitalisation impacting the way we think about, plan for, and use our infrastructure.



Since the release of our last Discussion Paper in 2019, our infrastructure spend has grown substantially. Over the next four years we will see an estimated spend of \$21 billion, an increase of \$9.1 billion. This program of investment includes expenditure on flagship projects like the new Women's and Children's Hospital and the Torrens to Darlington section of the North-South Corridor. In addition, the previously announced Hydrogen Jobs Plan is progressing, supporting the creation of a green hydrogen industry and demonstrating South Australia's leadership in renewables and hydrogen.

However, our funds are not unlimited. An increase in net debt is forecast, while general government sector revenue growth remains flat in real terms over the forward estimates. Given these fiscal constraints, it's more important than ever that we maximise the value of our existing assets and continue to support evidence-based prioritisation of infrastructure needs.

Infrastructure SA sees real opportunities to improve our productivity and grow our economy. Economic growth is essential to the prosperity and wellbeing of all South Australians. We have a small population and market size, so our growth must be in national and international exports and import replacement.

We also need to diversify our economy, expanding on the strength of our agricultural and resource exports and moving up the value chain to deliver more complex products. This will deliver the revenue needed to continue our investment in infrastructure to achieve an economy that is smart, sustainable and inclusive.

To support our economic growth, we will need to carefully plan for and coordinate the delivery of infrastructure and do more to attract, train and retain skilled people. We also need to think differently about how we make South Australia a vibrant and liveable place that becomes a destination of first choice for interstate and overseas migration.

This Discussion Paper is foundational to the development of our next Strategy. It provides an overview of the key infrastructure opportunities and challenges faced by South Australia. We encourage industry and the community to think about what we want the South Australia of the future to look like when responding to this Paper.

I hope this Discussion Paper generates fresh ideas and I encourage you to contribute your knowledge and insights to assist Infrastructure SA develop our next 20-year State Infrastructure Strategy.



Anthony F Shepherd, AO  
Chair of Infrastructure SA



*It's more important than ever that we maximise the value of our existing assets and continue to support evidence-based prioritisation of infrastructure needs.*



# 1. Context

## 1.1 About Infrastructure SA

Infrastructure SA was established and operates under the *Infrastructure SA Act 2018* (SA) (the Act) to serve as an independent advisory and assurance body in relation to major infrastructure projects in South Australia. It is governed by an independent Board, with both public and private sector expertise, and reports directly to the Premier of South Australia.

Section 5(1) of the *Infrastructure SA Act 2018* (SA) defines the objects of Infrastructure SA as:

- a. to promote such efficient, effective and timely coordination, planning, prioritisation, delivery and operation of infrastructure as is necessary for the economic, social or environmental benefit of the State and
- b. to promote the adoption and use of policies, practices, information and analysis to support sound decision-making in relation to infrastructure.

Infrastructure SA has four core deliverables, consistent with the Act:

- issuing a **20-Year State Infrastructure Strategy** and updating it at least every five years (the subject of this Discussion Paper)
- providing **project monitoring** as independent assurance for projects and programs with a capital value of \$50 million or more
- preparing an annual **Capital Intentions Statement** that represents Infrastructure SA's views on priority infrastructure initiatives
- providing **strategic advice** to the Premier of South Australia as needed.

Infrastructure SA's vision is that efficient and evidence-based infrastructure planning and delivery will grow the economy, create jobs and improve liveability for all South Australians.

You can find out more about Infrastructure SA at our website [www.infrastructure.sa.gov.au](http://www.infrastructure.sa.gov.au).

## 1.2 Defining infrastructure

Infrastructure SA uses the following broad definition of infrastructure.

**Infrastructure is the physical assets and structures that enable the services necessary to sustain or enhance the economy and liveability of South Australia.**

This includes roads, rail, ports, housing, and facilities associated with health, culture, sports, tourism, education, energy, water and waste utilities. It also includes digital connectivity infrastructure and other physical assets that can act as enablers for industry and other sectors of the economy.



### 1.3 South Australia's 20-Year State Infrastructure Strategy

Infrastructure SA delivered its first 20-Year State Infrastructure Strategy in May 2020.<sup>1</sup> We are now developing the next 20-Year State Infrastructure Strategy (the Strategy) which will:

- focus on economic growth, aligned with the South Australian Economic Statement<sup>2</sup>
- identify the challenges and opportunities for providing and managing infrastructure
- consider how we can maximise the value of the State's existing assets
- identify requirements for new infrastructure, and the policy changes or other reforms that can help drive economic growth through an infrastructure lens
- recommend future priorities to ensure the State has the infrastructure needed to grow the economy, create jobs, and improve the liveability and sustainability of South Australia.

The new Strategy will replace the 2020 Strategy and will be available online.

### 1.4 How to read this Discussion Paper

This Discussion Paper has been developed to provide context and facilitate feedback to inform the new Strategy. To provide the context, this Discussion Paper:

- outlines the role of Infrastructure SA
- discusses megatrends which are likely to influence infrastructure over the next 20 years
- describes the vision for the Strategy and sets six objectives to reach that vision
- discusses the current economic context.

To facilitate feedback, each of the six objectives are discussed further in individual chapters. Each chapter raises key issues related to the objective. A targeted consultation question is provided at the end of each key issue to provoke your thoughts and ideas for feedback.

It is noted that many of the key issues are relevant across multiple objectives, and some of the objectives overlap. When providing feedback and responding to the questions, you are welcome to raise issues where you see the best fit.

### 1.5 You are invited to participate

This Discussion Paper is the primary means of contributing your insights and knowledge to inform the new Strategy. Infrastructure SA is keen to understand the needs and views of different communities, sectors and regions to shape the direction of the Strategy, aligned with the vision of a smart, sustainable and inclusive economy.

We welcome submissions from anyone who would like to inform this process. Submissions can range from a simple letter to a more substantial document. Where possible, each submission should include evidence, such as relevant data, documentation or references to support your views. This approach is consistent with the Act, which requires Infrastructure SA to invite submissions to the Strategy and consider relevant information provided.

For further information on making a submission please refer to Chapter 12 How to make a submission to Infrastructure SA.



## 2. Megatrends impacting infrastructure in South Australia

Given the long-term nature of the Strategy and the rapid pace of change, Infrastructure SA has partnered with the Foresight Unit in the Government of South Australia's Department of the Premier and Cabinet to identify global megatrends relevant to infrastructure for South Australia over the next 20 years. These are the trends identified today that are likely to impact infrastructure delivery in the future.

Strategic foresight and the identification of megatrends is useful to frame thinking about the future, explore

potential scenarios and plan for the unexpected. Exploring the impact of megatrends on our strategic infrastructure requirements helps ensure the Strategy remains relevant in many future scenarios. The megatrends present both opportunities and challenges for South Australia.

The megatrends identified as the most relevant to South Australia and the new Strategy are outlined in Figure 1. The impacts of these on infrastructure are explored throughout this Discussion Paper.

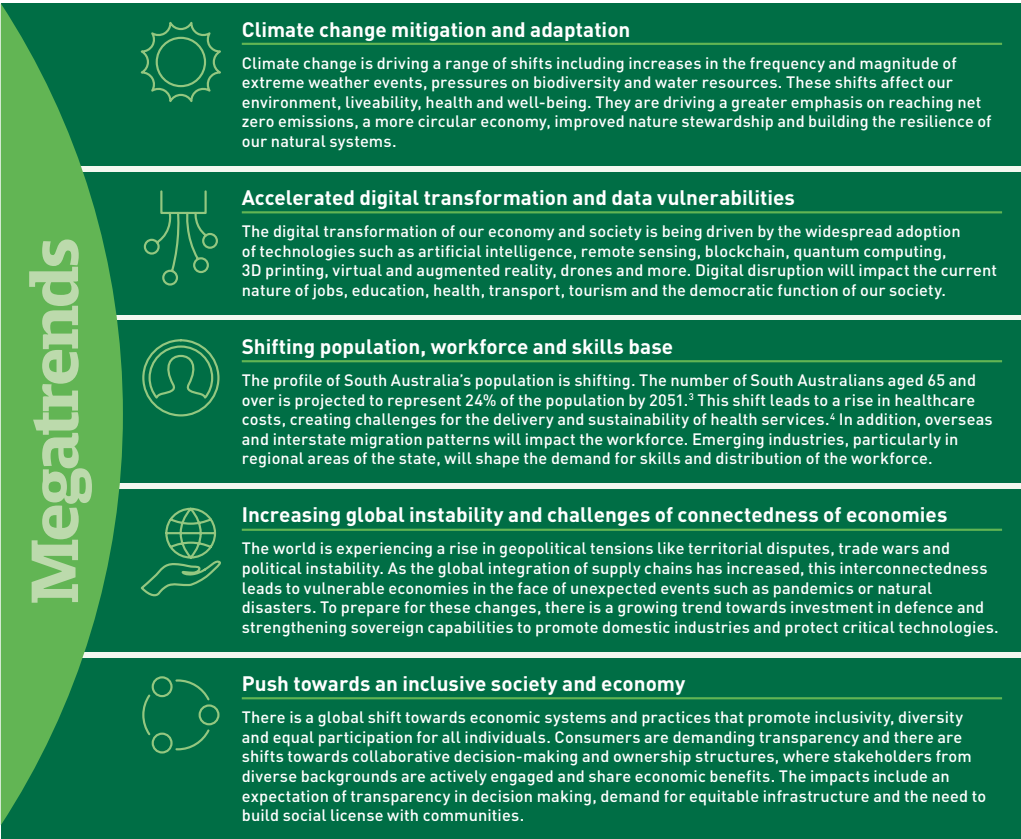


Figure 1:  
Megatrends identified as impacting infrastructure in South Australia



# 3. Growing the economy with infrastructure

## 3.1 The vision

The South Australian Economic Statement<sup>5</sup> has a vision to support economic growth and prosperity. Infrastructure SA has applied this vision to set the direction for the new Strategy.

**An economy that is fit for the future, improving the wellbeing of all South Australians. An economy that is smart, sustainable and inclusive.**  
*South Australian Economic Statement 2023*

The Strategy seeks to identify the infrastructure necessary to meet this vision and acknowledges the need to balance social, environmental and economic outcomes.

## 3.2 The objectives

Aligned with the vision, Infrastructure SA has identified six key strategic objectives we are seeking to achieve through the new Strategy. These objectives have been developed with consideration of the analysis of megatrends (Chapter 2) and current and future opportunities and challenges in infrastructure across South Australia, Australia and globally.

- **1. Enabling infrastructure unlocks higher productivity and economic growth to improve our living standards**
- **2. Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities**
- **3. Accessible and inclusive infrastructure supports social inclusion and economic participation**
- **4. Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities**
- **5. Improved resilience to shocks and events helps avoid or respond to disruptions that impact our economy, services and supply chains**
- **6. A stronger infrastructure industry optimises our infrastructure investment through better planning and prioritisation**



# 4. The economic context

The megatrends discussed in Chapter 2 will shape the way we plan for infrastructure over the next 20 years. As a foundation for our future infrastructure needs, this chapter summarises the current economic environment.

## 4.1 Global economy

Global economic conditions remain challenging in the wake of COVID-19 and Russia’s invasion of Ukraine. The compounding effects of these crises – including congested supply chains and scarce energy – have resulted in very high inflation and, consequently, a strong response from central banks worldwide.

According to the Organisation for Economic Co-operation and Development (OECD), global economic growth in 2023 is projected to be 2.7%, the lowest annual rate since the global financial crisis (excluding the 2020 pandemic period).<sup>6</sup> A slight improvement to 3% is expected in 2024, based on analysis undertaken for the Federal Budget (Table 1).<sup>7</sup>

**Table 1:**  
Global economic growth forecasts from the Federal Budget 2023–24<sup>21</sup>

	Outcome	Forecasts (Calendar Years)		
	2022	2023	2024	2025
China	3.0	5 ¼	4 ½	4 ½
India	6.7	5 ½	6 ¼	6 ¾
Japan	1.0	1 ¼	¾	1
United States	2.1	1	¾	2 ¼
Euro area	3.5	½	1	1 ¾
United Kingdom	4.1	-½	½	2 ¼
Other East Asia	4.4	3 ¼	4	4 ¼
Major trading partners	3.0	3 ¼	3 ¼	3 ½
World	3.4	2 ¾	3	3 ½

World and Other East Asia growth rates are calculated using gross domestic product (GDP) weights based on purchasing power parity (PPP). Growth rates for major trading partners are calculated using Australian goods and services export trade weights. Other East Asia comprises Indonesia, Malaysia, the Philippines, Thailand, Vietnam and Singapore, along with Hong Kong, South Korea and Taiwan.

Despite the current circumstances, many countries are forging ahead with climate change action. The United States has introduced the *Inflation Reduction Act (2023)* which provides significant federal funding to lower greenhouse gas emissions, with requirements for domestic content or procurement from countries with which the United States has a free trade agreement<sup>8</sup> – including Australia, presenting a significant opportunity.



4.2 Australia’s economy

Australia has not escaped the impacts of these challenging global economic conditions. Economic growth has slowed, with gross domestic product (GDP) only increasing by 0.2% in the March 2023 quarter.<sup>9</sup> GDP per capita, a measure of the standard of living, has lagged headline GDP growth and went backwards in the March 2023 quarter.<sup>10</sup>

The Reserve Bank of Australia (RBA) expects GDP growth to slow to 1.3% in 2023–24 in line with weakening global conditions and domestic cost-of-living pressures, before picking up to 2.0% in 2024–25.<sup>11</sup> However, there are key domestic uncertainties that may result in different outcomes, including the uncertain outlook for China and domestic consumption being affected by competing forces.<sup>12</sup>

Inflation is expected to have peaked at the end of 2022, with the consumer price index (CPI) rising 7.8% over the twelve months to the December 2022 quarter.<sup>13</sup> The RBA has, in response, increased the cash rate target from 0.1% in April 2022 to 4.1% in June 2023. The RBA expects inflation to fall to 3.3% by the end of 2024, before returning to the target band of 2–3% by the end of 2025.<sup>14</sup>

Australia’s labour market has remained robust, with the trend unemployment rate at 3.6% in July 2023.<sup>15</sup> According to RBA forecasts, the unemployment rate is projected to rise to 4.2% by the June quarter of 2024 and 4.5% by the June quarter of 2025, which is still low by historical standards.<sup>16</sup> Skills and labour shortages are continuing to impact many industries, although record levels of overseas migration may ease pressures.

4.3 South Australia’s economy

South Australia’s economy has recently performed well in both an absolute and relative sense. South Australia’s gross state product (GSP) increased by 5.1% in 2021–22, following a rise of 4.7% the previous year.<sup>17</sup> This represents the second-fastest growth rate in the country, behind Victoria at 5.6%.<sup>18</sup> The increase was driven primarily by agricultural industries (Chart 1), with favourable weather conditions producing two years of year-on-year growth above 25% following three years of decline, as well as strong household, public and business spending rebounding post-COVID.<sup>19</sup> GSP per capita increased by 4.5% in 2021–22 to \$68,777, though this remains below national GDP per capita at \$83,678.<sup>20</sup>

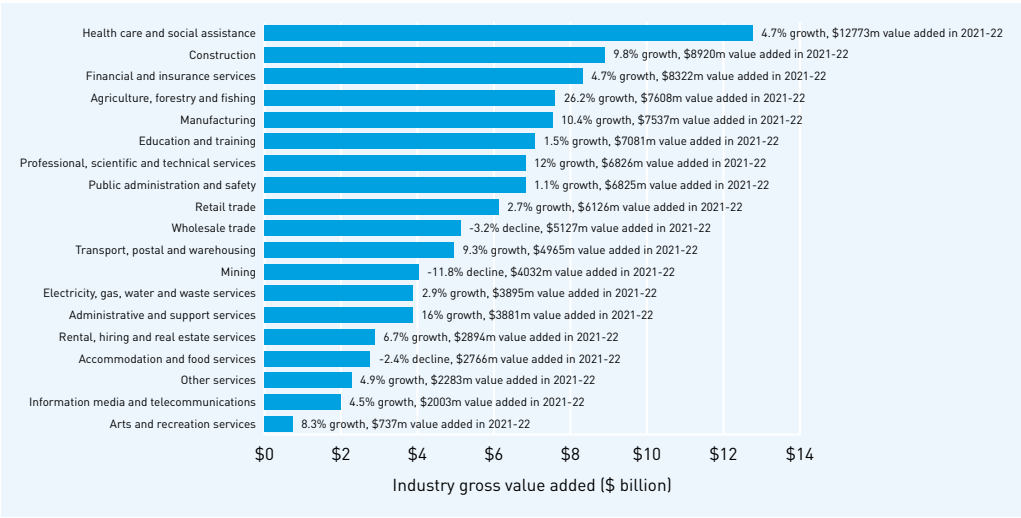


Chart 1:  
South Australia’s industry composition, 2021–22<sup>22</sup>



Goods exports from South Australia totalled \$17.4 billion in the twelve months to June 2023, up 19% on the previous period in unadjusted terms.<sup>23</sup> The state accounted for 2.9% of national goods exports overall.<sup>24</sup> South Australia's goods exports are highly concentrated, with ten commodities accounting for 80% of goods exports (Chart 2).<sup>25</sup>

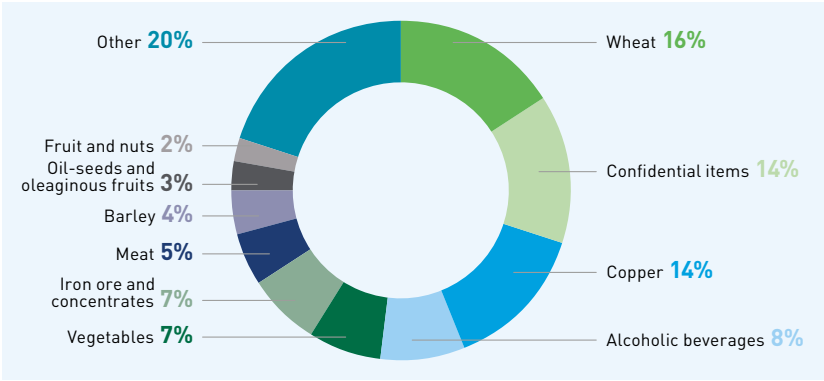


Chart 2:  
South Australia's export profile, 2022-23<sup>26</sup>

South Australia's labour market has strengthened in-line with national performance, with the state's trend unemployment rate at 4.1% in July 2023, while total employment is at a historical high in trend terms.<sup>27</sup> Such a tight labour market has seen organisations across the state face skills shortages.

In the short term, skilled migration is likely to be the core means to address shortages, balanced with increasing local skills development over the longer-term. South Australia's Skilled and Business Migration program had their largest year on record in 2022-23.<sup>28</sup> Overseas migrants accounted for the vast majority of South Australia's 1.6% annual population growth in 2022.<sup>29</sup> Population projections estimate that South Australia will reach 2.3 million residents by 2051 in a medium scenario, with an average annual growth rate of around 1% over the next 30 years (Chart 3).<sup>30</sup>

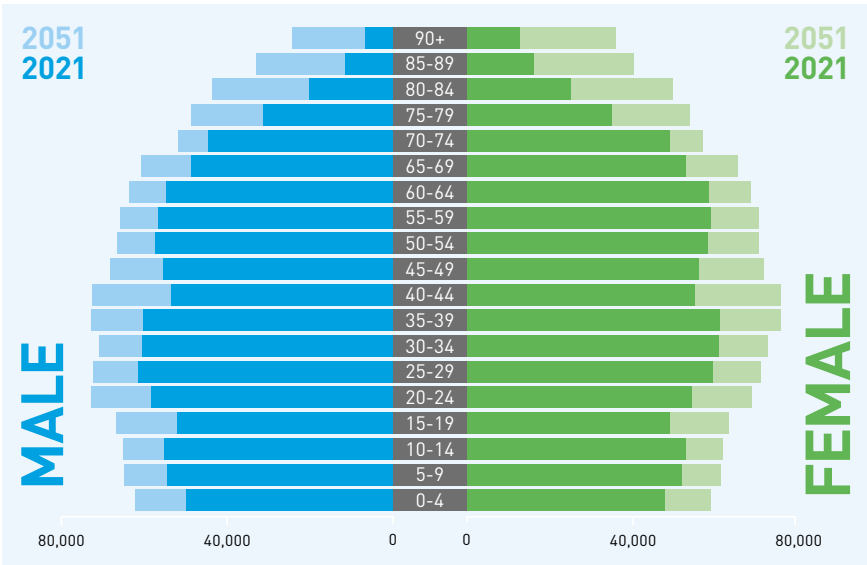


Chart 3:  
South Australia's projected population, 2021 and 2051, by age group<sup>31</sup>



## 4.4 Our productivity challenge

Productivity growth has slowed in South Australia in recent decades; similar trends have been observed across Australia and other advanced economies. South Australia's labour productivity growth averaged 0.4% between 2010-11 and 2019-20, compared to 2.3% across Australia.<sup>32</sup> Productivity matters because it is a key driver of higher living standards.

While the existence of our productivity challenge is well known, solutions are more difficult to identify and implement. The South Australian Productivity Commission recently found that technological progress in South Australia has stalled since 2001, and the economy has experienced inefficiency for almost the last two decades – with technological progress and efficiency being two key drivers of productivity growth.<sup>33</sup>

Inadequate infrastructure and connectivity can give rise to inefficiency in the economy.<sup>34</sup> South Australia's infrastructure, and the new Strategy, are therefore a key part of addressing our productivity challenge.



### Consultation question 1

*What opportunities should we consider to improve South Australia's economic growth?*





## 5. Enabling infrastructure



### Objective 1.

**Enabling infrastructure unlocks higher productivity and economic growth to improve our living standards**

South Australia has major economic opportunities on the horizon. The Government of South Australia will play a key role in planning and coordinating the infrastructure and connectivity needed to support these opportunities, setting us up to capture the benefits.

The global imperative to deliver net zero emissions and new and emerging industries mean South Australia needs to be ready with the right enabling infrastructure to unlock economic growth. Building upon existing infrastructure and developing new infrastructure, skills and capabilities will be instrumental to maximising the benefits presented through defence and the AUKUS partnership, space, cybersecurity, agriculture and manufacturing. Strategic infrastructure planning and provision will act as the enabler to maximise these and other multi-generational opportunities.

### 5.1 Freight and supply networks

#### ***We need to remain connected to markets***

The movement of goods via our freight and supply networks remains a fundamental driver to the economic wellbeing of South Australia. Improving productivity and efficiency, coupled with increased accessibility and reliability across all modes and supply chains, is needed to ensure we remain competitive and connected to markets. The national freight task is forecast to grow by 26% to 2050, with road freight forecast to grow by 77% from 2020 volumes.<sup>35</sup>





In South Australia, the bulk of our freight movements occurs by road (>80%),<sup>36</sup> with safety and congestion factors often competing with productivity objectives for prioritisation of investment across the network. Constraints across the key regional corridors results in limitations being imposed upon High Productivity Vehicles (truck and trailer combinations that shift more freight more efficiently)<sup>37</sup> significantly impacting efficiency for regional movements. The rapidly changing environment driven by e-commerce and consumer change is resulting in increased urban freight activity through 'direct-to-home' deliveries, adding to congestion and metro network challenges.

The freight sector is a complex and diverse system that operates across the full spectrum of our communities' daily lives, from connecting and supplying our regions and natural resources, transporting our goods to local and export markets, and keeping our cities functioning. This network is supported through a hierarchy of infrastructure and transport needs, from the key freight corridors and ports and facilities to the 'first and last mile' delivery to point-of-use destinations.

The sector is also facing challenges due to decarbonisation to meet net zero commitments. The emerging tension between reduced productivity and increased network impacts to accommodate low emission heavy vehicles is a key challenge for road infrastructure.

A more competitive freight network may encourage companies to locate in, or increase the production of goods, in South Australia. In turn, increased exports will help support our economic growth and increase employment opportunities.



**Consultation question 2**

*What infrastructure constraints are preventing a more efficient, accessible, and productive freight sector?*

**5.2 Water supply**

***Our water supply needs to be sustainable and affordable***

Water is critical to supporting our state's growth, prosperous and liveable communities and a healthy environment. South Australia's water security is under increasing pressure from climate change (Box 1), population growth, increasing demand and an ageing infrastructure base.<sup>38</sup>

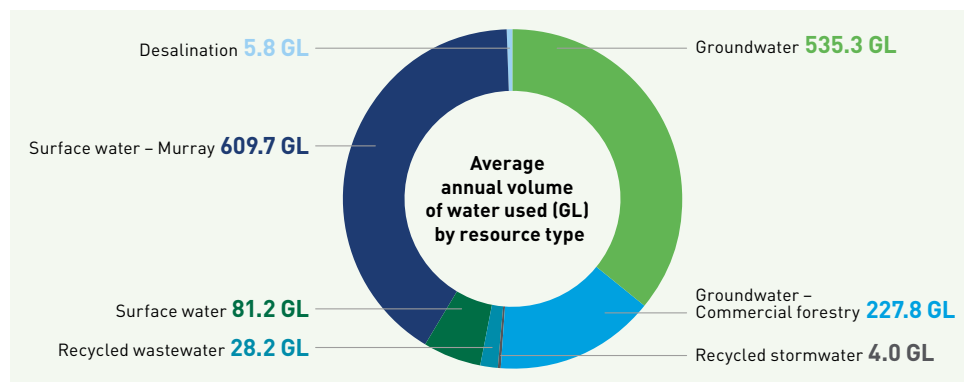
**Box 1. Climate projections for South Australia**

The latest climate projections show that South Australia can expect more hotter days, with declining total annual rainfall, more severe and prolonged droughts, and an increase in the intensity and frequency of heavy rainfall events.<sup>39</sup>

Across many parts of the state, inadequate water security, the cost of water and lack of distribution infrastructure are cited as key inhibitors to industry investment and growth.<sup>40</sup> Improving access to sustainable, secure and affordable supplies of water is essential to enabling growth and to key industry sectors including agriculture, mining and manufacturing, as well as enabling new industries such as hydrogen.

Delivering sufficient water to where it is needed to support economic growth in an affordable way is an ongoing challenge, as is efficiently and sustainably balancing demand with supply from the available water resources (Figure 2).<sup>41</sup> Proposals such as the Northern Water Supply Project have the potential to support projects across a range of industries, providing a new water supply to key economic growth areas.





**Figure 2:**  
Volume of water used in South Australia (2021-22)<sup>42</sup>

Understanding future demand for water supply and where it's needed will support effective planning. Strategic initiatives such as the Resilient Water Futures project, being led by SA Water in collaboration with agencies across government, are supporting planning for long-term water security aligned with the Government of South Australia's priorities. When finalised, such initiatives will inform future infrastructure investment needs and their timing.

In the face of future uncertainties, water systems will need to be resilient and adaptive to ensure secure and sustainable supply that supports our communities and industries. This includes greater use of integrated water management and consideration of all options to increase supply, including increased use of recycling schemes.



### Consultation question 3

*How can we enable a sustainable and affordable water supply into the future?*





5.3 Energy transmission

*The right energy transmission infrastructure optimises benefits for households and industry*

To support the Government of South Australia’s economic ambitions and net zero targets, significant investment will be required to deliver new transmission and modernised distribution networks. This will ensure secure, reliable and affordable energy is available, where it is needed, to service end-customers.

Our energy generation mix continues to evolve and must balance the variable nature of renewables with the firming capacity required to maintain levels of service at all times, requiring a transformation of existing and new transmission infrastructure. Building social acceptance through engagement and informed network planning will also be important to deliver transmission through both urban and regional areas. The Australian Energy Market Operator’s (AEMO) Integrated System Plan (ISP), backed by the Australian Government’s \$20 billion Rewiring the Nation plan is intended to give some level of certainty to planning for future transmission. The role of natural gas and the emerging role for hydrogen into the future will require careful consideration of our transmission and storage networks. We will need to meet demand and maintain stability of supply in a rapidly changing environment, while avoiding stranding existing assets.

The forecast growth in electrification across the residential and commercial building industry and transport sectors will increase operational consumption in South Australia for the next ten years.<sup>43</sup> This requires ongoing development of dispersed generation and storage assets, resulting in increased transmission networks to ensure energy is available at the point of consumption. Balancing an efficient and timely investment and delivery program will be fundamental to ensuring we maximise the opportunities and reduce the risks associated with the task.



**Consultation question 4**  
*How do we realise the opportunities and mitigate risks with transforming our transmission and distribution infrastructure for the future?*

5.4 Digital connectivity

*Digital connectivity is key to productivity improvements*

Infrastructure that supports digital connectivity (Box 2) is a key enabler for the Government of South Australia’s vision for South Australia to be a smart economy. Digital infrastructure and technology are key drivers for productivity growth and will support South Australia to keep pace with global developments. Bolstering cyber security is imperative, to protect our critical infrastructure and supporting systems.

**Box 2. Digital connectivity**

Digital connectivity refers to the application of technology to physical infrastructure, which facilitates the connection of assets and people to the internet. It encompasses:

- telecommunications infrastructure, such as submarine cables and fibre transmission
- access networks, such as fixed line, mobile and satellite
- end-point user devices and applications, such as Internet of Things devices and handsets
- cyber capabilities and platforms
- data centres.<sup>44</sup>



Business need secure and reliable digital infrastructure to make the best use of technology, including emerging technologies such as generative artificial intelligence, robotic automation and big data analytics. Individuals need reliable connectivity to fully participate in work and society and to learn new skills. Advances in technology are expected to create significant productivity and economic benefits through making existing industries more efficient and enabling the creation of new products and services.

Australia is lagging in global competitiveness of internet speeds, ranking 84<sup>th</sup> in the world on median fixed broadband speeds in July 2023, behind North America, most of Europe and parts of Asia.<sup>45</sup>

Currently, responsibility for planning and delivering digital infrastructure sits with multiple layers of government and the private sector, meaning it is difficult to gain visibility on the current situation to address gaps.

Government has an important role in supporting the adoption of digital technologies. The Australian Productivity Commission found that governments can encourage better use of technology through the provision of digital infrastructure, particularly in regional and remote Australia; data sharing frameworks and integration; and facilitating improvements in technical digital and data skills.<sup>46</sup>

The Government of South Australia recently announced a \$200 million investment to drive strategic and targeted investment in cyber security and digital initiatives. Priority investments include completion of a State Connectivity Strategy to define the standard of internet connectivity across all areas of the state to align future initiatives and investment decisions.<sup>47</sup> This will assist in understanding the challenges with internet connectivity, particularly in regional areas.



**Consultation question 5**

*What are the barriers to increased adoption of digital technology to improve productivity?*

**5.5 Resource exports**

***Adding value to our resource exports supports a stronger economy***

South Australia performs strongly in the export of mineral and agricultural products. In the 12 months to June 2023, these exports totalled \$13.3 billion.<sup>48</sup> However, our exports are largely unprocessed (Box 3).

**Box 3. South Australia’s agricultural and natural resources exports**

The Australian Government’s Department of Foreign Affairs and Trade estimate that for South Australia in 2022-23, of the total \$13.3 billion in agricultural and mineral goods exported, 56% were unprocessed primary products, such as grains, vegetables, fruit and iron ore.<sup>49</sup>

*Note calculations exclude confidential items.*

In South Australia, we have opportunities to expand the volume of resource exports and develop and export higher value-add products. Higher value-add products are more complex and increase the total value of our exports. More local production and value-adding to our natural resources requires more workers, new skills and greater expertise, all of which contributes to higher wages, economic growth and greater productivity.

Globally, demand for critical and strategic mineral resources is growing rapidly to enable the transition to net zero, including for use in electric vehicles, solar photovoltaics, hydrogen electrolyzers and batteries (refer to Box 4 on the battery value chain). In South Australia, we have numerous opportunities to capitalise on this demand, including though increased production of copper in the Gawler Craton region; developing new magnetite resources in the Braemar and Eyre Peninsula regions; and extraction and processing of critical minerals resources such as graphite and rare earth elements across South Australia<sup>50</sup>.



**Box 4. The battery value chain**

In 2019, Australia had 50% of the global market share for mining a large number of the raw materials used in lithium-ion batteries – graphite, copper, cobalt, manganese, nickel and lithium. However, Australia captures minimal value downstream – 0 to <1% of the market share for refining, production, manufacturing, service, maintenance and re-use and recycling.<sup>51</sup>



In the agricultural sector, there are also opportunities to improve the value of products exported, with more transformation and processing undertaken in South Australia. This includes meeting demand for emerging food and beverage markets, such as protein-based foods produced from plants.

Supporting increased value from our resources will require strengthening our supply chain capability and enabling greater access to key infrastructure enablers including freight and supply networks, water, energy and digital connectivity.

The facilitation of common-user infrastructure provides an opportunity to aggregate demand, creating economies of scale and efficiencies for our resource industries. Common-user infrastructure may also lower costs of entry, reduce duplication of physical infrastructure and allow more efficient use of land.<sup>52</sup>

**Consultation question 6**

*What investments could unlock the value of South Australia's resources?*



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SOUTH AUSTRALIA'S 20-YEAR STATE INFRASTRUCTURE STRATEGY  
DISCUSSION PAPER

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# 6. Liveable and well-planned places



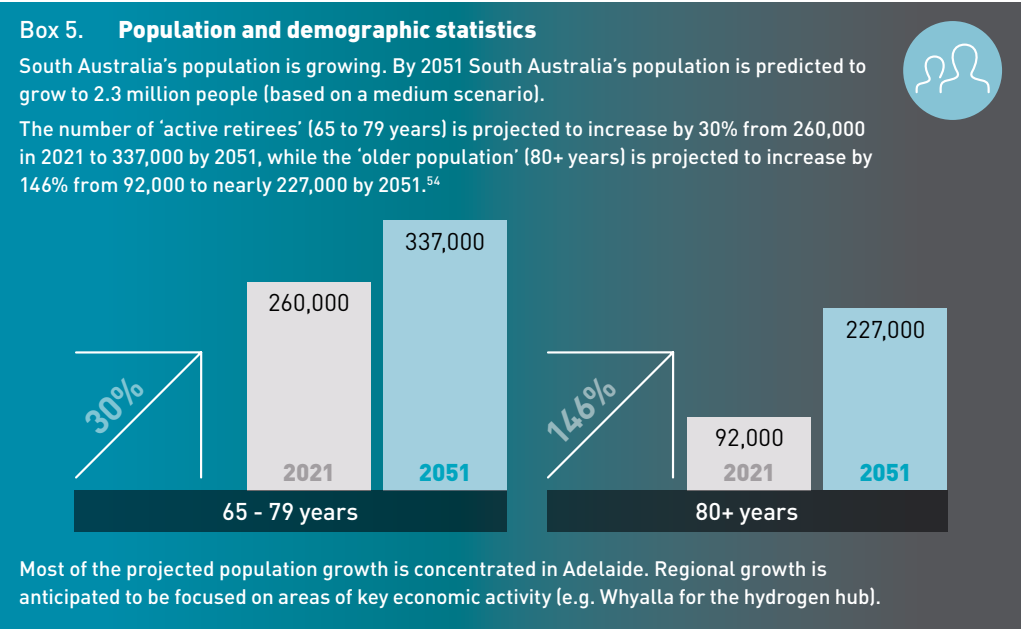
## Objective 2.

Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities

### The liveability of our places is integral to sustainable and equitable economic growth

Creating liveable places fosters sustainable economic development, attracts investment and retains local and international workforce talent. Liveable places can also enhance productivity, support tourism and promote innovation and entrepreneurship.

South Australia’s future economic performance will be linked to our ability to grow our population and strengthen our labour market by attracting new and diverse skills and businesses. We need to grow in a way that is sustainable and protects and enhances our way of life. Key population and demographic statistics are shown in Box 5 below.<sup>53</sup>



We are competing in an increasingly challenging global labour market. South Australia is experiencing the most acute skills shortages in decades, with a range of immediate skills challenges to be addressed. In 2022, 285 occupations were identified as experiencing a skills shortage, up from 149 in 2021.<sup>55</sup> By 2032, South Australia’s workforce will need 190,000 people with vocational education and training qualifications.<sup>56</sup>



The actions we take now will lay the foundation to sustainably manage population growth and South Australia's quality of life, to attract and retain a skilled workforce. A failure to plan appropriately could result in cities, suburbs and towns expanding in population without access to services, jobs and infrastructure, negatively impacting on South Australia's desirability as a location to live and work.

## 6.1 Coordinated planning

### *Coordinated planning drives better community outcomes*

Coordinated infrastructure planning and delivery underpins South Australia's quality of life and vibrancy. Effective alignment of land use and infrastructure planning will allow for a more integrated and accurate view of the infrastructure required to deliver better outcomes for growing communities. We also need to ensure our land use and infrastructure planning is adaptable to addressing future challenges.

Integration of land use and infrastructure planning enables the identification and preservation of strategic land parcels to support staged infrastructure delivery of schools, medical clinics and other essential services. Integrated planning will enable the timely provision of services that communities expect and require for quality of life. It may also help avoid the pitfalls of previous releases, such as the 2010 rezoning of land in the Mount Barker township that was not supported by adequate infrastructure planning and financing and is now experiencing an infrastructure backlog.

The State Planning Commission is currently updating the Greater Adelaide Regional Plan, along with six other regional land use plans for South Australia. The regional plans are strategic planning and land use documents that outline the long-term vision and goals and identify priority actions for the development and growth of South Australia. Aligning the 20-Year State Infrastructure Strategy with the new Greater Adelaide Regional Plan and the non-metropolitan regional plans will allow for more coordinated infrastructure planning and development. In addition, to improve the consistency and coordination of infrastructure planning across government, the importance of using common planning assumptions and forecasts should be elevated.



#### **Consultation question 7**

*How can South Australia better coordinate infrastructure investment to support a growing population?*



SOUTH AUSTRALIA'S 20-YEAR STATE INFRASTRUCTURE STRATEGY  
DISCUSSION PAPER

Lightsview  
Image courtesy of Renewal SA

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## 6.2 Affordable housing

### *Liveability is improved with affordable housing*

Access to secure, affordable and appropriate housing is fundamental to wellbeing and is a key element supporting liveability, economic participation and productivity.<sup>57</sup> In Adelaide, we have a relatively more affordable housing market than other capital cities – our median dwelling value is \$671,755 which compares favourably to Sydney (\$1,082,129), Melbourne (\$766,912), Brisbane (\$735,394) and to the combined capitals value of \$797,815.<sup>58</sup>

The location and availability of housing can enable or constrain access to education, employment, transport and other social infrastructure. A stable and secure home can also help reduce poverty and enhance equality of opportunity, social inclusion and mobility.<sup>59</sup>

The combined effects of ongoing population growth, changes to housing preferences and needs, and under-utilisation and inefficient allocation of housing stock, further compounds the problem. In South Australia, single person households have increased 78% over the last 30 years.<sup>60</sup> The result has seen housing supply not keeping pace with demand, particularly in some segments. Away from major centres and in regional areas, access to appropriate housing is more complex, with less diversity of stock and increased costs to build.

Rapid increases in purchase and rental prices since mid-2020 are further impacting on housing affordability and household mobility, particularly for low- and moderate-income households. A growing body of research is demonstrating the adverse productivity impacts of inadequate or unaffordable housing in Australia. This includes impacts on human capital through the misalignment of available, affordable and suitable housing and employment location; and, where housing costs outpace income growth, lower residual household income is available to save, consume and invest.<sup>61</sup>

Ensuring there is sufficient housing stock for new arrivals is likely to remain a challenge. In 2021, almost four-in-five South Australians lived in Greater Adelaide<sup>62</sup>, with Adelaide’s residential rental vacancy rate only 0.6% in July 2023, compared to the national average of 1.3% for the same period.<sup>63</sup>

Social housing adds supply and assists with making housing more affordable. However, it represents a small proportion of total housing stock, at just 5.5% of all occupied houses and around 20% of rental homes.<sup>64</sup> South Australia has seen a decline in social housing stock over the last decade. In response, the Government of South Australia has committed to an additional investment of \$232.7 million in public housing and an additional 1,144 households living in public housing by 30 June 2026 compared to previous estimates.<sup>65</sup>

Both the South Australian and Australian Governments are implementing measures to alleviate the pressure on housing affordability and improve housing outcomes. In South Australia, this includes pausing the sale of public housing, building additional social housing, introducing tax incentives, improving rental conditions, fast-tracking structure planning and rezoning, and enabling additional land release opportunities.

Addressing housing outcomes and ensuring adequate and appropriate supply requires a combination of government, private and not-for-profit housing providers and other organisations to be involved in financing, developing and managing housing stock.<sup>66</sup>



### **Consultation question 8**

*What can be done to support sufficient, fit-for-purpose housing to improve housing affordability?*



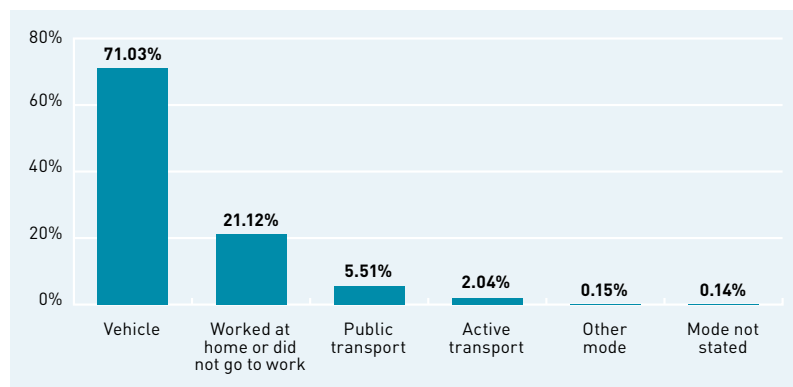


### 6.3 Public transport

#### *Public and active transport options reduce congestion and emissions*

Efficient access to public transport maintains the liveability and accessibility of cities and supports the movement of labour. Strategically planned and effective public and active transport enhances accessibility by providing efficient and affordable transportation options for residents. Equality of access to employment and services, decreased isolation and improved environmental and sustainability outcomes are also significant benefits.

Currently, private motor vehicles remain the dominant mode of transport in Greater Adelaide (Figure 3). Public transport patronage in Adelaide has traditionally been lower than other capital cities and fell significantly during the COVID-19 period, with commuters avoiding buses, trains and trams in favour of private cars.



**Figure 3:**  
Journey to work mode share for Greater Adelaide (2021)<sup>67</sup>



A greater modal shift to public and active transport would also reduce the significant impact of road congestion across the metropolitan network and the Adelaide Central Business District (CBD) in particular, improving liveability. Infrastructure Australia estimates the cost of road congestion in Adelaide will increase to \$7.6 million per weekday by 2031.<sup>68</sup>

Adelaide's public transport network is reasonably good at connecting the suburbs to the CBD during peak commuter periods and providing high coverage service to those with limited choice. Future planning and designs should aim to optimise the utilisation of the road network through maximising the use of public transport.

There is an opportunity to improve and redesign the bus network to create a more streamlined and efficient network that provides better cross-suburban connectivity and modal integration. Improving the bus network may encourage a greater modal shift towards public transport and make it the option of choice.

Servicing growing communities on the outskirts of the city and in our regional cities and towns remains a challenge, as delivering public transport in lower density areas costs more per capita.

Approaches such as on-demand bus services, as currently being trialled in Mount Barker, can support greater levels of uptake for public transport in a more-cost effective way than investing in new infrastructure.

When coupled with urban design and active travel modes, demand can be reduced for private car usage.

Public and active transport options can contribute to improved productivity and overall quality of life. Walking and cycling also offer significant benefits for health and reduce greenhouse gas emissions from other forms of transport. Newer transport forms using micro-mobility technologies, such as e-scooters and e-bikes, also offer pollution-free convenience for movement.



#### **Consultation question 9**

*How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?*



6.4 Health and wellbeing

Improved health and wellbeing supports participation in society

The availability and quality of health care is central to community health and wellbeing and is an essential component of liveability. Improved community health yields less reactive demand on health services and improves productivity by increasing workforce participation. A healthy population also impacts GDP (Box 6).

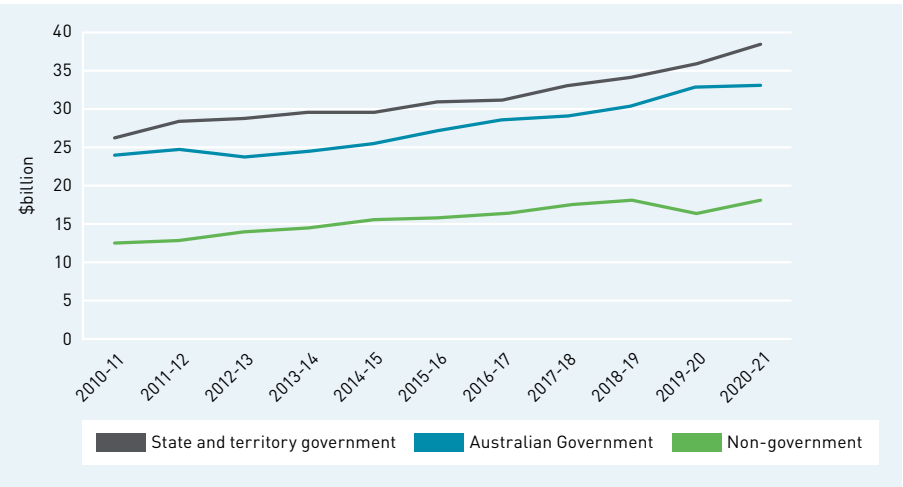
**Box 6. The link between health and GDP**

The Australian Productivity Commission estimated that GDP could be increased by \$4 billion per year if the health of people in fair or poor health was improved.<sup>69</sup>

As in other developed countries, Australian Government spending on healthcare has generally grown faster than GDP. Health expenditure is projected to increase from 4.1% of GDP in 2018–19 to 6.2% by 2060–61.<sup>70</sup> Underpinning increases in health spending are demographic factors (population growth and ageing) and non-demographic factors (technology, changing consumer preferences and rising incomes).<sup>71</sup> In relation to Australian Government health spending, demographic factors are anticipated to account for just under half the increase in real spending per person over the next 40 years.<sup>72</sup>

In South Australia, we are seeing similar patterns and challenges. Demand on our health system is increasing, particularly as our population grows and ages. South Australia currently has the second highest proportion of the population aged 65 and over, at almost 20%,<sup>73</sup> placing a greater demand on chronic disease management and long-term care services. This proportion of the population is expected to increase to 24% by 2051.<sup>74</sup>

Spending on hospitals increased between 2010–11 and 2020–21 for all sectors (Figure 4).<sup>75</sup> State and territory governments had the highest spending on hospitals in every year over the decade, increasing from \$26.3 billion in 2010–11 to \$38.4 billion in 2020–21.<sup>76</sup>



**Figure 4:**  
Spending on hospitals, by source of funds, constant prices, 2010–11 to 2020–21<sup>77</sup>  
Constant price health spending is in 2020–21 prices.



The current approach to managing the health system is unsustainable. Investments in more agile or mobile care offerings, including a greater emphasis on primary care clinics, community health centres and mobile units, support improved access to healthcare services would take the pressure off the state's hospital system and infrastructure.

New models of health care that harness the power of technology and innovation offer opportunities for improving efficiency and patient outcomes. The uptake of digital health has been shown to improve access to services, particularly in underserved or regional communities and improve coordination between health care providers. This shift comes with a greater need to focus on the resilience and security of digital systems.

Collectively, these approaches would support more cost-effective and accessible services, lower health care costs for individuals and government and optimise our infrastructure investments. The outcome is a system that better supports community health, societal participation and productivity.



#### **Consultation question 10**

*What investments would support a more efficient and productive health system that meets our growing and changing needs?*







## 6.5 Education and skills

### *Education and skills create a productive workforce*

The education and training sector is a major enabler of South Australia's productivity. Recent research by the South Australian Productivity Commission identified increased employee skills as a driver of labour productivity growth.<sup>78</sup> Also, an enquiry by the Australian Productivity Commission found that nationally, labour quality (the education and experience of the workforce) has accounted for about 20% of labour productivity growth in recent decades.<sup>79</sup>

Compared to other jurisdictions and the national average, South Australia's educational attainment levels are lagging. We have the lowest proportion of the population aged 24 to 55 years with a bachelor's degree or higher (22% compared to a national average of 28%); and the second highest proportion with an education level of Year 11 or lower.<sup>80</sup> This impacts our ability to prepare and position our workforce to grow our economy.

Technological advancements and automation are transforming the job market, increasing the demand for skills that are difficult to automate, such as problem-solving, creativity, and technological proficiency. These skills will be critical to the success of South Australia's economic growth ambitions, such as the AUKUS nuclear submarine program and delivery of the green reindustrialisation.

A number of factors impact the demand for, and type of education facilities required, including disproportionate population growth in favour of metropolitan versus regional areas; changing demographics; an increased number of students with complex needs; and individual family preferences for public versus private schools (Box 7).



**Box 7. Population projections**

Population projections indicate that between 2021 and 2041, the population of 4 to 17-year-old South Australians will increase by 9% in Greater Adelaide and decrease by 3% in the rest of the state. The regions with the greatest projected enrolment increases are Adelaide North, Inner Metro and Mount Barker.<sup>81</sup>



To align workforce capabilities with future industry needs, South Australia's schools, TAFEs, colleges, and universities continue to adapt. To keep pace with a changing environment, learning spaces need to be digitally enabled, we need flexible classrooms and breakout spaces to support learning environments that cater to individual needs, styles, and paces.

Quality early childhood education and care assists with healthy early childhood development and supports workforce participation of parents and caregivers. The Government of South Australia has established a Royal Commission into Early Childhood Education and Care, with a view to introducing a universal quality preschool program for three- and four-year-olds. If implemented, these reforms are likely to increase the demand for skilled labour and for additional infrastructure to support this cohort.

Long-term planning for infrastructure is required for South Australia's education infrastructure to respond to a growing population, changing industry needs and government's overall strategic direction. As articulated in *Our strategy for public education in South Australia*, the Department for Education is aiming to build a world-leading public education system for South Australia.<sup>82</sup>

**Consultation question 11**

*How can infrastructure support improved education and skills outcomes for South Australia?*

## 6.6 Cultural, tourism, and recreational facilities

### ***Cultural, tourism, and recreational facilities make South Australia a vibrant place***

The availability of cultural and tourist attractions and recreational and sporting activities play a significant role in creating a sense of place, providing opportunities for social interaction, leisure activities and community engagement and entertainment. These attractions can also enhance amenity and liveability for residents, attract visitors and serve as drawcards for new residents (Box 8).

**Box 8. Cultural, tourism and recreational infrastructure**

This infrastructure includes parks, recreational areas, sporting facilities, community centres, libraries, cultural institutions, tourist attractions, and public spaces, walkable and bike-friendly pathways.



In addition to improving liveability, our cultural, tourism and recreational experiences are core to attractiveness of South Australia as a destination and supports the growth of South Australia's tourism industry. The state's tourism industry currently employs 34,000 people and, as of March 2023, is worth \$9.4 billion<sup>83</sup>, making it one of our most important service sectors.



South Australia has a rich history of diversity of people, places, festivals, events, and creative industries, in addition to museums, galleries, theatres, and performance spaces. We also have a range of recreational facilities, including parks, sports facilities and community centres. Leveraging these unique attributes of our cities, regions and precincts will also create jobs for the arts, tourism, hospitality and sporting sectors. As an example, activating the Riverbank Precinct could expand the range of diverse social, recreational, sporting and entertainment activities available in Adelaide.

With a growing population, South Australia will need continue to invest in and maintain our cultural, tourism and recreational infrastructure to support our liveability. Strategic planning for our assets across all relevant sectors, by all levels of government and the private sector, will improve the quality and accessibility of arts, tourism, sporting and recreational spaces.



#### **Consultation question 12**

*How can we sustainably grow these sectors to realise greater benefits for visitors and residents?*





# 7. Accessible and inclusive infrastructure



## Objective 3.

Accessible and inclusive infrastructure supports social inclusion and economic participation

South Australia’s Economic Statement establishes a vision for an inclusive economy that puts South Australians and their wellbeing front and centre. It recognises that inequity constrains economic growth and that accessibility, social inclusion and economic success go hand-in-hand.<sup>84</sup>

Infrastructure is central to our economic productivity and the wellbeing of communities in all regions. Improved and equitable access to infrastructure assists communities to grow and meet economic challenges, builds resilience and improves quality of life. A growing population increases demand and pressure on infrastructure, meaning new and innovative options are needed.

Accessibility and inclusion challenges can arise from many reasons including disability, culture, gender and socioeconomic status. Reducing barriers by increasing access and inclusion is central to increasing participation in our economy and society and supports a more productive South Australia.

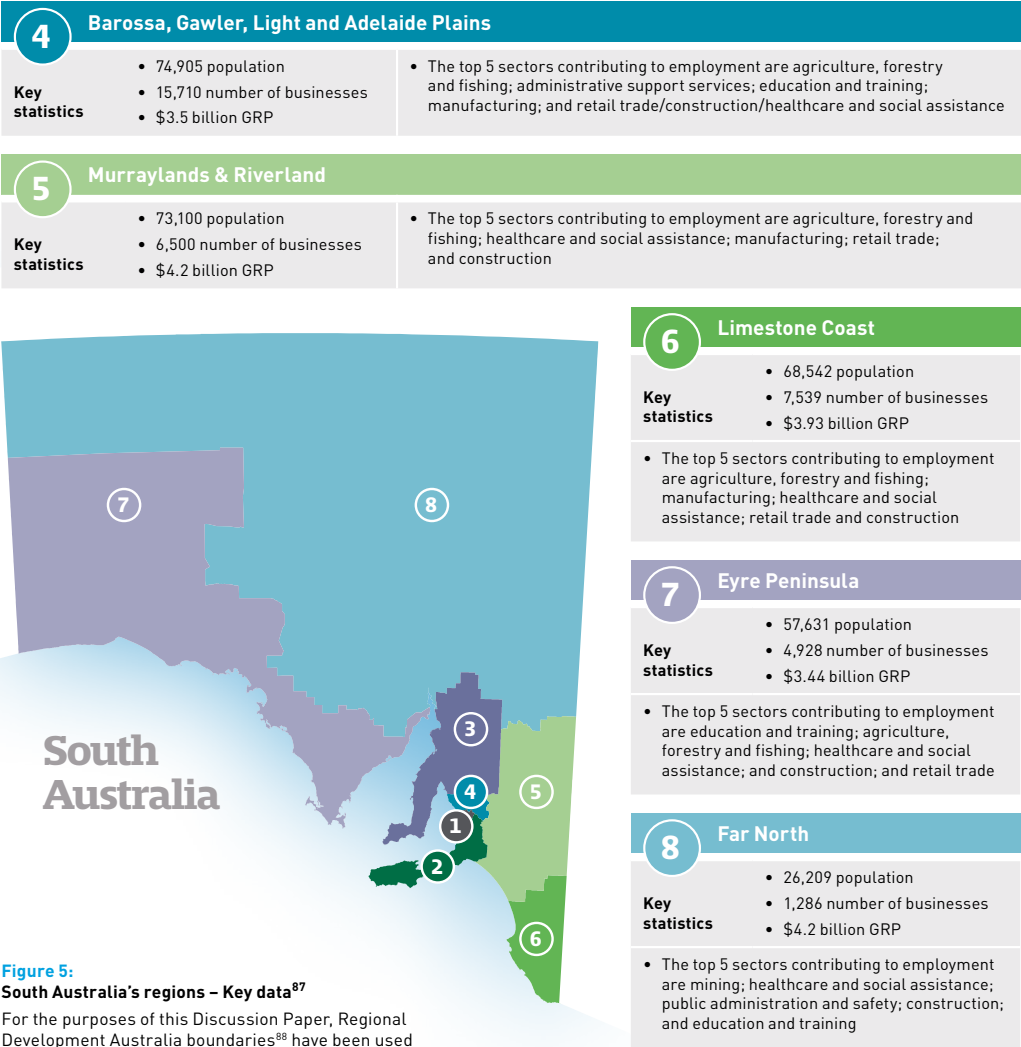
### 7.1 Our regions – A snapshot

Regional South Australia is a key economic driver for the state. In 2021-22 regional South Australia contributed \$36.5 billion to the South Australia’s economy, generating 28% of GSP and accounting for 30% of the state’s population.<sup>85</sup> Figure 5 shows the key statistics for each Regional Development Australia (RDA) region in South Australia.

Looking forward, RDA estimates the pipeline of projects for regional South Australia is valued at \$44.64 billion.<sup>86</sup> The following information outlines key statistics and the top 5 sectors contributing to employment for each region, to help inform responses to this Discussion Paper.

<b>1</b>	<b>Adelaide Metropolitan</b>
<b>Key statistics</b>	<ul style="list-style-type: none"><li>• 1,261,439 population</li><li>• 103,496 number of businesses</li><li>• \$87.33 billion GRP</li></ul> <ul style="list-style-type: none"><li>• The top 5 sectors contributing to employment are healthcare and social assistance; retail trade; education and training; public administration and safety; and manufacturing</li></ul>
<b>2</b>	<b>Adelaide Hills, Fleurieu and Kangaroo Island</b>
<b>Key statistics</b>	<ul style="list-style-type: none"><li>• 134,661 population</li><li>• 11,609 number of businesses</li><li>• \$5.95 billion GRP</li></ul> <ul style="list-style-type: none"><li>• The top 5 sectors contributing to employment are healthcare and social assistance; retail trade; agriculture, forestry and fishing; manufacturing; and construction</li></ul>
<b>3</b>	<b>Yorke and Mid North</b>
<b>Key statistics</b>	<ul style="list-style-type: none"><li>• 75,509 population</li><li>• 7,317 number of businesses</li><li>• \$4.14 billion GRP</li></ul> <ul style="list-style-type: none"><li>• The top 5 sectors contributing to employment are healthcare and social assistance; agriculture, forestry and fishing; manufacturing; retail trade; and education and training</li></ul>





7.2 Regional and remote areas

Regional and remote area needs present unique challenges and opportunities

Our ability to unlock economic growth in regional areas is dependent on understanding the strengths and competitive advantages of our regions and having the enabling infrastructure in place to leverage opportunities. Our regions are the cornerstone to our transition to a greener, decarbonised economy.

The ability of infrastructure to keep pace with population growth and emerging opportunities can be a challenge in regional and remote areas, with infrastructure more expensive to provide on a per-person basis in low population areas. Differences in levels of service and increased costs can create barriers to equity and access which impacts productivity, competitiveness and social outcomes.

Providing accessible and inclusive infrastructure can attract people to visit and stay in our regions, maximise economic participation and help South Australia fully realise the potential of our regions.



Recent work undertaken by Infrastructure Australia identified the infrastructure gaps in South Australia's regions. The three most frequently identified gaps are outlined below.<sup>89</sup>



**Water security** is crucial to the productivity and resilience of regional Australia, including agriculture, mining and manufacturing, as well to support emerging industries such as hydrogen. It is also key to supporting the health and wellbeing of regional and remote communities. Many parts of regional and remote South Australia do not have the same level of access to secure, safe, reliable or affordable water supplies as metropolitan or regional centres. This disproportionately affects vulnerable members of the community. Impacts associated with climate change and the sustainability of existing surface water and groundwater resources also present challenges to existing regional industries that rely heavily on water, including mining and agriculture.



**Digital connectivity** is an enduring concern across many communities and is increasingly important to the economic and social wellbeing of regional and remote Australia. Reliable and sufficient connectivity is needed to access essential services. Poor or unreliable access costs the state in lost economic opportunities, decreased productivity and the inability to capitalise on market access, as well as impacting public safety and social wellbeing. The Australian Digital Inclusion Index shows a continued divide in digital access between metropolitan and regional areas. The Index shows that for 2022, South Australia and Tasmania are the least digitally inclusive states.<sup>90</sup> Access in remote areas is even poorer, though there is a lack of data to fully understand this.



**Availability, diversity and affordability of housing** to meet the growing and changing demands of regional communities is a major constraint in attracting and retaining skilled workers, growing regional productivity and maintaining liveability. The lack of available, affordable and quality housing is a key inhibitor to attracting and retaining skilled workers and sufficient labour. There is a well-established evidence base to demonstrate that the provision of well-located, secure housing is vital for catalysing workforce participation and supporting local economies to grow.<sup>91</sup>



**Consultation question 13**

*How can we think differently about infrastructure investment to support equitable access and a more inclusive society?*





### 7.3 Closing the Gap

*Achieving Closing the Gap targets supports an inclusive South Australia*

The National Agreement on Closing the Gap commits all state and territory governments to achieve better life opportunities and wellbeing for all Aboriginal and Torres Strait Islander people. There are implications for infrastructure across the four Priority Reforms and the 17 socio-economic outcomes and corresponding targets (Box 9).

**Box 9. Closing the Gap infrastructure-related targets**

There are 17 socio-economic outcomes which have corresponding targets and indicators to measure progress on Closing the Gap. The commitments directly relevant to infrastructure are:

- Outcome 9: Aboriginal and Torres Strait Islander people secure **appropriate, affordable housing** that is aligned with their priorities and need.
- Outcome 17: Aboriginal and Torres Strait Islander people have access to information and services enabling participation in informed decision-making regarding their own lives. Target 17: By 2026, Aboriginal and Torres Strait Islander people have equal levels of **digital inclusion**.
- Clause 87i. **Community infrastructure**: The **community infrastructure target** will measure progress towards **parity in infrastructure, essential services, and environmental health and conditions**. This will include data development to measure essential service provision to Aboriginal and Torres Strait Islander communities, including **water and sewerage, waste management, road reserves and electricity supply**, as well composite measures to capture all aspects of the target.<sup>92</sup>

Building and strengthening structures and systems that empower Aboriginal and Torres Strait Islander people to share in decision-making; and building capacity and capability in the community-controlled sector are central to Priority Reform One and Priority Reform Two. A core element is building capability to increase the proportion of services delivered by Aboriginal and Torres Strait Islander organisations.

Infrastructure that supports services that improve access to education, training and employment and enable Aboriginal businesses to grow and flourish are foundational actions to increasing economic participation and improving outcomes for Aboriginal people.

Improving engagement and building stronger partnerships as part of infrastructure planning will yield benefits. To support meeting the demand for greater inclusion of Aboriginal knowledge and increased shared decision-making, investments that build the capability and capacity of Aboriginal communities and groups will be necessary.

Stronger requirements for procurement that enable inclusion of Aboriginal businesses, and that build further capability across this sector through an integrated approach, will offer opportunities to better engage with Aboriginal businesses and support longer-term, sustained positive outcomes.



**Consultation question 14**  
*What are the opportunities for infrastructure investment to accelerate attainment of the Closing the Gap targets?*



# 8. A decarbonised, sustainable economy



## Objective 4.

Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities

Climate change is one of the most pressing problems facing our world today and poses severe environmental, social and economic risks to everyone. Australia is heavily climate-exposed and we are already counting the costs from recent climate-driven disasters.

International action on climate change and achieving net zero emissions is gathering momentum and the economic opportunities to meet net zero are significant. Globally, it has been identified that US\$125 trillion of climate investments are needed.<sup>93</sup> Australia stands to benefit from a share of a forecast US\$47 trillion investment in the Asia Pacific region.<sup>94</sup>

Nationally, the Australian Government has committed to achieve a 43% reduction in greenhouse gas emissions below 2005 levels by 2030 and net zero emissions by 2050.<sup>95</sup>

The Government of South Australia has adopted goals to reduce the state's net greenhouse gas emissions by more than 50% below 2005 levels by 2030, and to achieve net zero emissions by 2050.<sup>96</sup> For South Australia, transforming our economy in an orderly and planned way will mean we can realise the positive economic benefits of a cleaner, greener economy whilst mitigating the risks associated with the transition.

Already, South Australia has made significant progress in reducing emissions by 42% from 2005<sup>97</sup> levels, largely through our leadership position in the energy transition to renewable sources. But more still needs to be done to decarbonise the state's other high emitting sectors, including transport, agriculture, manufacturing and mining. Figure 6 below shows sector-by-sector emissions for South Australia.

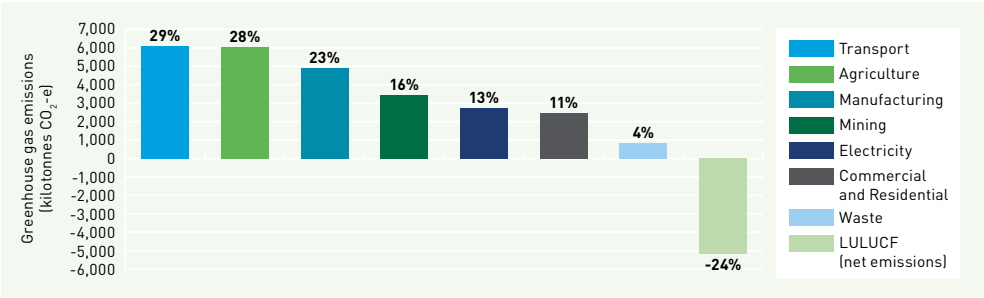


Figure 6:  
South Australia's greenhouse gas emissions in 2021<sup>98</sup>

South Australia's regional areas will be the cornerstone to our transition to a greener, decarbonised economy. Supporting new and emerging industries that enable growth requires a workforce in the right place with the right skills. We are well placed to leverage opportunities – building on our industrial capability, South Australia has the potential to manufacture and export green iron and green processed critical minerals, underpinned by world-class carbon accounting and greater circularity of resources.<sup>99</sup>



## 8.1 Green industries

### *Green industries will support our transition to net zero*

Getting to net zero will require tremendous, rapid change and large-scale technology deployment across multiple industries. It will require a fundamental shift away from high-emissions industrial processes and infrastructure to that of low-emissions, supported by new products, processes and services. This transition will see a shift in job and skill profiles, as new industries emerge. In South Australia, industrial emissions represent 47% of our total emissions and are in hard to abate industries.<sup>100</sup> We will need to be ready to support the changing demand.

Some industry sectors are more exposed to this transition than others. 'Hard to abate' industries that have high levels of emissions in chemical processes, a strong reliance on fossil fuels or where the cost of reducing emissions is high will be particularly challenging.<sup>101</sup> These industries include steelmaking, mining, the aluminium supply chain, chemicals (such as fertilisers and plastics), cement, oil and gas, aviation, shipping and heavy road transport. The transition will also create significant opportunities to leverage our advantages to build entirely new businesses and bring in new innovations.

Globally, this is a highly competitive environment and South Australia will need to move quickly if we are to reindustrialise to take advantage of these opportunities. The electricity and water infrastructure required to achieve the state's green industrial ambitions will be on a scale far beyond anything previously seen in South Australia.<sup>102</sup>

The transition to a large-scale, cost-competitive renewable energy system will be key to the green industrialisation. This includes both electricity generation and zero emissions fuels such as green hydrogen. South Australia's early leadership in the transition will contribute to the Government of South Australia's plan to establish a green hydrogen economy through the Hydrogen Jobs Plan and commitment to a green hydrogen power plant.

Decarbonisation of the economy will require significant amounts of critical minerals and rare earth elements. The South Australian Economic Statement sets out an ambition to build on our green industrial capability by manufacturing and exporting premium products like green iron and green processed critical minerals (including copper, graphite and rare earths).<sup>103</sup>

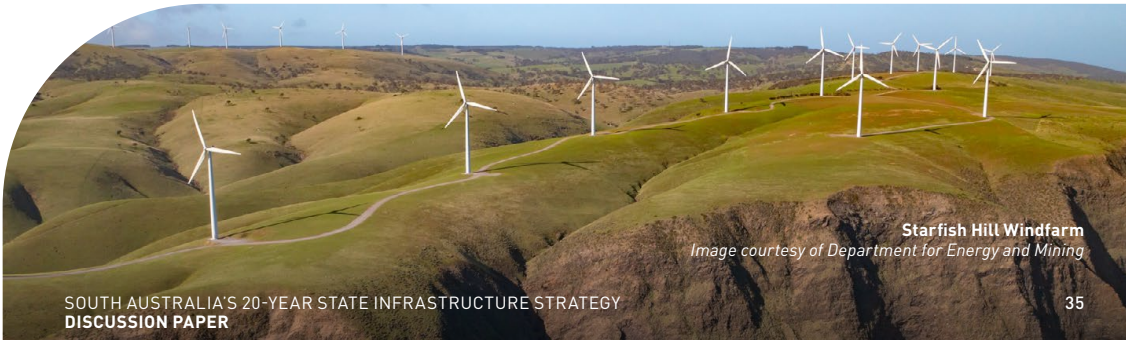
Clean energy alone will not fully support hard-to-abate sectors in reducing their emissions to achieve net zero. Remaining emissions will need to be addressed through other means, for example:

- Carbon offsetting via carbon planting or farming, which can strengthen biodiversity and provides employment. This may offer opportunities for First Nations people as part of the Australian Government's Caring for Country outcomes.
- Carbon capture and storage (CCS) technologies, which capture emissions in storage sites, such as geological formations or depleted oil and gas reservoirs. As an example, in South Australia, Santos Ltd is progressing with a CCS project at Moomba, with start-up expected in 2024.<sup>104</sup>



### *Consultation question 15*

*What infrastructure investments will support industries to transition to a global net zero future?*





## 8.2 Decarbonised energy system

***Our future energy system requires planning and investment to support security, reliability and affordability***

Globally, the transition to a decarbonised energy system is accelerating and impacting all levels of society and the economy. South Australia’s Green Paper on the energy transition was released for consultation in July 2023, and outlines both the opportunities and risks associated with the transition.<sup>105</sup>

Electrification of the grid is driving increased levels of infrastructure investment across South Australia and will require an orderly, planned roll-out of new generation capacity coupled with appropriate levels of system security services such as firming capacity and frequency services. This will support a secure, affordable, and efficient transition.

South Australia has a target of 100% net renewable energy generation by 2030.<sup>106</sup> In 2021–22, renewables met almost 70% of South Australian total electricity consumption and in 2021 we met 100% of operational demand from renewables on 180 days.<sup>107</sup>

The infrastructure investment required across such a complex system is challenging and needs a multi-faceted approach on supply (generation, storage and transmission) and demand (efficient management, local usage and emerging export opportunities). Multiple pathways and technology options exist to reach net zero emissions by 2050, and all require public and private sector collaboration to deliver the enabling infrastructure for a secure transition. Securing community acceptance through engagement will also be a key issue to address for new energy infrastructure.

Establishment of Renewable Energy Zones (via the draft Bill *Hydrogen and Renewable Energy Act 2023* (SA)) and the transmission infrastructure to connect to the National Grid are key enablers. The role of gas, hydrogen (and/or derivatives of hydrogen), domestic photovoltaic (PV) systems and the optimal mix of storage (short, medium, long duration) are some of the key issues to address. All scenarios outlined in the Integrated Systems Plan by the AEMO<sup>108</sup> show that there needs to be a diverse, system-wide approach to achieving net zero by 2050 drawing upon multiple energy sources and approaches.

While renewable energy sources, backed by batteries and other storage options, will provide the bulk of our energy needs, over the medium term it is likely that there will continue to be a role for gas-fired power plants to provide crucial ‘firming’ of the network demand at peak times. In the longer term, additional green energy sources may be developed, including green hydrogen.

Harnessing the opportunities presented through leveraging a 100% renewable energy system as outlined in the South Australian Economic Statement requires well planned, timely and coordinated approaches to infrastructure delivery.



***Consultation question 16***

*How do we maintain an affordable, reliable and secure energy system through the energy transition?*



Bungala Solar Farm  
Image courtesy of Department for Energy and Mining



8.3 Transitioning transport

Transitioning transport to net zero requires a concerted effort

The transport sector includes road (people and freight movement), rail, aviation, and shipping and currently represents 29% of South Australia’s total emissions.<sup>109</sup> Figure 7 shows a summary breakdown of emissions by mode. Each mode has its own unique set of challenges and opportunities to decarbonise across both the short- and long-haul (Box 10). Infrastructure to support transport has a long lifespan, so the impact of decisions made today will influence outcomes for decades to follow.

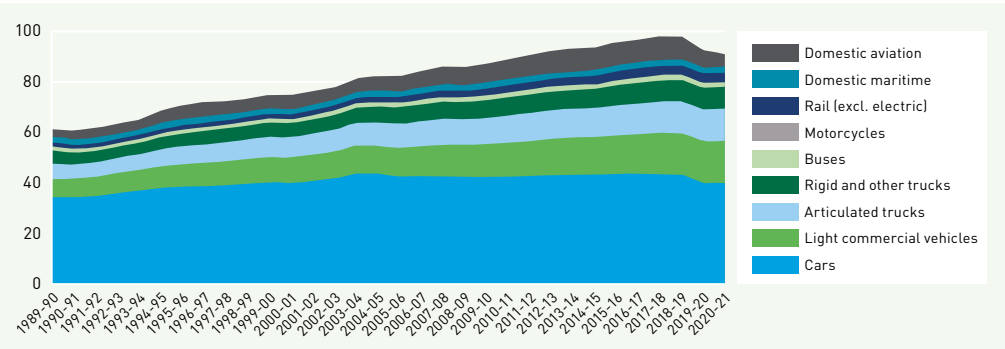


Figure 7: Greenhouse gas emissions by mode, 1990–2020, Australia, ktCO<sub>2</sub>e pa<sup>110</sup>

**Box 10. Road freight emissions**

Road freight has higher emissions compared to rail and is the dominant option of choice. By 2050, road freight is projected to increase to comprise 77% of the total freight task in Australia.

Further, Australia’s road freight fleet is ageing. In 2022, 14% of freight trucks on Australian roads were built before 1996. These are vehicles which emit 60 times the particulate matter of a new truck and eight times the nitrogen oxides.<sup>111</sup>

The Government of South Australia is actively pursuing a range of priority actions to address this issue. This includes transitioning to a zero-emission public transport fleet and supporting the uptake of electric vehicles and delivery of associated charging infrastructure through initiatives such as the grant to RAA to install an electric vehicle charging network throughout South Australia<sup>112</sup>. A challenge for government is that the public transport fleet is only a relatively small portion of transport emissions, so transition of private sector vehicles will be key to achieving overall reductions.

AEMO’s expects the uptake of electric vehicles to increase electricity demand this decade.<sup>113</sup> Planning for the increased load on the energy network, in addition to the deployment of public and private charging infrastructure will be critical for widespread electric vehicle adoption.

Global factors will also facilitate change to the South Australian transport sector, with alternative fuels development and the associated land-side impacts on infrastructure in shipping, rail and aviation all requiring local adaptation and adoption to meet our targets.

**Consultation question 17**

*What are the most significant challenges for decarbonising transport and how do we address them?*



8.4 A circular economy

*A circular economy reduces waste and creates opportunities for South Australia*

Generation of waste has traditionally been regarded as an unavoidable by-product of economic activity, including from inefficient production processes, low durability of goods and unsustainable consumption patterns by the community.

The circular economy presents significant opportunities for addressing this by-product and decarbonising the economy. By transitioning from a linear 'take-make-dispose' model to a circular economy approach, the use of virgin materials and generation of waste is reduced by keeping materials circulating through the economy (Figure 8).

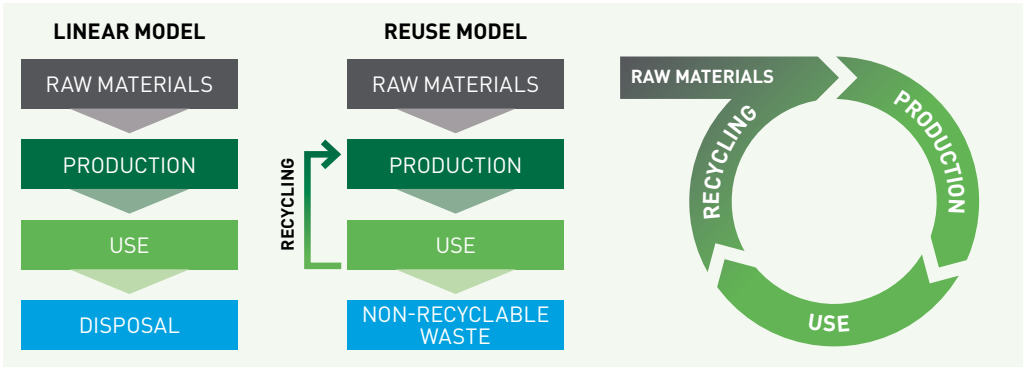


Figure 8:  
The circular economy<sup>114</sup>

Growing the circular economy in South Australia has the potential to create an additional 25,700 full time equivalent jobs and reduce South Australia's greenhouse gas emissions by 27%.<sup>115</sup> The National Waste Report 2022 shows South Australia has a high resource recovery rate of 80% and is the highest ranked jurisdiction in Australia for resource recovery.<sup>116</sup>

As an early adopter of technologies such as solar PVs, wind turbine generation and grid-scale storage (via lithium-ion batteries), South Australia will also be one of the first major developed jurisdictions to confront the opportunities and challenges associated with the resultant end-of-life waste streams generated.

As the energy transition progresses and the value of associated mineral resources increases, the economics of metallurgical recycling of wind turbines, solar panels and lithium-ion batteries will become compelling.<sup>117</sup>

However, Australia has little-to-no processing capabilities for grid-scale infrastructure waste streams and few planned beyond ideation stage. This leaves a gap in managing an estimated 50,000 tonnes of grid-scale solar PVs, 9,000 tonnes of wind turbines, and 4,500 tonnes of battery energy storage systems per year, by 2050 in South Australia alone.<sup>118</sup> Further, established end markets for recovered materials exist globally, but are limited in Australia.<sup>119</sup>

Embedding decarbonisation principles in public procurement is another opportunity to accelerate the shift to a circular economy, with the Government of South Australia purchasing \$8.5 billion in goods and services every year.<sup>120</sup> A more circular approach to procurement could leverage government budgets to avoid or mitigate negative environmental impacts and reduce emissions and set a positive example to industry.



**Consultation question 18**

*What action is needed to achieve a circular economy in South Australia?*



8.5 Infrastructure delivery

Our infrastructure delivery needs to be environmentally sustainable

The construction and building of infrastructure contributes to waste, with the global built environment responsible for half of the world’s raw material use and 40% of landfill waste.<sup>121</sup> Three materials – concrete, steel and aluminium – make up for 23% of total global emissions, and most of this is used in the built environment.<sup>122</sup> Addressing embodied emissions is central to supporting decarbonisation across this sector (Box 11). Embodied emissions of construction materials are estimated to be approximately 5 to 10% of Australia’s total emissions.<sup>123</sup> This proportion is expected to increase, particularly with the greening of the grid and improvements to operational energy use and energy efficiency.

**Box 11. Embodied emissions**

Embodied emissions or embodied carbon are the greenhouse gas emissions (carbon dioxide equivalent) that occur during resource extraction, transportation of resources to the manufacturer, manufacturing, and transportation of materials to construction sites.<sup>124</sup>

Decarbonising the infrastructure sector requires a concerted effort to reduce emissions across the asset lifecycle – planning and design, construction, ongoing operations and maintenance and decommissioning. The greatest opportunity to reduce carbon emissions occur early in the infrastructure lifecycle (Figure 9). Careful consideration of materials and their embodied emissions will help reduce inputs of high carbon intensive materials (such as concrete, steel and glass), encourage reuse and facilitate end-of-life strategies and improved circular economy outcomes.

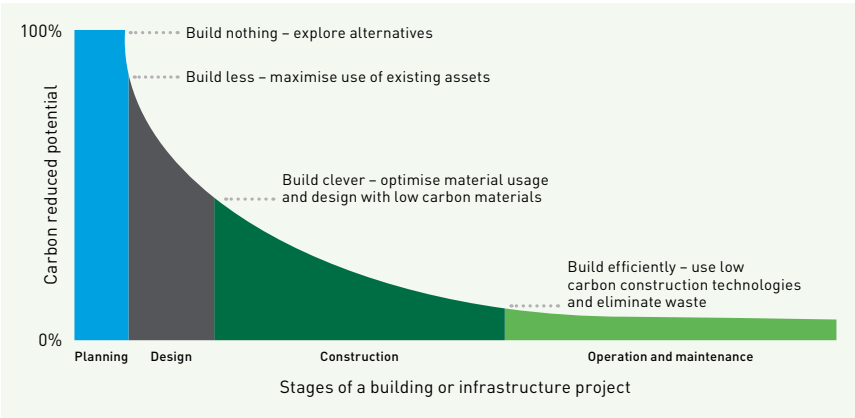


Figure 9: Opportunities to reduce embodied emissions in different stages of a building or infrastructure project<sup>125</sup>

**Consultation question 19**

*What measures can be taken to enable the infrastructure industry to decarbonise?*



## 9. Improved resilience



### Objective 5.

**Improved resilience to shocks and events helps avoid or respond to disruptions that impact our economy, services and supply chains**

The economic prosperity and liveability of our cities and communities is reliant on the provision of well maintained, functioning infrastructure. Our infrastructure needs to be resilient to withstand and recover from shocks and long-term stresses, to ensure South Australians can continue to enjoy the benefits of living in a smart, sustainable and inclusive state.

With the impact of climate change and increasing global instability, we are seeing an acceleration of threats from natural and human-induced shocks and stresses.<sup>126</sup> By 2050, the annual cost of natural disasters is expected to increase from \$18 billion per year to more than \$39 billion.<sup>127</sup> Refer to Box 12 for recent economic losses from floods.

#### Box 12. Floods create lost economic activity

Lost economic activity from the widespread flooding across Australia in 2022 has been estimated at \$5 billion, the equivalent to a quarter of a percentage point of growth in 2021–22.<sup>128</sup>



Events such as the COVID-19 pandemic, bushfires, cyber-attacks and extensive flooding across Australia highlighted the significant impact shocks and stressors have on our community and economy. Direct and indirect costs for response and recovery efforts, lost productivity, adaptation requirements, impacts to services and supply chains and increasing insurance costs all divert budget from other investments and impede economic growth.

Building consideration of resilience needs into our infrastructure planning and into the operations and maintenance of assets will assist in our ability to prepare and respond, reducing the economic, social, and environmental impact of these events.<sup>129</sup>

Infrastructure Australia identifies three interconnected aspects of resilience – infrastructure resilience, organisational resilience and community resilience – from which, the concept of ‘infrastructure for resilience’ emerges (Box 13). This recognises a holistic and systematic approach to resilience is needed.

#### Box 13. Infrastructure for resilience

- **Infrastructure resilience:** the resilience planned for, designed, and built into assets, networks and systems (including natural assets).
- **Organisational resilience:** the resilience of the organisations, personnel and processes supporting infrastructure to supply a service.
- **Community resilience:** the community’s role in building and maintaining its own resilience while contributing to infrastructure resilience.<sup>130</sup>





9.1 Planned resilience

Embedding resilience in planning can reduce the impact of shocks

Resilient communities can recover from and adapt to, the effects of shocks and stresses (Figure 10). This is essential to lessening the economic impacts of such events.



Figure 10: Resilience definition<sup>131</sup>

Planning for a more resilient future, one that is less exposed to the economic impacts of shocks and stressors, requires an understanding of the risks and vulnerabilities associated with hazards and threats, and a systematic approach to planning for these. Understanding the extent to which a community can accommodate, absorb, adapt, resist or recover from hazards is critical. Infrastructure plays a core role in supporting each of these elements.

Strategic land use planning supports better resilience outcomes, as it guides the development and management of land and identifies, evaluates, and minimises risks; enhances adaptive capacity; protects ecological systems; and fosters sustainable development.

Climate change and planning for natural hazards are being integrated into planning processes across South Australia. The 'State Planning Policy 5: Climate Change' includes avoiding development in hazard prone areas where possible, or ensuring risks are mitigated to an acceptable or tolerable level, in a cost-effective manner.<sup>132</sup> Increasingly, infrastructure developments are undertaking specific natural hazard and climate change risks assessments, though this is not yet consistently undertaken.

New state-wide mapping of riverine and surface water flood hazards and refined bushfire hazard mapping is currently being undertaken by the Planning and Land Use Services division of the Government of South Australia's Department for Trade and Investment. This will support future planning that directs development of sensitive uses (such as aged care facilities and schools) and critical infrastructure away from high-risk areas and those exposed to high hazard risks. The outcomes of this work will inform decisions about land use policy, infrastructure and responses to climate change.



**Consultation question 20**  
*How do we better account for the impacts of climate change in our infrastructure, to support improved resilience?*





## 9.2 Critical infrastructure

### *Our critical infrastructure needs to be resilient to respond to disruptions*

Critical infrastructure includes physical facilities, systems, assets, supply chains, information technologies and communication networks, that if unavailable for an extended period, would significantly impact our social or economic wellbeing or affect our ability to ensure national security.<sup>133</sup> Embedding resilience considerations in our critical infrastructure is important to ensure economic stability, the ongoing provision of essential services, community health and wellbeing and protection of the environment.

While each state is responsible for identifying and assessing their critical infrastructure, the Australian Government is responsible for the administration and enforcement of the *Security of Critical Infrastructure Act 2018* (Cth) which covers the major infrastructure sectors.

The Australian Government's Road and Rail Supply Chain Resilience Review Phase 1 identified nine major risks for nationally significant roads and rail networks (Figure 11). These hazards are common across all infrastructure sectors.



**Figure 11:**  
Key risks to road and rail supply chain infrastructure<sup>134</sup>



The Government of South Australia has strategies to address public critical infrastructure threats and governance arrangements to coordinate planning and actions. Private critical infrastructure operators are responsible for managing the risks to the operation of critical infrastructure assets they own.

A major challenge to achieving resilience is understanding the interdependencies between public and private infrastructure, the supply chains delivering goods and services and determining responsibilities and obligations in an increasingly complex world.

A sector-by-sector approach to resilience has generally been applied to date, however with increasing complexity, there is a pressing need to understand the shared risks, vulnerabilities and mitigations for critical infrastructure across sectors.<sup>135</sup>

Other areas to consider for building the resilience of infrastructure include:

- incorporating a value for resilience in the investment process
- including the community in the decision making for critical infrastructure
- establishing a mitigation funding program for at-risk assets
- embedding ecological knowledge into the planning and development of infrastructure
- setting minimum resilience standards.



**Consultation question 21**  
*What are the critical resilience issues that South Australia needs to address?*

### 9.3 Green and blue infrastructure

#### *Green and blue infrastructure supports improved resilience*

Green and blue infrastructure, together with other nature-based and ecological assets, plays a vital role in supporting resilience and the wellbeing of our communities (Box 14). The value of adopting a more systematic approach that incorporates green and blue infrastructure is being increasingly recognised.

#### **Box 14. Green and blue infrastructure**

Green and blue infrastructure is a system or network of natural and semi-natural systems.

Green infrastructure includes natural and built landscape assets which incorporate vegetation or natural features. It includes trees and green cover, parks and gardens, open recreational spaces, green roofs and façades, permeable pavements, walking and cycling tracks.

Blue infrastructure includes water-related features and assets such as waterways, dams, levees, wetlands, stormwater management systems, beaches and coastal structures.<sup>136</sup>



Green and blue infrastructure is essential for helping our communities to mitigate and adapt to climate change and provides benefits for liveability, biodiversity and sustainability.<sup>137</sup>

Green and blue infrastructure provides ecosystem services and benefits such as urban cooling, flood mitigation, water purification, air quality improvement, space for recreation and climate mitigation and adaptation.<sup>138</sup> It can also complement and offset the need for traditional infrastructure investments through avoided or reduced upgrades or augmentations. This in turn improves resilience, reducing community vulnerability and exposure to extreme events in an efficient way. Some of these benefits are shown in Figure 12.



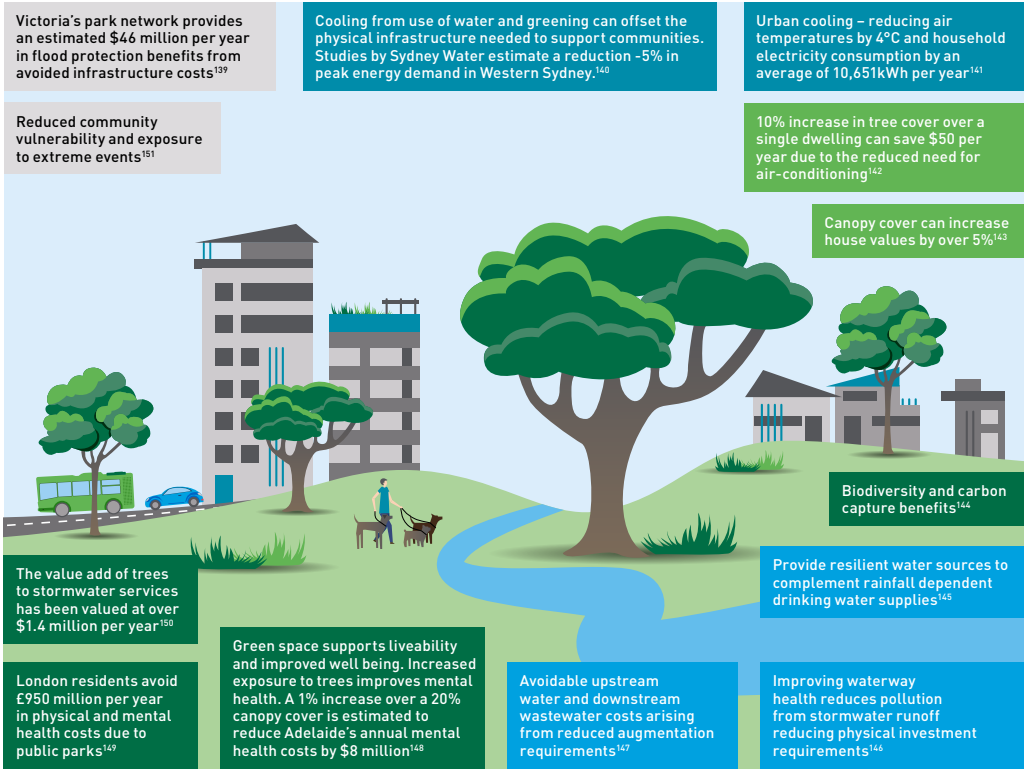


Figure 12: Green and blue infrastructure benefits

At both a national and state level there is growing recognition of the need for stronger nature stewardship to better protect and enhance our natural systems, biodiversity and the ecosystem services they provide.<sup>152</sup> Making sure impacts to natural systems and ecological processes are avoided, minimised and offset, as part of good decision making in infrastructure planning, supports this outcome.

Despite its recognised benefits, green and blue infrastructure is often overlooked and undervalued as infrastructure.<sup>153</sup> A lack of consistent approach to valuing benefits means they are not quantified in decision-making processes.<sup>154</sup> Fragmented ownership of the costs, benefits and risks also presents a barrier to protecting the existing green and blue infrastructure network and investing in new green and blue infrastructure assets.<sup>155</sup>



**Consultation question 22**  
*How can we better realise the resilience benefits of green and blue infrastructure to inform infrastructure planning?*





**Dry Creek Linear Park**  
*Image courtesy of Department for Environment and Water*





## 10. A stronger infrastructure industry



### Objective 6.

**A stronger infrastructure industry optimises our infrastructure investment through better planning and prioritisation**

The construction sector plays a significant role in the South Australian economy, accounting for \$8.9 billion, or 7.2% of GSP in 2021-22.<sup>156</sup> In the May 2023 quarter it employed 72,400 people, or 7.5% of the workforce in South Australia, the sixth largest employing sector.<sup>157</sup>

Globally and locally, the infrastructure industry is facing challenges due to supply chain constraints, labour and skills shortages, and the significant pipeline of work. At the same time, escalating project costs and increasing project complexity are driving insolvencies and consolidation in the industry.

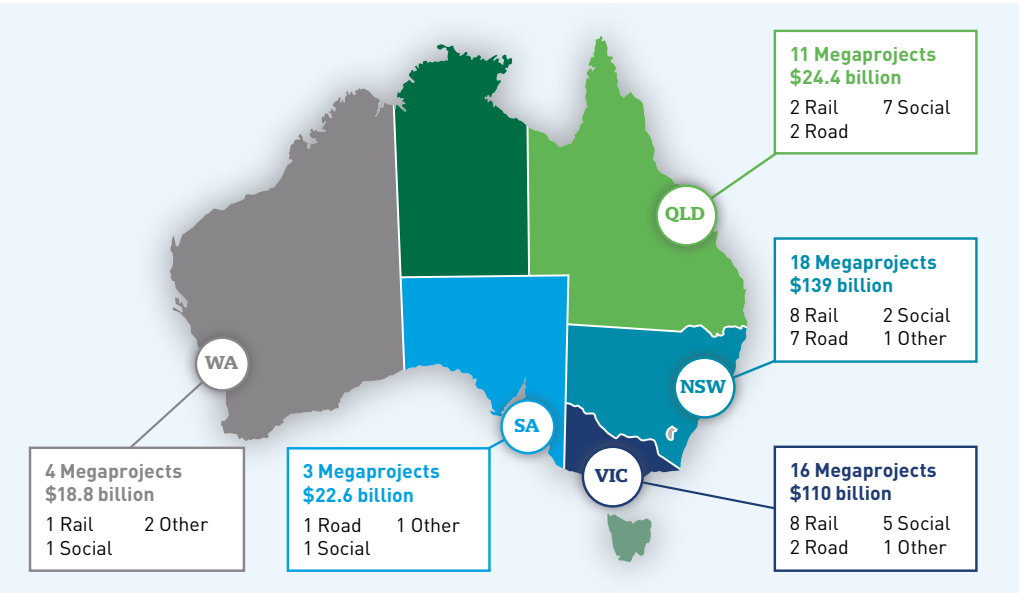
Good infrastructure planning requires identification of investment needs and priorities, based on a sound business case with a robust evidence base. Planning and sequencing infrastructure investments to support growth is critical to aligning infrastructure investments with the intended social, environmental and economic benefits. We need to optimise the use of our existing asset base through maintenance and augmentation, to strategically prioritising new infrastructure investment where necessary.



10.1 Planned pipeline

Visibility of the pipeline supports industry planning

There are a large number of projects and megaprojects in the forward pipeline across Australia (Figure 13) and globally, placing significant pressure on industry’s ability to respond and deliver.



**Figure 13:**  
**Australia’s megaproject pipeline (June 2023)**<sup>158</sup>  
A megaproject is defined as any project with a published or estimated value of \$2 billion or more, and for social infrastructure a published or estimated value of \$1 billion or more.

To provide visibility to industry, the Government of South Australia publishes information on future infrastructure projects, however there isn’t currently a whole-of-government approach.

The Government of South Australia’s Department for Infrastructure and Transport publish an annual forward workplan which covers regional and metropolitan areas of the state across the next four years, for projects from planning and design to construction and delivery stages. Other infrastructure providers, such as SA Water, make information available via their regulatory submissions. However, this is not the case across the board. Increased engagement and visibility of the forward work program may allow industry to better plan their resourcing and capacity requirements.

According to Infrastructure Australia, the demand for public infrastructure projects exceeds the capacity of the existing workforce, with an estimated shortage of 442,000 skilled workers for public infrastructure projects in 2023, across all occupational groups.<sup>159</sup> A national skills gap of 200,000 staff by 2040 is estimated for engineering skills.<sup>160</sup>

Workforce capacity constraints impact infrastructure delivery by creating cost pressures and delays. Given the pipeline is expected to remain strong in the medium to long term, opportunities will need to be created to address skills shortages, encourage industry participation, and improve productivity.

**Consultation question 23**

*How can government and industry work together to support the supply of skilled labour needed to deliver a transparent infrastructure pipeline?*



## 10.2 Digital technology

Productivity growth in the construction sector has been slow and improvements are needed to keep pace with change and help reduce capacity constraints. Greater adoption of digital technology offers an opportunity to drive productivity and innovation, for example, digital twins (Box 15), building information modelling, artificial intelligence, modern methods of construction and the Internet of Things can drive smarter, faster, and more cost-effective infrastructure delivery.

**Box 15. Digital twins**

A digital twin ‘...can bring together data in order to visualise, analyse and simulate services that can be performed to provide value to the nation’. For example, digital twins can:

- Avoid building a new road by simulating the performance of the existing road first
- Optimise the design of an asset before committing to building the asset
- Reduce energy consumption by up to 10% by analysing the performance of an asset and taking necessary action.<sup>162</sup>

Digitisation also represents an opportunity to achieve greater value from existing infrastructure. By integrating digital technologies, existing infrastructure systems can benefit from data-driven insights and improved operational efficiency. While digital infrastructure may help support a more sustainable infrastructure industry, challenges relating to data sharing, the cost of adopting new technologies, lack of standardisation and interoperability and unequal access to technology remain.<sup>161</sup> A holistic approach to adoption across government infrastructure projects will help address some of these challenges and ensure the productivity benefits from digital technology can be delivered.

**Consultation question 24**

*How can we maximise the productivity benefits of digitising our infrastructure?*





### 10.3 Effective procurement

*Effective procurement can reduce risk and deliver better outcomes*

The approach to procurement used by the Government of South Australia, like adopting early involvement and collaboration, can support a competitive and sustainable infrastructure industry and deliver on shared goals across risk, diversity, social procurement, decarbonisation and innovation. It's important the procurement model is fit-for-purpose for the project, sustainable, equitable and considers appropriate risk allocation amongst all parties.

Supporting industry with procurement approaches that package and sequence contracts to match market capacity and encourage participation, particularly from local, small-to-medium businesses, increases the diversity and capability across the industry to better meet needs.

To support our infrastructure delivery, the Government of South Australia aims to be a client that industry wants to contract with. Standardising and streamlining tender methods and requirements to reduce the costs and burden to industry, making tender processes clear, committing to realistic timeframes, and ensuring fair risk allocation will help achieve this.



**Consultation question 25**

*How can government continue to encourage collaboration and innovation in procurement?*

### 10.4 Funding and financing solutions

*Infrastructure funding and financing solutions are needed to support a sustainable future*

In South Australia, our public infrastructure such as transport, hospitals and schools is typically funded by the Government of South Australia. The Australian Government also directly invests in a number of our infrastructure projects. Governments finance their infrastructure investment through debt or equity. Refer to Box 16 for definitions.

**Box 16. Funding and financing**

Infrastructure funding refers to how investment and operational costs are repaid over time. For public infrastructure this is by users of the infrastructure through charges such as tolls, or by taxpayers.

Infrastructure financing refers to the money raised upfront for the design, construction and early operating costs of an asset, through debt or equity arrangements.<sup>163</sup>

Given the pressure on future budgets and the need to meet fiscal targets, including sustainable levels of net debt, broader funding and financing models may be relevant. Establishing a balance between risk allocation, achieving value for money and service delivery levels would remain key considerations in any new arrangements.



**Consultation question 26**

*What are the funding and financing options government should consider in future, to ensure its infrastructure program remains affordable and sustainable?*



# 11. Consultation questions

Infrastructure SA seeks to understand and address key strategic infrastructure issues with the potential for wide-ranging impacts. We are keen to leverage the knowledge and experience across industry, governments and the community.

To help frame your responses, each chapter of the Discussion Paper poses a series of questions, also outlined below. Your responses to these questions will guide our considerations as we develop the new Strategy. Where possible, each response should include evidence, such as relevant data, documentation or references to support your views.

Our strategy will focus on infrastructure of a strategic or significant nature for South Australia. Infrastructure that best supports the Government of South Australia's vision for economic growth and prosperity and ensures we balances social, environmental and economic outcomes.

If your input is regarding a relatively small project or specific locality, it may be more appropriate to approach your local council or the Department for Infrastructure and Transport.

**Table 2:**  
**Consultation questions**

Location	Question number	Questions
Chapter 4 The economic context		
Section 4.4 Our productivity challenge	1	What opportunities should we consider to improve South Australia's economic growth?
Chapter 5 Enabling infrastructure		
Section 5.1 Freight and supply networks	2	What infrastructure constraints are preventing a more efficient, accessible, and productive freight sector?
Section 5.2 Water supply	3	How can we enable a sustainable and affordable water supply into the future?
Section 5.3 Energy transmission	4	How do we realise the opportunities and mitigate risks with transforming our transmission and distribution infrastructure for the future?
Section 5.4 Digital connectivity	5	What are the barriers to increased adoption of digital technology to improve productivity?
Section 5.5 Resource exports	6	What investments could unlock the value of South Australia's resources?
Chapter 6 Liveable and well-planned places		
Section 6.1 Coordinated planning	7	How can South Australia better coordinate infrastructure investment to support a growing population?
Section 6.2 Affordable housing	8	What can be done to support sufficient, fit-for-purpose housing to improve housing affordability?
Section 6.3 Public transport	9	How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?



**Table 2:**  
**Consultation questions cont.**

Location	Question number	Questions
Section 6.4 Health and wellbeing	10	What investments would support a more efficient and productive health system that meets our growing and changing needs?
Section 6.5 Education and skills	11	How can infrastructure support improved education and skills outcomes for South Australia?
Section 6.6 Cultural, tourism, and recreational facilities	12	How can we sustainably grow these sectors to realise greater benefits for visitors and residents?
<b>Chapter 7 Accessible and inclusive infrastructure</b>		
Section 7.2 Regional and remote areas	13	How can we think differently about infrastructure investment to support equitable access and a more inclusive society?
Section 7.3 Closing the Gap	14	What are the opportunities for infrastructure investment to accelerate attainment of the Closing the Gap targets?
<b>Chapter 8 A decarbonised, sustainable economy</b>		
Section 8.1 Green industries	15	What infrastructure investments will support industries to transition to a global net zero future?
Section 8.2 Decarbonised energy system	16	How do we maintain an affordable, reliable and secure energy system through the energy transition?
Section 8.3 Transitioning transport	17	What are the most significant challenges for decarbonising transport and how do we address them?
Section 8.4 A circular economy	18	What action is needed to achieve a circular economy in South Australia?
Section 8.5 Infrastructure delivery	19	What measures can be taken to enable the infrastructure industry to decarbonise?
<b>Chapter 9 Improved resilience</b>		
Section 9.1 Planned resilience	20	How do we better account for the impacts of climate change in our infrastructure, to support improved resilience?
Section 9.2 Critical infrastructure	21	What are the critical resilience issues that South Australia needs to address?
Section 9.3 Green and blue infrastructure	22	How can we better realise the resilience benefits of green and blue infrastructure to inform infrastructure planning?
<b>Chapter 10 A stronger infrastructure industry</b>		
Section 10.1 Planned pipeline	23	How can government and industry work together to support the supply of skilled labour needed to deliver a transparent infrastructure pipeline?
Section 10.2 Digital technology	24	How can we maximise the productivity benefits of digitising our infrastructure?
Section 10.3 Effective procurement	25	How can government continue to encourage collaboration and innovation in procurement?
Section 10.4 Funding and financing solutions	26	What are the funding and financing options government should consider in future, to ensure its infrastructure program remains affordable and sustainable?



## 12. How to make a submission to Infrastructure SA

### We want to hear from you

Infrastructure SA welcomes submissions from anyone who would like to inform this process.

Written submissions must be received by 13 November 2023 and can be made via:



#### YourSAy

South Australia's 20-Year State Infrastructure Strategy



#### Email

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

Subject: Submission - South Australia's 20-Year State Infrastructure Strategy - Discussion Paper feedback



#### Post

Attention: Strategy Team  
Infrastructure SA  
GPO Box 2343, Adelaide SA 5001

### Publication of submissions

All submissions will be published on Infrastructure SA's website as public documents.

Please make sure your submission does not include personal details or any material that you do not wish to make public.

If you wish to treat part of your submission as confidential in nature you will need to make a case for this. Confidential material should be clearly marked 'IN CONFIDENCE' and provided in a separate attachment to non-confidential material.

We will not publish any material that is deemed offensive or potentially defamatory.



### Got questions?

Contact us via email: [infrastructure@sa.gov.au](mailto:infrastructure@sa.gov.au)



## 13. Glossary of terms

Aboriginal people	Aboriginal and Torres Strait Islander people
AEMO	Australian Energy Market Operator
AUKUS	Trilateral security pact between Australia, the United Kingdom and the United States
CBD	central business district
CCS	carbon capture and storage
CPI	consumer price index
GDP	gross domestic product
GL	gigalitre
GRP	gross regional product
GSP	gross state product
ISP	Integrated System Plan
ktCO <sub>2</sub> e	kilotonnes of carbon dioxide equivalent
LULUCF	Land use, land-use change, and forestry
OECD	Organisation for Economic Co-operation and Development
pa	per annum
PPP	purchasing power parity
PV	photovoltaic
RBA	Reserve Bank of Australia
RDA	Regional Development Australia
SA	South Australia
US\$	currency in United States dollars
\$	currency in Australian dollars



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# Regulatory Business Plan 2024-28

## Summary



Government of  
South Australia



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As a public utility, we are responsible for delivering a reliable supply of safe, clean, water and dependable wastewater services for more than 1.7 million South Australians. We do this by managing the largest water network and one of the largest sewerage networks in the country.

Continuing to meet customer expectations and service standards requires ongoing investment.

This is a summary of our Regulatory Business Plan 2024-28 which outlines our proposed investment for 2024-28. The full plan is available on our [website](#).





## About the plan

Every four years we submit a regulatory business plan to our economic regulator, the Essential Services Commission of South Australia (ESCOSA).

Our plan outlines the revenue we require to operate and invest in our business for the next regulatory determination period. It also includes how we propose to deliver the services our customers value and expect, and to meet all our regulated responsibilities including health, safety and environmental.

Our customers informed the plan through a comprehensive research and engagement program which we used to plan and prioritise investments.

ESCOSA reviews our plan and provides a regulatory determination which establishes the customer outcomes we need to deliver and the allowable revenue we can recover from our customers. Together with the government, we then set prices each year to achieve the allowable revenue across each four-year regulatory period.

For full details, see chapter 2 of our [Regulatory Business Plan 2024-28](#).





## Our operating context

The current regulatory period, which began in July 2020, has been challenging for us, as it has been for many utilities and large companies across Australia. Disruptions arising from COVID-19, compromised supply chains, cost escalations above the consumer price index, and large-scale events, such as the River Murray floods, and broader global conflict have required the use of innovative approaches and solutions to continue to deliver services for our customers.

In this environment, costs in the current regulatory period have been higher than expected, and this has impacts for the next regulatory period, including higher operating costs and the deferral of some capital investments we were not able to deliver in the current period.

Maintaining essential water services while keeping customer bills as low as possible amid global inflation is the driving principle behind our submission. It seeks to balance managing affordability for our customers with efficiently delivering the services they rightly value and expect. Maintaining and replacing ageing water and wastewater infrastructure needs to be weighed against future growth, and needs to respond to the impacts of climate change in the 2020s, the 2030s and beyond.

The plan seeks to strike a balance between all these priorities and outlines how we propose to invest in the 2024-28 period to deliver services at the lowest

immediate cost. In doing so, we note there will be need for growing capital investments in future periods to manage the impacts of ageing infrastructure while maintaining expected levels of service.

For full details, see chapter 3 of our [Regulatory Business Plan 2024-28](#).





## Proposed investment and customer bill impact

To maintain the current service standards, we propose to invest \$462 million in water services and \$245 million in wastewater services on average through each year of the regulatory period. This is estimated to impact a residential customer's quarterly SA Water bill with typical water use and average property value by \$10.20 (excluding inflation, or \$17.80 where inflation of 2.5 per cent is assumed in 2024-25).

In real terms, water and sewerage bills remain lower than what they were 10 years ago (Figure 1).

Changes to projected operating costs are also affecting the proposed levels of investment, noting decisions made following a formal request from the State Government to reduce the operating revenue we seek through the regulatory submission process. In response, we will reduce some of our operating security investments, sought expenditure on metropolitan service contracts and recovery of electricity expenditure by around \$35 million per annum.

Electricity costs are estimated to rise through the regulatory period by more than 75 per cent when compared with the electricity allowance set by the Essential Services Commission of South Australia as part of the 2020 final regulatory determination. This is a primary driver of operating cost increases, together with providing services to additional customers and meeting external responsibilities.

Proposed capital investments of \$2.8 billion will largely be driven by work programs to maintain services to current customers (47 per cent), meet external obligations (26 per cent) and meet growth (22 per cent), with the balance spent on improving services.

We have proposed a flat 2 per cent capital efficiency and additional operating efficiencies in the next regulatory period, recognising that more than \$350 million in total efficiencies have already been achieved in the current and previous regulatory periods.

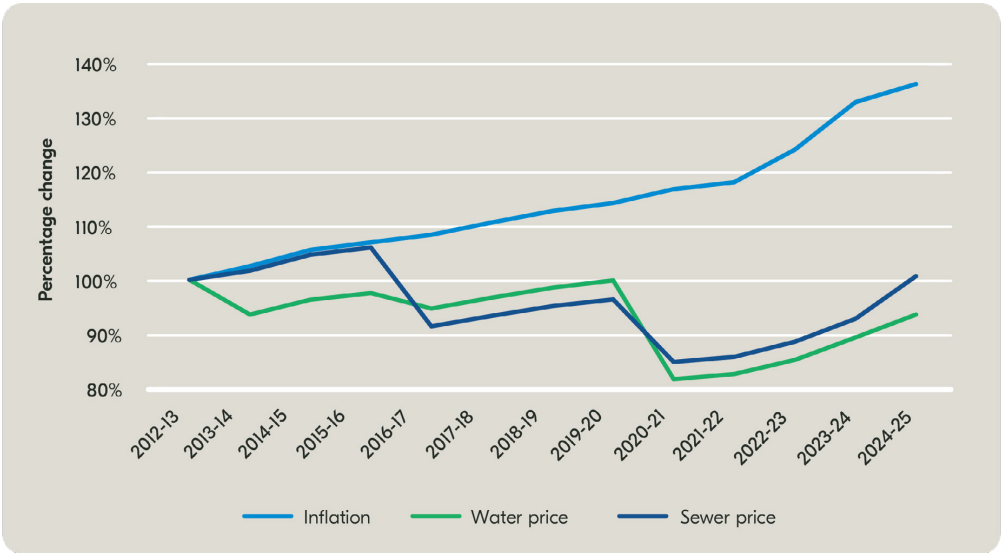


Figure 1 - Water and sewerage prices compared with inflation, 2012-25

For full details, see chapters 10 and 12 of our [Regulatory Business Plan 2024-28](#).



## Customer engagement approach and outcomes

Our Regulatory Business Plan 2024-28 has been informed by our customers and key stakeholders.

Engagement was undertaken through a range of approaches to ensure our plan was informed by meaningful engagement with a diverse range of stakeholders. Stakeholder views and feedback were carefully considered and incorporated into planning and prioritisation.

There were three phases of engagement (Figure 2).

Engagement activities incorporated three processes:

1. Broad engagement was used to raise awareness about our planning process, how to get involved, and encouraged feedback from a wide audience, reaching thousands of customers. Through social media and other communication channels, we encouraged our customers to engage, reaching more than 1.4 million people (including more than 180,000 letterbox drops, Facebook reach of more than 620,000 and online digital reach of about 600,000).

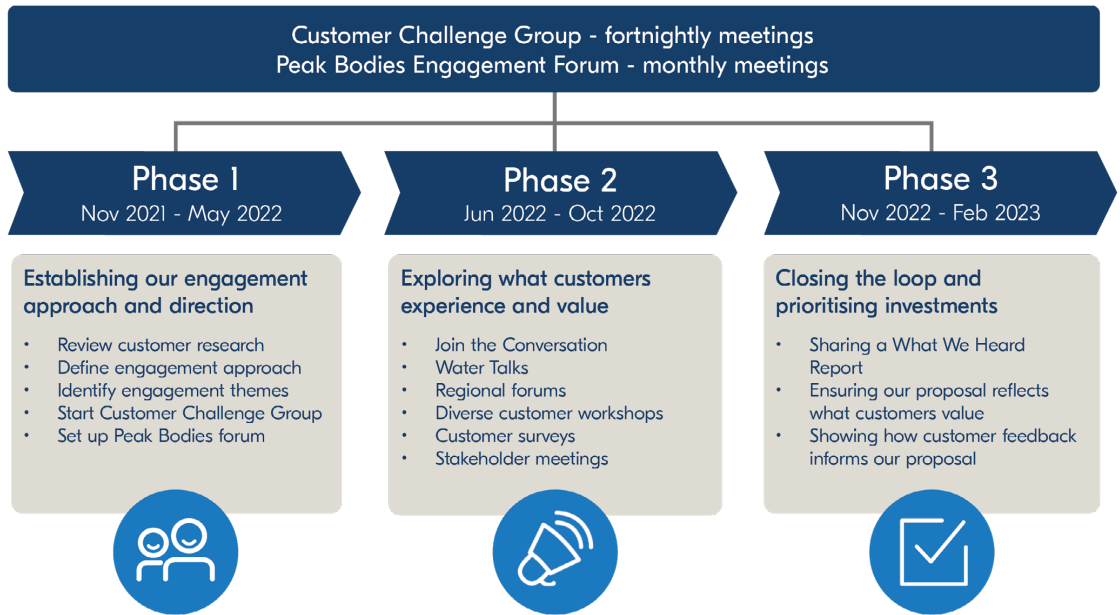


Figure 2 - Engagement phases



## Customer engagement approach and outcomes

2. Targeted activities directly engaged key stakeholders, organisations and community members to ensure diverse perspectives informed our planning. Among these activities were conversations with our regional customers through community workshops and interviews to enable feedback on issues specific to geographic areas.
3. Engagement through two forums, the Customer Challenge Group (CCG) and Peak Bodies Engagement Forum (PBEF). The CCG comprised 11 people representing a cross-section of our customers with a diverse range of skills and backgrounds. The PBEF was made up of key industry and community representative organisations drawn from our existing Customer Advisory Group and members of ESCOSA's Customer Advisory Committee. These groups reviewed and challenged initiatives and helped identify priorities for investment from the perspective of different customer groups.

Engagement with customers and stakeholders was complemented by insights and feedback collected through our ongoing tracking research.

To further inform and prioritise new initiatives, during August and September 2022, we tested how customers valued proposed new initiatives through a willingness to pay study.

Willingness to pay is one input to investment prioritisation that gave an indication of customer support. The investment proposals tested were also assessed against other engagement outcomes, where relevant, and other prioritisation measures applied to all investment proposals.

For full details, see chapter 4 and the research and engagement sections of chapters 8 and 9 of our [Regulatory Business Plan 2024-28](#).





## Prioritising investment

Through 2022, as engagement on our plan progressed, household budgets were affected by rising interest rates, ongoing impacts of the COVID-19 pandemic, large-scale events such as the River Murray floods and broader global conflict. Both the CCG and PBEF began to identify affordability as a focus.

In this environment, we went back to the CCG and PBEF for their guidance on prioritising investments in an environment where we are not able to progress all supported initiatives.

Feedback from the CCG, which was endorsed by the PBEF, ranked the five top priorities to guide our investment decision-making:

1. meet legal obligations
2. continue to maintain current levels of service to existing customers
3. address long-term affordability
4. deliver services to new customers
5. deliver new service offerings.

This feedback was used to further support the prioritisation criteria we adopted when determining what initiatives to progress.

Some of the investment areas supported by the willingness to pay survey outcomes that had high operating costs were not prioritised for 2024-28 for reasons of affordability. These initiatives may be considered for future regulatory periods.

For full details, see chapters 7, 8 and 9 of our [Regulatory Business Plan 2024-28](#).



Figure 3 - CCG feedback of investment priority



## Proposed capital expenditure

**Our proposed capital expenditure for 2024-28 focuses on maintaining our services and standards for customers and the community, with some support for growth projects and investigations of new water sources to ensure a secure and resilient water future.**

Works supporting water services are proposed to include major pipeline renewals, as well as maintenance on trunk mains, major pipelines, reticulation networks and supporting infrastructure such as tanks.

Proposed wastewater and recycled water network investments include maintenance of mains, treatment plants and supporting infrastructure such as pump stations. Where it is needed, we are also proposing renewal and replacement work. Several initiatives on the wastewater network are driven by *Environment Protection Act 1993* requirements.

Growth investment will mostly focus on extending our water and wastewater networks to manage the forecast population growth, particularly in northern Adelaide.

There will also need to be continuing investment in enabling technology.

Major investments proposed for the period include:

- the Eyre Peninsula desalination project, following extended consultation that saw works deferred from the current regulatory period
- continuing investment in the Tea Tree Gully Sustainable Sewers program
- replacing more than 200 kilometres of water mains and more than 40 kilometres of wastewater mains
- continuing Mount Bold Dam safety upgrade works, which are being delivered over multiple regulatory periods to reduce costs to customers
- starting work to replace our billing system, which is scheduled to occur over two regulatory periods to reduce costs to customers.

For full details, see chapter 8 of our [Regulatory Business Plan 2024-28](#).



## Proposed operating expenditure

**Increases to our proposed operating expenditure have been driven by cost increases, with inflation resulting in rising prices for materials we used every day to provide trusted water services to our customers and community.**

Our base operating expenditure, together with additional operating expenditure for new initiatives and to meet growth includes:

- delivering services to 30,000 new water customers and an estimated extra 10 gegalitres of water which requires additional operating investments
- increased electricity costs through the regulatory period
- the Eyre Peninsula Desalination Plant beginning operation
- external obligations related to the Superannuation Guarantee, Security of Critical Infrastructure, reservoir-related health obligations, and government directions.

For full details, see chapter 9 of our [Regulatory Business Plan 2024-28](#).





## Next steps

Our Regulatory Business Plan will be considered by ESCOSA. They will consult on our plan and then prepare and release a Draft Determination.

This draft will detail ESCOSA's initial evaluation of what we are proposing for 2024-28, with consideration given to public submissions it has received and its own assessments.

The Commission will also present a draft position on how much revenue it believes we will need to deliver services at the lowest sustainable long-term cost to customers.

ESCOSA's Draft Determination will be released in early 2024 and made available for public comment. Our response to the determination will be made publicly available on the ESCOSA website, which will also house ESCOSA'S Final Determination, which is due in mid-2024.

When the Final Determination is received, together with the State Government, we will set prices for delivering our regulated water and wastewater services based on the final approved revenue. These prices will apply from 1 July 2024, and will be reviewed and set annually through the regulatory period.

To stay up to date on the determination process, visit ESCOSA's website at [escosa.sa.gov.au](https://escosa.sa.gov.au).







4 October 2023

To ESCOSA  
CC SA Water  
[reviews@escosa.sa.gov.au](mailto:reviews@escosa.sa.gov.au)

**SAWRD24 submission – Regulatory business proposal**

The Cities of Salisbury and Playford are pleased to provide a joint submission on the SA Water regulatory business proposal. The Councils' request that the Commission ensures that critical SA Water infrastructure, to facilitate the current and future residential and employment growth in northern Adelaide, is included in the **SA Water 2024-28 Regulatory Business Plan**.

The urban structure of metropolitan Adelaide is changing, with the vast majority of growth occurring in the outer northern suburbs. In the City of Salisbury and Playford, residential population is anticipated to grow from 250,000 to 291,000 residents by 2036. Land already zoned for residential development and future residential growth areas within the region will house over 400,000 people in the Cities of Salisbury and Playford.

In addition to the residential growth, the Cities of Salisbury and Playford will provide significant employment lands in the next 15 years at Greater Edinburgh Parks (GEP) and in the North-West Economic Corridor (land west of Port Wakefield Road).

Greater Edinburgh Parks has been part of the State Government's employment growth plans since 2012, when it was identified as future strategic employment land in the *30-Year Plan for Greater Adelaide*. The State Government prepared a masterplan for the area and a few areas of employment land were rezoned at the time. The land is now being highly sort for development. Some 162ha is proposed to be rezoned now, but critical SA Water infrastructure remains unresolved.

The Cities of Salisbury and Playford have identified the North-West Economic Corridor as a strategic employment area located between (and adjacent to) the Northern Expressway and Northern Connector. The corridor is bookended by future residential growth hubs at Dry Creek in the City of Salisbury and Riverlea in the City of Playford, which is in stage one of establishment.

It is imperative that SA Water strategically plans for the essential infrastructure in this region. The consequence of not providing critical SA Water infrastructure in an equitable manner, is a loss of significant economic development for the state.

Both councils are aware of existing zoned strategic employment land that is also being faced with prohibitive SA Water charges. There is significant inequity in the current distribution of costs to individuals.



In the City of Playford, the original townships of Angle Vale and Virginia are now surrounded by new residential estates, which will all be connected to mains sewerage. The challenge is in the original townships where the existing premises have on-site wastewater systems, with many of them close to the end of their life. These systems will need to be replaced in the near future. However, the size of existing blocks and existing structures on site makes it difficult to install new systems under the current design requirements.

Additionally, commercial developments particularly in the township main streets are hindered due to the lack of mains sewerage, resulting in lack of business expansion and investment. The need to replace systems will cause concern to individuals and the broader community. The preferred outcome and potentially only option for some homes is to connect existing homes to the SA Water sewerage system.

Both councils acknowledge that the SA Water 2024-28 Regulatory Business Plan identifies significant investment in water supply in northern Adelaide. However, this is predicated on the Minister enacting Section 6 of the Public Corporations Act 1993. This work is required to service the growth in northern Adelaide and should progress as part of planned infrastructure roll out and not be reliant on the Minister providing direction.

Both council's note that the plan does not identify any capital expenditure on the expansion of the sewer network. SA Water needs to ensure that it can respond to market demand for residential and industrial growth in northern Adelaide.

The Cities of Salisbury and Playford request that the critical SA Water infrastructure be included in the SA Water 2024-28 Regulatory Business Plan to facilitate strategic economic opportunity for the state.

Please contact Dr Greg Pattinson, Executive Strategic Advisor at the City of Playford on 8256 0176 or [gpattinson@playford.sa.gov.au](mailto:gpattinson@playford.sa.gov.au) or Mrs Sally Jenkin, Team Leader Strategic Urban Planning at the City of Salisbury on 8260 8148.

Yours faithfully



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13 November 2023

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Contact: Peter Jansen

To the Strategy Team

**Re: City of Salisbury - submission on the 20 Year State Infrastructure Strategy- Discussion Paper**

Thank you for the opportunity to make comments on the Discussion Paper. Council supports the independent approach to assessing the State's 20 Year infrastructure needs through the priority setting in the Capital Intentions Statement.

It is noted that this Discussion Paper and the recent Planning and Land Use Services Greater Adelaide Regional Plan Discussion Paper have a similar approach to identifying the trends, demographic snapshots, and outcomes for discussion. It is considered that there are opportunities for the Departments to align and reference each Discussion Paper as far as practicable, and of their timing to allow for consideration by Councils. It should be noted that due to the limited timeframe for consultation, this submission has not been able to proceed to Council endorsement, and is reflective of previous positions of Council. The Council may see fit in making changes to the submission after the closing date, and as such, it is requested that an allowance is made.

As background, I can advise that the City of Salisbury is well advanced in its strategic planning for growth through:

- A Strategic Growth Framework that provides clear direction for the rezoning of land west of Port Wakefield Road and is guiding Code Amendment proposals
- Salisbury City Centre revitalisation agenda
- Continued planning and delivery of strategic residential infill providing housing choice and affordability, such as at Lake Windemere and Walkley's Road Corridor
- Participation in Dry Creek Salt Pans cross government CEO's working group
- Participation in Parafield Airport Masterplan identifying employment opportunities.
- Participation in cross government North-Western growth and infrastructure Executive Steering Group

Salisbury and Playford are a northern powerhouse in the defence, technology, manufacturing, and food industries. The Northern region has a critical role in the future of South Australia. The two cities comprise an area of over 500 sq km and cover an area north of Gepps Cross to the Gawler River. The region contributes \$12.5 billion to the economy through its 11,500 businesses, international firms and entrepreneurs. The Greater Adelaide Regional Plan paper indicates that the current residential land supply will cater for the next 15 years, but that 100,000 homes will be needed over 30 years to support growth in the region.

Additional consideration needs to be given to future industries to ensure that South Australia, and the region, is an attractive place to invest for new and developing industry sectors. This is critical to ensure we can leverage off the current growth, investment and advances in defence, green energy and the supporting resources, the circular economy and a more complex economy.



The City of Salisbury considers the North West Economic Corridor a prime location for these land uses (such as Renascor) due to its synergies with strategic infrastructure proximity to the labour force, higher education facilities and other industries. However, the opportunities are limited as so far as there is a lack of infrastructure co-ordination on state roads, water and sewerage supply. In addition, a significant investment in trunk stormwater infrastructure is required. Highly functional digital connectivity to this region is also paramount to attract investment in this region.

While it is imperative that the planning system identifies growth opportunities only well planned and co-ordinated infrastructure delivery can make this occur. Both planning and infrastructure agencies must work together to attract new innovative economic and residential development that responds to emerging trends (e.g. climate adaptation, de-carbonisation, smaller households, working from home, impacts of AI and technology) on built form, transport and communities.

To this end both the City of Salisbury and the City of Playford have been collaborating on the delivery of co-ordinated growth for the two Councils' areas. This includes advocating for state infrastructure co-ordination through the newly established cross-government Steering Group for the North West Adelaide Economic Corridor and preparing a joint submission on the Greater Adelaide Regional Plan Discussion Paper and on the SA Water Regulatory Business Plan.

#### Employment Land Growth

There has been significant growth in economic development across the Council in recent years and there is ongoing demand for appropriately sized and serviced lands. Currently we have existing employment zoned land that cannot be serviced by sewerage, and the cost to do so is not economical while onsite systems limit the types of uses that can occur. This is detrimentally impacting on economic growth in the region.

It is also necessary to highlight that Greater Edinburgh Parks has been part of the State Government employment growth plan since 2012 and in conjunction with North West Corridor lands, they are highly sought after for employment lands. However critical SA Water infrastructure is unresolved. Water and sewer connections are required, and must be facilitated by the Infrastructure SA Strategy. A transport strategy for this area is also not resolved. Both issues have resulted in rezoning proposals not commencing.

In addition, there are other employment growth areas within the Council area including the growth in the next five years of the RAAF Base Edinburgh, Industrial lands at Parafield Airport and the extension of Technology Park. These developments will have additional impacts on the State's road networks and other infrastructure capabilities.

#### Transport and Roads

The City of Salisbury is facing challenges with its transport network and is undertaking its own local area transport studies. With residential and employment growth, our roads are becoming congested particularly due to a lack of east-west connections and there is conflict between freight and residential movements in the northern areas. It has been Council's priority to continually advocate for immediate action for the upgrades to Kings Road, Elder Smith Road and the grade separation of the Kings Road and Park Terrace Rail crossings.

In addition, while the electrification of the rail line has been a good outcome for our community, the significant majority of our community do not travel to the city every day. Public transport provision could be improved significantly to better align with our community's destinations by providing east-west connections. Investigations should also commence to consider mass transit systems for future growth, not just the growth in employment areas but future residential growth at Dry Creek and other areas in the northern region of Adelaide.

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The potential exists for the State to take the lead on developing an Integrated Transport Strategy. A well-planned network will increase efficiencies for all sectors of the community.

#### Infill Development

Councils and the State Government should work together to manage and plan for the additional pressure that infill development has on infrastructure including the increased demand for services such as education and public transport.

The future recreational needs of our population must also be considered. Recreation and sport are important for a community's health and wellbeing. There is already significant demand for Adelaide's sporting grounds. A strategy needs to be considered about how we can cater for both an increased population and the impacts of climate change (increased heat and severe rain events) on sporting grounds and facilities.

Other recreation and open space issues that should also be considered include:

- access to underutilised open space and recreational areas in schools that are only used during school hours.
- That some Councils maintain a significant amount of regional open space that is provided for the regional community.
- The 12.5% open space allocation in the planning development application process needs to be reviewed in response to the matters raised elsewhere in this submission.
- The needs to define that some open space is not for recreation uses, but for biodiversity and stormwater purposes.
- The provision of water bodies for water recreational sports particularly as a cooler environment.

Infrastructure provision should be prioritised for areas within the existing urban boundary before servicing greenfield development beyond the boundary to ensure that infrastructure provision is efficient, cost effective and meets the requirements of infill growth.

#### Health and Wellbeing

Health and wellbeing should be considered in broader terms than only access to traditional health infrastructure. Wellbeing in particular is a wholistic term that is not only defined by an absence of disease or illness. Infrastructure that positively impacts on wellbeing should be considered in the provision of the state's infrastructure. This may include urban planning considerations for housing, social connection, active transport, active citizenship and celebration of culture. Human level design of infrastructure and development that fosters a sense of belonging are important.

Health services and the change in the provision of these services in coming years is important to consider. People will be working from home more frequently, accessing health services online and preventative health will increase in importance. Health services with a focus on prevention should be increased to reduce the pressure on primary health care services which are already struggling to meet demand. The growing population of people aged over 65 and the importance of culturally appropriate health services will mean a one-size fits all, centralised approach to health care infrastructure should be assessed as to whether it is fit for purpose now and into the future.



#### Closing the Gap

To support the aligning Closing the Gap targets, infrastructure investment should consider the cultural requirements that encourage greater economic and social participation. This may include providing supporting infrastructure so that Prescribed Body Corporates (Native Title Holders) and Aboriginal Community Controlled Organisations can provide effective cultural governance and services to their communities. Including cultural recognition and meeting spaces in public infrastructure can support inclusion and enhanced feelings of safety in public spaces.

Housing and community infrastructure should be co-designed with relevant community groups and leaders, to ensure any investment meets local community needs and essential, health and digital services are provided and accessed effectively.

#### Future Proofing

Development of Dry Creek could provide the next tranche of significant population growth for our council providing for approximately 10,000 dwellings. However, feasibility assessment and detailed master planning has yet to substantially commence and it is likely that the infrastructure and building costs will be substantial. The development of this land is likely to have a 20-year lifespan. This is a significantly large piece of land close to the centre of Adelaide and it should be developed with consideration of the technological advances, climate hazards and changing societal expectations that are likely to be experienced over the next 20-years. For example, the use of driver-less-vehicles, innovative public transport modes, micro mobility, decoupled carparking, higher residential densities, sea level rise, extreme weather as well as different ways of providing open space and recreation areas and biodiversity linkages.

The Infrastructure Plan must recognise the importance of the natural assets such as the mangroves, environmentally significant areas, International Bird Sanctuary, Dolphin Sanctuary and the need for coastal retreat and carbon sequestration in the northern region. Growth of the green and circular economy offers investment opportunities that will only increase over the lifespan of the Strategy.

It is important that strategic employment lands are also future proofed, not just by managing buffers to sensitive land uses, but by ensuring provision of sufficient and climate resilient infrastructure of appropriate capacity, on time, for them to grow and adapt in the future. Transport systems must be linked to growth areas for employment lands. To understand the future supply of employment lands, consideration needs to be given to the climate change risk assessment currently being undertaken by the State Government as sea level rises and increased rainfall events may impact on supply.

There is an opportunity to increase investment into stormwater harvesting and managed aquifer recharge systems to improve long term water security. Local government schemes will support and supplement sustainable growth, as well as improve biodiversity and ecological outcomes

To assist in decarbonising, there must be increased supply of power infrastructure to support increased demand for growth areas and the transition to electric vehicles.

Climate change impacts on public infrastructure must be considered in the long term financial plans of organisations and the State Agencies, including the value of green and blue infrastructure.



#### Infrastructure Delivery

It is recommended that the strategy investigates improved mechanisms for the funding of the delivery of state and local infrastructure delivery which is the major constraint for growth.

It is also necessary to identify the value of the less skilled employee to the employment network, and that skilled migration can be used in conjunction with work skill training programs to improve workers and business creation through appropriate infrastructure support and programs to the integration into a vibrant and strong community.

#### Conclusion

Council agrees that infrastructure is an enabler for development and economic growth, and raises the matters in this submission in anticipation of take-up by the State. However, it is essential that the State strategically plans for the required essential infrastructure to achieve the growth outcomes in the region, and includes the coordination of water, sewer, waste services, telecommunications and electricity in addition to the roads, stormwater and social infrastructure. To underpin the economic future of Northern Adelaide as envisioned by state and local governments, it is critical that an integrated infrastructure and land use strategy is prepared that provides a co-ordinated delivery of infrastructure that meets the requirements of the future land uses. A well-planned network will increase efficiencies for all sectors of the community and will attract the investment required for success.

We would welcome the opportunity to engage further with Infrastructure SA to progress the short- and longer-term strategies for infrastructure provision.

Yours faithfully

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Enc Joint submission to ESCOSA on SA Water Regulatory Business Plan.







**MOTION ON NOTICE**

**ITEM**

**ASMC-MON1**

**ASSET MANAGEMENT SUB COMMITTEE**

**HEADING**

Motion on Notice: Cr P Jensen: Playground at  
Richardson Reserve, Parafield Gardens

**Item AMSC-MON1**

Cr P Jensen has submitted the following Motion on Notice:

That Council:

1. Requests the Administration to present a report to the January 2024 Asset Management Sub Committee on the scheduled timing and planned extent of play space renewal at Laurence's Green, Parafield Gardens, including indicative costs of the renewal.

**Administration Comment:**

Should this motion be carried, Administration will prepare a report for consideration by the Asset Management Sub Committee in January 2024.