

South Australia's 20-Year State Infrastructure Strategy Discussion Paper

Submissions from Government
Agencies and Statutory Authorities

From: [REDACTED]
Sent: Tuesday, 31 October 2023 8:19 AM
To: Infrastructure SA
Cc: 'Leah Maxwell'
Subject: Submission - South Australia's 20-Year State Infrastructure Strategy - Discussion Paper feedback

[REDACTED]
To whom it may concern,

I am writing in response to Consultation Question 18: What action is needed to achieve a circular economy in South Australia?

My role is that of Circular Economy Officer with the Adelaide Hills Region Waste Management Authority (AHRWMA). AHRWMA is a subsidiary of four councils (Adelaide Hills Council, Rural City of Murray Bridge, Mount Barker District Council and Alexandrina Council). AHRWMA exists to provide waste management services for our Member Councils. AHRWMA operates two Waste Transfer Stations (Brinkley and Heathfield Resource Recovery Centres) and a landfill (Brinkley Landfill). AHRWMA accepts several waste streams via these facilities including items which are recyclable (such as cardboard, scrap metal), those covered under a product stewardship scheme (such as batteries, computers, paint) and items which cannot be reused or recycled and must be disposed of (such as asbestos, plastics, textiles).

Wherever possible, we recover products for reuse. These include:

- Concrete which is crushed and used onsite as road base
- Soil which is retained for the capping of landfill cells and land regeneration.
- Green organic material which is converted to mulch and resold to the public.

We currently have a recovery rate of 72% for materials entering our sites and hope to continue increasing that value.

We have been pleased to see the creation of Green Industries SA's Circular Procurement Hub which we hope to utilise in the near future. Additionally, funding provided to AHRWMA by Green Industries SA has allowed for the purchase of assets (such as a mobile concrete crusher, and an electromagnet and hydraulic grabber) which facilitate the conversion of Construction and Demolition waste into a usable product (crushed aggregate).

However, there are currently items which we are forced to place into the landfill or not receive. This is because there is no local market or processing facilities for these items. These products include textiles, soft and hard plastics (such as toys) and photovoltaic cells,

In response to Consultation Question 18:

AHRWMA hopes to see the creation of processing facilities for textiles and plastics in South Australia. This would allow us to further reduce the volume of material entering the landfill and provide resources to fuel the Circular Economy.

A product stewardship scheme for photovoltaic cells would allow us to accept and transfer these items to a suitable processing facility.

Further funding from Green Industries SA (or similar) to allow AHRWMA to continue upgrading our facilities and assets for the reclamation of materials will support us to continue recovering materials from landfill and via Waste Transfer Stations.

Clear guidance or guidelines from the EPA that define the products that are suitable for reuse. This would assist Local Government and industry with decision making and investment in infrastructure.

I would be pleased to discuss this further or to respond to questions.

Yours sincerely,

Catherine Stone
Circular Economy Officer
Adelaide Hills Regional Waste Management Authority
Ngarrindjeri, Peramangk and Kurna countries
[REDACTED]
www.ahrwma.com



ARTC welcomes the opportunity to provide feedback on the Infrastructure South Australia 20-Year Infrastructure Strategy (the Strategy). We are pleased that the updated strategy aligns with the review of the recent National Freight and Supply Chain Strategy to cover the impacts of recent major global and domestic events including the pandemic, the war in the Ukraine and severe weather conditions.

The severe weather events caused immense disruption across the ARTC network and deserve immediate focus and resources to deliver a functional and resilient supply chain, but ARTC believes that the simultaneous implementation of policies and investments that will achieve meaningful modal shift of freight from road to rail are necessary to realise significant long-term benefits. Both resilience and modal shift require Commonwealth action and leadership and ARTC believes that advocacy from the South Australian Government will be a positive force towards mutually beneficial outcomes.

Modal shift resolves a number of key issues that are at the forefront of communities and industry, including congestion, safety, productivity, reliability, impacts on the environment, sustainability and cost of living. There is an overreliance on the road network as the primary medium for movements of people, freight and services. This overreliance is a function of the failure of road user charges for heavy vehicles to cover the direct costs they impose on the roads; let alone the externality and societal costs that arise from this excess consumption. Heavy Vehicle pricing reform and incentives to promote the movement of freight onto rail can therefore ensure the efficient consumption of infrastructure in South Australia and deliver significant benefits to the community and industry. This efficient utilization in turn allows the government to better allocate resources, avoid unnecessary and premature expenditure on road infrastructure and ensure that infrastructure investment delivers the maximum return for the economy of South Australia.

Rail is ideally positioned to play a key role in supporting the development of new resources opportunities and driving economic growth across the state. This is one of two matters that ARTC is seeking the South Australian Government to lead and take action. The Braemar region of the state presents an opportunity to realise this, where its ability to access the east-west corridor from Broken Hill into the Iron Triangle region, provides a unique opportunity to deliver an access solution that promotes the development of this critical resource-rich region. ARTC has been actively engaging the resources companies focused on the development of this critical resource region, and has extensive national experience in the development of commercial frameworks that support the development of regional resource areas. ARTC would be happy to work with Infrastructure SA and the SA Government on potential frameworks that promote acceleration of the development of key resource areas by leveraging its experience in managing and investing in both multi-commodity and regional networks across the country.

Safety is another important issue that ARTC is seeking support from the South Australian Government. The vast number of level crossings in regional South Australia are risk exposure points for road and rail users that can have devastating and long-lasting impacts on local communities, industries and governments. Improving safety at these locations can deliver significant safety, environmental and network benefits for the South Australia.

ARTC therefore stands ready to play a major role in the development of key policies and the coordination of investments across the state to ensure that the benefits for South Australia are greater than the sum of the parts.

Incentives for mode shift

The use of rail within South Australia is well below its potential. Less than 15 per cent of containers passing through the Port of Adelaide are moved by rail while less than 5 per cent of journeys in Adelaide are made by rail. There is an overreliance on the road network as the primary medium for the movement of people, freight and services, particularly in Adelaide.

This reflects the failure to adequately price road access by heavy vehicles and results in inefficiencies across society and the supply chain because road network performance becomes unpredictable and increases congestion, delays, safety concerns, and emissions. ARTC believes the implementation of Heavy Vehicle pricing reform, and development of road user access charges that reflect both the direct and societal cost of that access, is the primary policy that can address this excess utilization. By efficiently pricing heavy vehicle traffic, it is expected that truck volumes across the road network would decline through the utilisation of transport modes that are more efficient and considerate of externality and societal costs. This should result in greater reliability on the road network and sustainability in utilisation and emissions and deliver key benefits to the economy of South Australia.

For example, moving one tonne of freight by road produces significantly more greenhouse gas emissions compared with rail freight. Furthermore, existing heavy vehicle charges do not cover the full cost of their impact on the road network, resulting in an under recovery of expenses that is ultimately borne by the taxpayer. Many roads remain substandard for extended periods because there is inadequate funding to undertake repairs, particularly on local government owned roads. Ever growing demand for roads also results in significant expenditure in new road infrastructure (with further added costs to make these appropriate for heavy vehicle use) for which the full costs are never recovered.

Given freight is transported across state boundaries, the Commonwealth Government is the appropriate level of government to lead and implement Heavy Vehicle pricing reforms. Implementation of this much needed reform would level the playing field between road and rail freight and encourage efficient utilization of the transport network. Appropriately pricing the associated externalities associated with freight transport would also ensure that efficiency reflects the full costs to the economy, including the societal costs of road access. The South Australian Government should be active in its support for this reform.

Rail modal share between Melbourne and Adelaide has fallen over the past several decades and is estimated to be below 20% while road freight has grown to meet the needs of the market, which is estimated to have grown over the same period. The increasing number of heavy vehicles transporting growing volumes of freight between these cities is exacerbating congestion and safety concerns along the South Eastern Freeway between Adelaide and the fast-growing Adelaide Hills. Arterial roads in metropolitan Adelaide that connect to the South Eastern Freeway (e.g. Portrush and Glen Osmond Roads), along with their communities, have also been affected by the increase in heavy vehicles. Efficiently pricing heavy vehicles using the South Eastern freeway would promote modal shift to rail, reducing congestion and creating significant extra vehicle capacity on the freeway; in turn allowing the provision of extra bus services to deliver the much needed public transport solution for Hills residents travelling into the CBD and non-Hills suburban areas of Adelaide.

Complementing this should be a rebate system to encourage more rail freight. By adopting both incentive schemes, and mechanisms to recover the full cost of access to the road network (including societal costs), the SA Government can deliver the most efficient transport supply chain outcome and the optimal community outcome. This balance of incentives and cost recovery is something that is actively being explored by the Victorian Government in their establishment of the Port Shuttle Rail Network.

The pricing reform and rebate could encourage growth in container movements to and from Port Adelaide by rail, both in absolute and market share terms. This will reduce heavy vehicle movements across Adelaide and in the process lower congestion and emissions and improve safety and reliability for other road users. A key beneficiary would be local roads between the port and rail terminals including the Port River Expressway, which is experiencing growing congestion driven by heavy vehicle traffic. To support growth in Port Shuttles, there needs to be investment in integrated terminals at both the port and metropolitan terminals. There are positive signs of this in South Australia with Linfox's recent investment in at the Adelaide Freight Terminal and more should be encouraged. Inefficiencies at the terminals and port, including the need to for multiple movements between ship and train, are limiting success of Victoria's Port Shuttle

Rail Network. The ultimate model is the port shuttle service operating in Sydney between the Moorebank terminal and upgraded Patricks Terminal at Port Botany. Terminals at both ends are configured for integrated container movements, limiting the number of required container lifts allowing for direct ship to train and warehouse to train movements. The addition of well-planned rail infrastructure then enables the quick turnaround of rail services to maximise container throughput per day, which further encourages the use of rail and lowering the per tonne cost of freight movements.

Resilience

The East West corridor is the backbone of the ARTC network carrying 70-80% of freight between the eastern states across the state, onwards to Western Australia forming a vital link in the national supply chain. Like much of Australia's legacy transport infrastructure, it was built to historical standards many decades ago based on stable and more predictable climatic conditions and is highly susceptible to adverse and increasingly volatile weather conditions.

The ARTC network was severely impacted by such events between 2021 and 2023, including a 24-day shutdown of the East-West corridor near Pimba in 2021, flooding in western Victoria in 2022 that caused a derailment blocking Melbourne – Adelaide traffic for seven days, while rail traffic between South Australia and NSW was disrupted for 90 days until early 2023. The latter two events overlapped to stop all rail traffic between the eastern states and South Australia. The line through the Adelaide Hills is also prone to disruptions with instances of falling trees, embankment issues and bushfires impacting on this vital route connecting Adelaide to Melbourne.

ARTC believes funding to enhance the resilience of the key rail corridors through the state should be an immediate priority. ARTC is seeking the support of the South Australian Government to advocate the Federal Government to fund these critical resilience works with national benefits.

ARTC is planning significant work to improve the resilience of its network through the Network Investment Program that will consider both new and accelerated capital replacement activities to progressively improve network performance. However, a funding decision is yet to be made by the Commonwealth Government and additional support from jurisdictional governments is critical for securing funding.

The growing need to continually repair and rebuild these assets following weather damage is unsustainable and financially damaging to ARTC and the rail freight industry.

While ARTC is responsible for managing the risks to the operation of the critical infrastructure assets it owns and operates, the national rail network has traditionally not been viewed as critical infrastructure in the same manner as defence, energy, and water infrastructure. The case for national support to upgrade the network to ensure continued operation and functionality is clear from its seamless functionality and critical role in ensuring continuity of freight movements during the pandemic while the adverse economic impacts were obvious when there have been extended outages.

Furthermore, the East-West Corridor through to Perth carries the most container traffic of any ARTC corridor and is the most competitive against road freight of all key origin-destination pairs. It is critical to maintain this competitive advantage from a productivity and safety perspective and also from an environmental perspective given the lower emissions per tonne of freight emitted by rail freight compared with road freight. This is more critical given the national freight task being expected to grow by 26% by 2050 coupled with the latest climate projections show that South Australia can expect hotter temperatures, declining total annual rainfall, more severe and prolonged droughts and an increase in the intensity and frequency of heavy rainfall events resulting in potentially more outages for the ARTC network without any investment.

Minerals opportunities

The Braemar minerals province straddles the border with NSW south of Broken Hill and represents a new frontier in resource developments in South Australia. Whilst significant effort has been applied by individual companies in progressing their own development plans, these plans reflect the optimal capital formulation for each specific project. ARTC has been engaging with each developer to help progress their projects as appropriate and is actively engaged in helping projects get their product to market and deliver the most cost-effective transport solution. There is always a risk that the sum of individual project developments results in a less than optimal overall infrastructure plan, and there may be an opportunity for ARTC to leverage its extensive Business Development and operational expertise in respect of both multi-commodity and resource specific networks, to work with proponents and the SA Government to develop an infrastructure plan for the region that supports the goals of all stakeholders and maximizes its development potential. An example of this could be the establishment of a multi-user rail terminal that connects to the ARTC Network and facilitates the delivery of product, loading of rail services and their movement to port for export. ARTC would be happy to engage on this opportunity further with Infrastructure SA and the SA Government as appropriate.

Level crossing safety

Successful modal shift results in more train movements and with this is greater risk exposure at the many level crossings across South Australia. The risk of a collision between a train and road vehicle at a level crossing is one of ARTC's biggest corporate risks with long term impacts on local communities, productivity and reputations. This is particularly the case in regional South Australia where most level crossings are passively protected by STOP signs requiring the road vehicle driver to exercise judgement before crossing the tracks. Upgrading the highest risk passive crossings to active protection (bells, flashing lights and boom gates) would no longer require road vehicle users to stop before proceeding over the track if there are no trains approaching. Road network performance would be improved, emissions would decline, and safety would be significantly enhanced. Furthermore, ARTC is the subject of numerous requests in South Australia and other jurisdictions to alter the timing of active level crossings to accommodate longer heavy vehicles that are becoming more common on regional roads. While it may appear simple, adjusting the timing is a site-by-site process, spanning long distances, that requires the resources and time of ever limited numbers of signalling engineers with costs up to tens of thousands of dollars per site. It is unsustainable and unfair for ARTC to undertake these works at its own expense for which the benefits flow directly to the road network and vehicle operators with no benefit to ARTC. ARTC believes that the road network operator and/or heavy vehicle operators should be covering these expenses.

ARTC is the most exposed to the risk at level crossings as the rail network owner and is supportive of the Federal Government's Regional Level Crossing Safety Program. However, the program rules and funding splits reduce the chances of its objectives being achieved and place an unnecessary financial and administrative burden on the jurisdictional agencies. ARTC is seeking a funding commitment from the South Australian Government towards this program, including towards adjustments of level crossings to accommodate longer heavy vehicles, and request it advocate the Federal Government to fund more than 50% of the cost of each upgrade to maximise the chance of the program achieving its objectives.

In metropolitan Adelaide, there are over a dozen level crossings on the ARTC network with higher risk exposures than those in regional areas because of the higher traffic volumes and regular passenger services operating on adjacent networks. These crossings are already actively protected with grade separation the only potential advancement. Such projects are substantial in cost and time and are beyond the funding ability of ARTC but deliver little benefit to ARTC. While ARTC is supportive of the South Australian Government's Level Crossing Removal Planning Program, it is of the view that the government should embark on these projects if safety and the road network performance at these locations is of concern requiring improvement.

Conclusion

South Australia plays a critical role in the national freight and supply chain. The ARTC network carries the majority of its interstate freight across the state, serving millions of people in Australia and across the world. The sustainability and resilience of the network is of the utmost national importance and policies such as Heavy Vehicle pricing reform and short to long term network investment are critical to ensuring network longevity and safety.

ARTC is ready to assist in the development and implementation of these policies and needs the support of the South Australian Government to ensure they are successfully implemented and to increase the chances of ARTC acquiring the resources needed to achieve its objectives with widespread benefit across the state and nation.



Date: 13 November 2023

Infrastructure Strategy Discussion Paper

Email: infrastructure@sa.gov.au

Level 6
81-95 Waymouth Street
Adelaide SA 5000

GPO Box 1047
Adelaide SA 5001
Australia

Ph: +61 8 8124 4928

dewcoastprotectionboard@sa.gov.au

www.environment.sa.gov.au

Dear Mr Shepherd,

Re: Coast Protection Board Submission to South Australia's 20-Year State Infrastructure Strategy Discussion Paper

Thank you for the opportunity to provide input into the review of South Australia's 20-Year State Infrastructure Strategy.

The Strategy itself supports the Government to effectively prepare for the future of public infrastructure and develop robust infrastructure policy that can tackle challenges facing South Australia. To maximise the impact of the Strategy, it could go further to acknowledge the importance of the natural environment (including the coast) and the impacts of climate change.

The Coast Protection Board (the Board) has a statutory duty to protect the coast and it does that through supporting and building both hard infrastructure (such as sea walls, groynes etc) and soft infrastructure (such as managing the beach and dune system by moving and carting sand in lieu of building a sea wall to protect urban areas). It is also a prescribed referral body under the *Planning, Development and Infrastructure Act 2016* (PDI Act), ensuring certain coastal development (including significant infrastructure projects) is informed by independent, evidence-based assessment to facilitate economic and sustainable coastal development while protecting the coastal environment.

The Board acknowledges the important role of Infrastructure SA and the critical need for a contemporary State Infrastructure Strategy that reflects the evolution in infrastructure needs, such as the incorporation and prioritisation of blue and green infrastructure.

The coastline fulfils an important role to protect public and private infrastructure such as residential houses and businesses. However, due to the extreme weather and rising sea levels associated with increased climate change, our coastline is losing its natural resilience. Ultimately, this threatens the surrounding communities that rely upon it. This is just one example of how accounting for the role of the environment when considering public infrastructure - in this case managing and protecting our precious coastline - is critical for our wider social and economic need.

Areas in which the Board considers the Strategy development could be enhanced from a coastal perspective include:

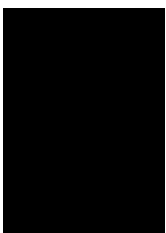
- Strengthening the emphasis on the environment within the key strategic objectives driving the Strategy and on the role of natural systems and infrastructure to help meet these objectives. The coastline is key in providing natural protection to assets.
- Enhancing the Strategy by incorporating key principles to ensure new infrastructure (e.g. roads), is not at risk of current and future coastal hazards (including coastal flooding/sea level rise, erosion, dune drift and acid sulfate soils).
- Consistency with the established planning hierarchy of 'avoid', 'accommodate' and 'adapt' (for example, see State Planning Policy 13.2) would acknowledge the threats of climate change to the environment, and infrastructure, strengthening the effectiveness of the Strategy to tackle future challenges.



- Consideration of special infrastructure funding arrangements to help mitigate coastal hazard risks for existing infrastructure, such as potential highway realignments to minimise risk and enable coastal retreat processes, or significant levee banks to protect critical infrastructure.
- Improving coastal hazard resilience by expanding the definition of infrastructure to account for natural infrastructure, or nature-based protection. For example, the reestablishment of coastal wetlands helps buffer coastal hazard risks and protect critical infrastructure. Green and blue infrastructure are briefly discussed in section 9.3 in relation to improved resilience, however, greater inclusion and discussion of these aspects would better capture the nature of emerging coastal infrastructure, beyond seawalls and levee banks. In addition - and in relation to Q22 on page 44 - exploring the role of legislation and mechanisms for implementation might help further realise the benefits of blue infrastructure to inform infrastructure planning.
- Expanding the objectives (s. 3.2, p. 9) to include "...protect and enhance the natural and built environments". This might include the setting aside of land for environmental or natural infrastructure purposes. The benefits of protecting natural infrastructure mitigate the increasing impact of climate change and build a natural barrier. Ecological areas such as marshes and dunes provide natural coastal protection against extreme weather events including storm surge and high waves which in turn prevents or reduces coastal flooding and structural damage, as well as providing important ecological habitat. Investment in these vital assets will support a Strategy that is fit for purpose to adequately address climate change impacts, which is one of the biggest threats to infrastructure.
- Emphasising the role of the coastal environment in section 6.6 of the Strategy and the benefits it provides to cultural, tourism and recreational facilities should also be included. This would acknowledge the high numbers of visitors and tourists to the coast and the value that beaches provide to the state.
- Representing the economic costs of severe events such as fire and coastal storms, rather than just floods in relation to improved resilience (Ch. 9, box 12). This would be more representative of the issues affecting our environment and the subsequent discussion could also incorporate coastal hazards in the list of events.

The Board appreciates the opportunity to make this submission. For further information, please contact me at DEWCoastProtectionBoard@sa.gov.au.

Yours sincerely,



Jeff Tate
Presiding Member
Coast Protection Board

Gawler River Floodplain Management Authority
PO Box 366 Seacliff Park, SA 5049

Website: www.gawler.sa.gov.au/grfma

Infrastructure SA
GPO Box 2343
Adelaide SA 5001
Infrastructure@sa.gov.au
13/11/2023

South Australia's 20-Year State Infrastructure Strategy Discussion Paper October 2023

Thank you for the opportunity to provide comment on the South Australia's 20-Year State Infrastructure Strategy Discussion Paper October 2023.

This submission provides feedback in context of the clear synergies the strategy paper identifies that relate to the Gawler River Floodplain Management Authority.

The Gawler River Floodplain Management Authority is established as a regional subsidiary pursuant to section 43 and Schedule 2 of the Local Government Act 1999 to co-ordinate the construction, operation and maintenance of flood mitigation infrastructure for the Gawler River. Constituent councils are City of Playford, Adelaide Plains Council, Town of Gawler, the Barossa Council, Light Regional Council, Adelaide Hills Council.

Megatrend - Climate change mitigation and adaptation.

Climate change is driving a range of shifts including increases in the frequency and magnitude of extreme weather events, pressures on biodiversity and water resources. These shifts affect our environment, liveability, health and well-being. They are driving a greater emphasis on reaching net zero emissions, a more circular economy, improved nature stewardship and building the resilience of our natural systems.

The objectives

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

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.

Consultation question 1

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

Answer 1.

The Gawler River is formed by the confluence of the North Para and South Para in the town of Gawler and is located in the Adelaide Plains district of South Australia. The district surrounding the river produces cereal crops and sheep for both meat and wool, as well as market gardens, almond orchards and vineyards. The farm gate output of the Gawler River Floodplain horticultural areas is estimated to be at least \$225 million.

Reduction of the severity of impact of natural events such as flooding within known affected areas will assist with:

- Reduced physical damages, economic losses and disruption to people in the flood impacted area.
- Increased economic growth and development.
- Timely, effective, coordinated and well-maintained flood management responses

Options might include.

- Development of new and refitting existing infrastructure, such as Dams and levee bank improvements.
- Annual flood awareness campaigns
- Stronger planning rules for new developments in flood prone areas

Consultation Question 3

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

Answer 3.

Investigate options to sustainably harvest water in times of flood events and or high rainfall.

In proposing such options, it is noted there are challenges with intermittent supply and conversely large volumes of water in short time frames.

Notwithstanding, benefits can be realised with redirection of “flood waters” to alternate use in activities such as horticultural and vineyards (particularly on the Adelaide Plains and within the Barossa Valley)

Consultation question 22

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

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

Answer 22

In reference to water related features and assets, the GRFMA, with assistance from the Australian Government, Cooperative Research Centres Program facilitated development of a decision support system (Gawler River UNHaRMED Mitigation Project (GRUMP)) to explore how to manage flood risk into the future in an integrated and dynamic fashion considering different drivers and options impacting on future risk.

As a method for exploring the future, scenarios were developed considering plausible changes from 2013 to 2050. Members of SA’s State Mitigation Advisory Group (SMAG), assisted by the scenarios team at the University of Adelaide and Research Institute for Knowledge Systems, developed five alternate plausible futures for Greater Adelaide. These scenarios are detailed in Futures Greater Adelaide 2020 – An exploration of disaster risk and the future (Riddell et. al., 2016).

Objectives of the process were.

- To provide a platform for GRFMA constituent councils to compare flood mitigation options over time in an integrated and transparent manner, as the basis for preparing

a master plan incorporating existing mitigation structures and on-going maintenance and operation for constituent councils and the community.

- To enable this platform to be used to engage the community in decision making, improve risk awareness and resilience and willingness to pay for risk reduction, depending on risk appetite.
- To integrate social, economic, and environmental risk factors for a broad understanding of the Gawler River Catchment to inform a landscape masterplan for long-term strategic planning.
- To highlight the role of research and science in local government decision making and provide an example for similar councils and catchment management authorities across Australia.
- To develop a repeatable process to enable continued use of the project outputs and analysis frameworks for Local Government decision making across South Australia.

The GRUMP program was useful in identifying the merits of opportunities for integrated planning of flood mitigation actions by the Gawler River Floodplain Management Authority.

Table 4 attached, provides as example, a summary of direct and indirect damage benefits of selected options.

Yours Sincerely

A black rectangular box used to redact the signature of David Hitchcock.

David Hitchcock, Executive Officer

TABLE 4: SUMMARY OF (REDUCTION OF) AAD AND RELATED NPV, INCLUDING THEIR RANGE UNDER DIFFERENT SOCIO-ECONOMIC SCENARIOS, (REDUCTION OF) AAOL AND RELATED NPV, INCLUDING THE VARIATION UNDER DIFFERENT OUTAGE DURATIONS, AND THE SUM OF THE DIRECT AND INDIRECT DAMAGES UNDER THE BAU SCENARIO, FOR SELECTED PATHWAY OPTIONS

Option portfolio	Year/ NPV	Direct Damage – BAU scenario (M\$)	Direct Damage reduction range, across scenarios	Indirect Damage – Med. BAU scenario (M\$)	Indirect Damage Range BAU scenario (M\$)	Total Damage BAU scenario: direct + indirect medium (M\$)
8. Floodway + dam '18	2018	6.0 (-39%)	-39%, -39% -	3.9 (-20%)	2.0-7.8	9.9 (-33%)
	2040	7.7 (-40%)	36%, -42%	5.7 (-21%)	2.9-11.4	13.4 (-33%)
	2060	9.5 (-37%)	-36%, -43%	8.9 (-26%)	4.4-17.7	18.4 (-32%)
	NPV	93 (-39%)	-37%, -39%	67 (-21%)	34-134	161 (-33%)
25. Floodway + Dam + Raised floor levels '18	2018	5.8 (-41%)	-41%, -41% -	3.9 (-20%)	2.0-7.8	9.7 (-34%)
	2040	7.4 (-42%)	42%, -47%	5.7 (-21%)	2.9-11.4	13.1 (-34%)
	2060	9.2 (-39%)	-42%, -48%	8.9 (-26%)	4.4-17.7	18.1 (-33%)
	NPV	90 (-41%)	-41%, -44%	67 (-21%)	34-134	157 (-34%)
29. Floodway + Dam + Zoning strict ARI200 '18	2018	6.0 (-39%)	-39%, -39% -	3.9 (-20%)	2.0-7.8	9.9 (-33%)
	2040	6.0 (-52%)	47%, -73%	3.2 (-55%)	1.6-6.4	9.2 (-54%)
	2060	6.1 (-60%)	-40%, -74%	5.0 (-58%)	2.5-10.0	11.1 (-59%)
	NPV	81 (-47%)	-43%, -60%	50 (-41%)	25-100	131 (-45%)
31. Floodway + Dam + Zoning strict ARI200 + Raised floor levels '18	2018	5.5 (-44%)	-44%, -44%	1.7 (-65%)	0.9-3.5	7.2 (-51%)
	2040	5.5 (-57%)	-52%, -75%	3.2 (-55%)	1.6-6.4	8.7 (-56%)
	2060	5.6 (-63%)	-55%, -76%	2.1 (-83%)	1.0-4.2	7.7 (-72%)
	NPV	74 (-52%)	-48%, -64%	32 (-62%)	16-64	106 (-56%)

Document No: 23_032

27 November 2023

Ms Tara Hage
Manager Strategy
Infrastructure SA
Via email: infrastructure@sa.gov.au

81-95 Waymouth St
Adelaide SA 5000
GPO Box 1047
Adelaide SA 5001 Australia

P: +61 (08) 7424 5760
E: dew.greenadelaide@sa.gov.au

www.greenadelaide.sa.gov.au

Dear Tara,

Re: South Australia's State Infrastructure Strategy Discussion Paper

Thank you for the opportunity to provide feedback on South Australia's State Infrastructure Strategy Discussion Paper. Green Adelaide has focused its comments on Section 9 (Improved Resilience).

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

The development of a new 20-Year State Infrastructure Strategy (the Strategy) is timely, with the latest ***Guide to climate projections for risk assessment and planning in South Australia*** (DEW, 2022) indicating that impacts such as increased average temperatures, greater frequency of very hot days, declining rainfall, rising sea levels, and more extreme weather events will continue.

There is growing adoption of climate risk assessment within both local government (e.g. through the [Resilient South Resilient Asset Management Project](#)) and state government (led by DEW). Undertaking these assessments will help with both the planning and construction of infrastructure which has increased resilience to future climatic conditions, thereby reducing medium- to long-term maintenance or replacement costs.

While the discussion paper mentions flood and bushfire hazard mapping, consideration could also be given to urban heat mapping. This work has been undertaken by Green Adelaide in partnership local and state government partners. Urban heat poses significant risks to both human health and infrastructure, including critical infrastructure such as the power grid and water supply. Identifying urban heat islands and taking action to reduce their size and severity will in-turn reduce these risks. The [Urban Heat and Tree Mapping Viewer](#) is a useful and accessible resource for viewing previous urban heat mapping and areas of vulnerability. As further data is collected, it will enhance the ability to make evidence-based decisions on the location and adaptation measures required future development.

It is also recommended that the Strategy identifies coastal flooding as a specific risk needing careful consideration and mitigation and/or adaptation in future infrastructure planning and construction. This could be supported by new state-wide coastal flood mapping currently being undertaken by the DEW. Reference to this mapping should be included as key evidence to support future planning for renewed and new infrastructure, in particular given the prominence of critical infrastructure along the coastline. The metropolitan coastline also features key remnant ecosystems, including mangroves and saltmarsh which are highly effective carbon sinks relative to other vegetation. Protection and restoration of these ecosystems will help buffer impacts of sea-level rise and storm surges on coastal built infrastructure. Green Adelaide is supporting research into Blue Carbon including the restoration of key sites. It is recommended that DEW is consulted in the development of the State Infrastructure Strategy to ensure that all available and relevant natural hazard mapping and data is identified.

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

Increased inclusion of green and blue infrastructure within the built environment presents a significant opportunity to provide multiple benefits, including mitigating and adapting to climate change. This could include the widespread adoption of Biodiversity-sensitive Urban Design (BSUD) and Water-sensitive Urban Design (WSUD).

Building biodiversity back into urban areas, within the built environment, coupled with the protection of our limited remnant vegetation, is vital to mitigate continued species loss and adapt to the impacts of climate change. BSUD is a flexible framework for infrastructure developers to consider provision for biodiversity along with socio-economic considerations early in the development process. Green Adelaide has been working with the Royal Melbourne Institute of Technology's (RMIT) on guidance for implementing BSUD in the Adelaide context and would welcome the opportunity to work with Infrastructure SA to explore how these ideas can be incorporated into the State Infrastructure Strategy. There are also opportunities being investigated to incorporate BSUD practically in major state infrastructure projects, such as the new Women's and Children's Hospital.

Implementation of WSUD is already occurring at various scales across metropolitan Adelaide, but there remain opportunities for it to become more widespread. This includes in streetscapes and commercial settings through to large scale wetlands. Incorporation of WSUD in infrastructure planning is important for managing the impacts of stormwater and reducing the risk of damage due to flooding, in particular with the increased likelihood of extreme weather events in coming decades. WSUD also plays a part in mitigating urban heat through supporting a greater amount of, and healthier, vegetation in urban areas. Green Adelaide is a major funding partner of Water Sensitive SA, a key capacity-building and knowledge sharing program to embed WSUD as business-as-usual for urban development in South Australia. Water Sensitive SA has a wide range of [case studies](#) on its web-site, particularly relevant to facilitating water sensitive outcomes in major infrastructure projects.

Furthermore, across government development of a draft **Urban Greening Strategy (UGS) for metropolitan Adelaide** (to be released for consultation in early 2024), has identified a number of relevant actions including:

- identifying agreed and consistent valuation of green infrastructure
- acknowledgement and inclusion of green infrastructure on asset registers
- public investment in demonstration sites, and
- resourcing for planning and construction of green infrastructure upfront rather than being seen as a last in/first out addition in project budgeting.

It is recommended that the State Infrastructure Strategy encourages green and blue infrastructure and nature-based solutions in future infrastructure planning and construction. State Government is in a prime position to 'lead by example' in the uptake of opportunities to demonstrate the benefits in this area. The recently released **Torrens to Darlington Urban Design Strategy** (DIT, 2023) provides an example of the consideration of the benefits which green infrastructure can provide as part of the early planning for a major public infrastructure project.

In summary, Green Adelaide recommends the following in order to better account for the impacts of climate change on infrastructure and realise the resilience benefits of green and blue infrastructure:

- encourage climate risk assessments based on the most up-to-date climate projections in the planning for renewed or new infrastructure
- incorporate all available data and evidence when considering the current and future impacts of climate change, including coastal flood mapping and urban heat mapping

- identify the State Government as having a leading role to play in demonstrating the benefits of green and blue infrastructure through adoption in public infrastructure
- promote the implementation and integration of BSUD and WSUD at the early planning stages of infrastructure projects of all scales.

Green Adelaide acknowledges the work undertaken to date in preparing the discussion paper and would welcome the opportunity to engage further to support the development of the State infrastructure Strategy.

For further information, regarding this submission, please contact Alison Collins, Green Adelaide Team Leader Planning, on [REDACTED]

Yours sincerely



Brenton Gear
Director
Green Adelaide

Consultation question 6 - What investments could unlock the value of South Australia's resources? (Page 19)

As referred in the Discussion Paper, the battery value chain and the importance of higher value adding products and activities contribute to the State's economic growth and productivity gains. There are opportunities for South Australia to tap into and expand existing assets to repurpose used lithium-ion batteries (LIB) for second life or process end of life LIB for higher value recycling outputs that extracts critical minerals to meet market demand (refer to GISA funded LIB opportunities study <https://www.greenindustries.sa.gov.au/resources/lithium-ion-battery-recycling-opportunities-in-sa-2021->). Investment in LIB repurposing and recycling infrastructure will help to unlock the value of South Australia's critical mineral resources for LIB.

Consultation question 7 - How can SA better coordinate infrastructure investment to support a growing population? (Page 21)

GISA supports that aligning the 20-Year State Infrastructure Strategy with the new Greater Adelaide Regional Plan and the non-metropolitan regionals plans will allow for more coordinated infrastructure planning and development. GISA has also provided a submission to the State Planning Commission's Greater Adelaide Region Plan Discussion Paper, advocating for embedding circular economy principles in land use planning and development decisions for the achievement of a common outcome of a strong circular economy built on a smarter, cleaner and regenerative future.

This submission highlighted a number of important considerations, including:

- Employment land not only includes traditional waste and recycling industries but also consider population serving industries that are increasingly required to support circular economy outcomes such as repair and reuse enterprises (e.g. repair cafes; tool libraries), community gardens, alongside community drop-off facilities (consolidation points) for second hand or end-of-life household items. Such enterprises could be clustered in accessible and convenient circular economy hubs within urban settings which will enhance living and working local.
- Residential and commercial developments need to ensure that the design allows for adequate space for segregated waste and recycling streams to be safely and conveniently stored, and accessible for easy collection – including waste collection vehicles turning and overhead clearance room.
- The 'Better Practice Guide Waste Management in Residential and Mixed Use Development' (<https://www.greenindustries.sa.gov.au/resources/better-practice-guide-for-waste-management-in-residential-mixed-use-developments-2014->) was developed to support for developers, planners, architects, facilities managers and the waste industry to provide best practice guidance in managing waste in new residential and mixed use developments. Planning is underway to update the guide and the GARP could support its implementation and that of the updated version by providing reference to ensure minimum requirements for segregated waste and recycling services and best practice, efficient collections systems are included as part of the planning and design process.

GISA supports the inclusion of Objective 4 “infrastructure supports decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities”.

Consultation question 15 - What infrastructure investments will support industries to transition to a global net zero future? (Page 35)

It is noted that the transition to a large-scale, cost competitive renewable energy system will be key to the green industrialisation. Infrastructure investment in sustainable management of end-of-life products and assets will be required to ensure circularity outcomes. This can include circular economy hubs promoting reuse or repurposing for second life as well as investment in recycling and remanufacturing infrastructure and systems to ensure materials can be recirculated at high value

use. Circular economy infrastructure investment will avoid carbon emissions in the first place, or require much less energy inputs than production from new virgin materials.

Consultation question 16 - How do we maintain an affordable, reliable and secure energy system through the energy transition? (Page 36)

It is noted and agreed that energy transition to 100% renewable energy system as outlined in the SA Economic Statement requires planned, timely and coordinated approaches to infrastructure delivery. At the early design and deployment stage, It is important to consider the options for decommissioning and the sustainable management of this infrastructure at end-of-life to inform infrastructure needs and planning to support circular outcomes for this material at decommissioning.

Consultation question 17 - What are the most significant challenges for decarbonising transport and how do we address them? (Page 37)

Electric vehicles will play a key role in transitioning the transport sector to net zero. It is also important to consider the associated infrastructure requirements for end-of life electric vehicles and components, including LIB. The development of a national product stewardship scheme for end-of-life electric vehicles will provide a nationally consistent system for the achievement of desired circularity outcomes, that takes into account infrastructure requirements for building local reprocessing capability and capacity.

Consultation question 18 “what action is needed to achieve a circular economy in South Australia?” (Page 38)

GISA supports a more circular approach to procurement and, as identified in the Discussion Paper, incorporating a whole of government sustainable public procurement policy focusing on circularity and decarbonisation outcomes will assist the state’s circular economy transition. Achieving a circular economy in South Australia will require creating the right enabling conditions across sectors, all levels of government and stakeholders, underpinned by policies, programs and other levers. Support to circular economy infrastructure (such as circular economy hubs mentioned above, recycling and remanufacturing), designing for reuse and circularity of materials, R&D, market development and adoption of circular economy business models and practices are all actions required to facilitate and enable South Australia’s transition.

Supporting the Circular Economy: South Australia’s Waste Strategy 2020-2025

(<https://www.greenindustries.sa.gov.au/resources/sa-waste-strategy-2020-2025>) was released in 2020 to form a framework of policies, strategies and plans to meet South Australia’s priorities for resource recovery and waste management. The circular economy is a prominent focus for Green Industries SA and the *Green Industries SA Act 2004* incorporates the concept of ‘circular economy’ as a guiding principle. With this focus, South Australia will expand the Waste Strategy to a broader Circular Economy Strategy which will commence development in 2024.

If you would like to discuss the information above, please contact Serena Yang, Manager Policy and Evaluation [REDACTED] or Ian Harvey, Director Policy and Evaluation [REDACTED]

[REDACTED] We look forward to continuing to engage in the process to progress the development of the next 20-Year Infrastructure Strategy.

Kind regards

Bernadette Gersbach (She/Her) | Acting Chief Executive / Associate Director People and Culture
Green Industries SA



John Fulbrook MP

MEMBER FOR PLAYFORD

Shop 24B
Martins Plaza
237 Martins Road
Parafield Gardens SA 5107
8250 7234

playford@parliament.sa.gov.au

[johnfulbrookmp](https://www.facebook.com/johnfulbrookmp)

13 November 2023

RE: State Infrastructure Strategy

Dear Sir or Madam

Thank you for the opportunity to provide a submission for the 20 Year Infrastructure Strategy.

On behalf of my constituents living in Parafield Gardens, Salisbury Downs, Greenfields and parts of Mawson Lakes and Paralowie, I make representation on the following matters:

- Kings Road
- Elder Smith Road

Details are as follows:

Kings Road

In recent years, vehicle movement by road in Adelaide has been improved through the delivery of the North-South Motorway, specifically around its interconnection to the Port River Expressway. This will be bolstered further once work is complete on the River Torrens to Darlington Project.

Prior to the arrival of the North South Motorway, the main flow of northern traffic flowed into Main North Road. Since the former has been delivered, traffic has been dispersed through both north/south corridors. While Kings Road is double lane from Main North Road to the Salisbury Highway, it reverts to a single lane towards Bolivar Road for around 3km before flowing west onto the new motorway.



While the blueprint for metropolitan road freight and general vehicle movements travelling north/south has been delivered, capacity within northern Adelaide for traffic travelling east/west requires further development. Consequently, I advocate for the single lane section of Kings Road, running through Paralowie, Salisbury Downs and Parafield Gardens to be duplicated.

According to the RAA, in its most recent State Budget submission, traffic volumes are as high as 20,700 vehicles per day on the single lane section of Kings Road between Salisbury Highway and the North/South Motorway. From data I have accessed from the Department of Infrastructure and Transport, I can attest this number is holding currently at a maximum of 19,500 vehicle movements. Subsequently, during peak periods, the road is frequently blocked and impedes normal traffic flow.

In its current form, increased demand has resulted in the road struggling to cope with the existing traffic passing through it. It should also be noted that between 2016 and 2020, there were 70 casualty crashes on this section of road.

Given concerns raised by members of my community, the road has recently been subject to a traffic study. While this has only recently commenced (and has some time to go before completion), the public consultation of the study has recently concluded. While this is not an exact figure, I understand just under 600 people participated in this process. When compared to similar studies, it is my understanding this is considered high. While noting that the Strategy is not likely to be swayed by public sentiment, consideration should be given to the factors that motivated this high level of public participation.

It should also be noted that this exercise is a combined study with the Commonwealth Government to assess the viability of removing the level crossing at Kings Road, which I support. The RAA has advised the Parafield level crossing is traversed by more than 33,000 vehicles per day.

While work on the studies is yet to be completed, I would envisage even at this early stage, a significant level of data has been generated to inform Infrastructure SA on the viability of including both the removal of the level crossing and duplication of the road in the Strategy. Given this, I encourage the authors of the Strategy to communicate with the Department prior to finalisation.

In noting the proximity of the level crossing to the road network, its removal is likely to improve response times for emergency service vehicles into the suburbs of Parafield Gardens, Salisbury Downs and Paralowie.

Thought should also be given to how this road interfaces with industrial areas within the north. It should be envisaged that traffic flow will be further exacerbated with planned industrial development in Salisbury South and potentially Parafield Airport.

With land already available to widen Kings Road and that it takes traffic from the busy northeast corridor of McIntyre Road, a redevelopment of around 3km of road has potential to offer significant benefits to both businesses and residents in the north and northeastern suburbs. Given this, consideration should be given for its upgrade to be included within the updated Strategy.

Elder Smith Road

While a duplication of nearby Kings Road has potential to alleviate east/west flowing traffic on Elder Smith Road, thought should also be given to increasing its capacity to two lanes in each direction within the foreseeable future.

At present, a traffic bottleneck develops in peak periods over the section of road crossing the railway corridor. This is due mainly to the road decreasing to a single lane, with blockages prevalent in both directions due to heavy flows emanating from both directions. It is possible for congestion to occur in both directions concurrently.

Understandably this is exacerbated whenever a crash occurs, frequently bringing traffic to a near standstill.

According to data from the Department of Transport and Infrastructure, I understand 24,700 vehicles access the road on a typical weekday. The RAA reports that between 2016 and 2020, 15 casualty crashes occurred on the 800m long single lane section.

Writers of the Strategy should consider a traffic study currently underway that I understand will determine the most appropriate measures to alleviate traffic pressure in the area. I believe this is more advanced than the study that I referred to earlier on Kings Road.

It may be possible to refer to this work to determine what should be included into the final version of the Strategy to alleviate the traffic bottlenecks prevalent during peak periods.

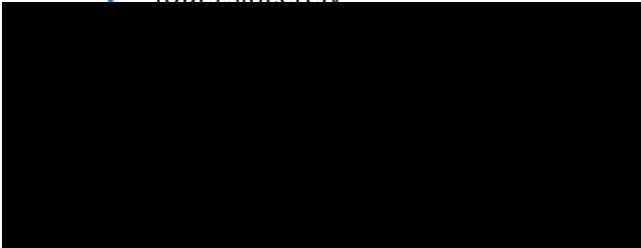
Please also note that there appears to be land provision to extend Elder Smith Road through to the North South Motorway.

Consideration should be given to determine if a road connection within the next twenty years is appropriate.

I thank you for the time taken to consider this submission.

Should you wish to discuss these further, please do not hesitate to contact me on 8250 7234.

Yours sincerely



John Fulbrook MP
Member for Playford

State Infrastructure Strategy – Discussion Paper October 2023

Submission

November 2023

Table of contents

Introduction	4
About the Local Government Association of South Australia	4
Consultation on the Strategy Discussion Paper	4
Background	5
LGA submission to the May 2020 Strategy	5
LGA Submission	6
Current South Australian context	6
General recommendations	7
The six key objectives	7
1. Enabling infrastructure unlocks higher productivity and economic growth to improve our living standards	7
Freight and supply networks	7
Water	9
Sewerage	11
Energy	11
Digital connectivity	12
Recommendations – Objective 1	12
2. Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities.	13
Regional planning	13
Affordable housing	14
Public transport	15
Health and wellbeing	16
Childcare	17
Education and skills	18
Recommendations – Objective 2	18
3. Accessible and inclusive infrastructure supports social inclusion and economic participation....	19
Regions	19
Regional and remote areas	20
Closing the Gap	21
Recommendations – Objective 3	21

4. Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities.	22
Decarbonisation	22
Circular economy.....	23
Recommendations – Objective 4.....	25
5. Improved resilience to shocks and events helps avoid or respond to disruptions that impact our economy, services and supply chains.	25
Planned resilience	25
Food security.....	26
Recommendations – Objective 5.....	27
6. A stronger infrastructure industry optimises our infrastructure investment through better planning and prioritisation.....	28
Workforce and labour	28
Sustainable procurement.....	28
Recommendations – Objective 6.....	29
Conclusion	29

Introduction

About the Local Government Association of South Australia

The Local Government Association of South Australia (LGA) is the voice of local government in South Australia, representing all 68 councils across the state and the Anangu Pitjantjatjara Yankunytjatjara.

The South Australian *Local Government Act 1999* (LG Act) recognises the LGA as a public authority for the purpose of promoting and advancing the interests of local government. The LGA is also recognised in and has prescribed functions in 29 other South Australian Acts of Parliament. The LGA provides leadership, support, representation and advocacy relevant to the needs of our member councils.

The LGA is a strong advocate for policies that achieve better outcomes for councils and the communities they represent. As such, the LGA welcomes the opportunity to provide commentary on South Australia's 20-Year State Infrastructure Strategy Discussion Paper – October 2023 (the Strategy Discussion Paper). The LGA further welcomes opportunities to be involved in the development of South Australia's 20-Year State Infrastructure Strategy (the Strategy) as Infrastructure SA looks forward to finalising this in late 2024.

This submission has been informed by existing policy positions, evidence-based research and consultation undertaken by the LGA with members during October and November 2023.

In its submission, the LGA seeks to highlight the opportunities and challenges that will be present over the next 20 years as the world adapts to and manages responses to the global 'megatrends' that the Strategy Discussion Paper has identified. This commentary has been provided from the perspective of the local government sector and lifts up those examples where activities are occurring across the sector that can be of broader benefit across the state as models to consider or adopt.

Consultation on the Strategy Discussion Paper

In respect of the context of the current consultation on the Strategy Discussion Paper, the LGA notes that Infrastructure SA:

- Is an independent State Government agency providing advice to the Government on coordination, planning, prioritisation, delivery and operation of infrastructure.
- Is tasked with developing the Strategy and reviewing this every five years, with the first Strategy being delivered in May 2020.
- States the aim of the Strategy is to assess statewide infrastructure needs, strategic goals and priorities to 2045.
- Released the Strategy Discussion Paper on 1 October 2023 to help inform the process of developing the Strategy.
- Proposes to present the final Strategy to the State Government in late 2024.

The LGA further notes that officers from Infrastructure SA were invited to undertake a presentation to one of the LGA committees, the South Australian Regional Organisation of Councils (SAROC), on 16 November 2023. The LGA thanks both Tara Hage, Manager Strategy and Catherine Jamieson, Manager Infrastructure Strategy and Policy for their attendance and presentation to SAROC.

The presentation addressed that in undertaking its review of the first Strategy, Infrastructure SA has modified its approach, taking a more objectives and outcomes-based approach to development of the final Strategy. It is also noted that the Discussion Paper is intended to establish a basis for further targeted stakeholder consultation and engagement into the early part of 2024, as Infrastructure SA works towards delivering the Strategy. The LGA welcomes further opportunities to be involved in these rounds of stakeholder engagement, as a peak body for the local government sector.

The Strategy Discussion Paper:

- Is divided into sections and identifies six key strategic objectives that Infrastructure SA seeks to achieve through the new Strategy. The LGA secretariat has aligned its discussion within this submission to the objectives outlined in the Strategy Discussion Paper, and focussed on those areas that are most relevant to the local government sector.
- Identifies context around global 'megatrends' that will influence local considerations in infrastructure planning over the next 20 years. These include climate change adaptation, digital transformation and cyber security, shifts in population, workforce and skills, increasing global instabilities, and push towards inclusivity in social and economic systems and practices. Some of these matters have already been identified by the LGA and members as policy priorities for ongoing work or dedicated project development on the LGA work schedule.

Background

LGA submission to the May 2020 Strategy

The LGA made a comprehensive submission to the development of the first Strategy. The key points of that submission included that the Strategy must:

- Give appropriate consideration to the contribution, opportunities and challenges associated with local government infrastructure.
- Support ongoing investment from the State Government in local infrastructure.
- Advance the state's partnership with local government through collaboration towards shared objectives.
- Identify innovative funding models that provide certainty of funding for local government infrastructure while putting downward pressure on council rates.
- Support joint advocacy to the federal government that unlocks fair and equitable funding opportunities for South Australia.
- Recognise that ambitious targets need evidence based strategic actions to achieve meaningful and sustainable outcomes.
- Recognise infrastructure's role in supporting economic growth, community development and wellbeing, and protecting the environment. These are all functions that are aligned with the objectives outlined in the LG Act, for which the local government sector is responsible.

These principles remain important and should again be considered in the current revision of the Strategy.

LGA Submission

In making a submission to the Strategy Discussion Paper, the feedback provided by the LGA membership has been prefaced by some general commentary regarding the South Australian context, particularly as it relates to the State Government's stated growth agenda. This is followed by discussion aligned with the six key objectives outlined in the Strategy Discussion Paper.

The LGA secretariat did not receive responses to all issues outlined in the paper. Commentary in this submission has been limited to those areas which are of most concern to members. The LGA also notes that some councils provided a submission directly to Infrastructure SA on the Strategy Discussion Paper.

The LGA submission makes 30 recommendations to consider in the further development of the Strategy.

Current South Australian context

The LGA notes that since the last state election, over the last 18 months the State Government has outlined an ambitious growth agenda for the state. With the publication of the first South Australian Economic Statement in March 2023, the State Government has set a tone for its 'smart, sustainable and inclusive' economy, and with it comes a large program of works to help deliver on this agenda.

In pursuit of the stated growth agenda, the LGA notes that there are currently significant levels of consultation and engagement being undertaken across the State Government in a range of portfolios. A great number of these consultations cross over into matters of keen interest to the local government sector, in everything from growing the hydrogen and renewable energy sector to water security, urban greening, regional planning, and of course infrastructure planning, such as development of the Strategy. As the peak body in South Australia for local government, the LGA welcomes opportunities to be involved in the consultation and development of these core initiatives on the State Government's agenda.

The State Government should ensure that there is alignment of purpose and objectives across the delivery of this broad economic and growth agenda. Furthermore, State Government needs to be well equipped, both with internal resources, but also through strong local government and commercial partnerships, to be able to deliver on stated targets.

With this context in mind, some of the feedback that the LGA and members have shared in this submission, has a significant cross over with feedback provided to other active or recent consultations that have been run by the State Government. While inherently challenging because of the varied nature of the responsibilities spread across State Government agencies, an integrated approach to developing key statewide strategies is preferable to ensure that more efficient and effective collaboration is realised with the community and key stakeholders.

The points made in this submission regarding strategic alignment will deliver more meaningful outcomes for the communities we serve. The Strategy should also prioritise productive and efficient infrastructure expenditure for all tiers of government, reducing duplication of infrastructure development, enabling better use of existing assets, and providing consistent and clear mechanisms for industry on the funding of infrastructure projects.

General recommendations

The LGA recommends that the Strategy:

1. Encourages the State Government to consider ways to move towards greater integration on consultation and development of key statewide strategies. For example, more alignment is required across the following strategies that are either completed, currently being developed or proposed for future development:
 - South Australia's 20-Year State Infrastructure Strategy.
 - The Greater Adelaide Regional Plan (GARP).
 - Regional plans for the further six regions identified by the Planning, Development and Infrastructure (Planning Regions) Proclamation 2020. It is understood these planning processes are due to commence in early 2024.
 - The Resilient Water Futures project, that aims to deliver the Urban Water Strategy by mid-2024.
 - The South Australian Government Climate Change Actions.
 - The Urban Greening Strategy, being led by Green Adelaide.

(Noting that the above list is meant for illustrative purposes and is not meant to be exhaustive)

Commentary on the intersection across some of these planned or proposed statewide strategies is contained in this submission.

2. Recognises infrastructure's role in supporting economic growth, community development and wellbeing, and protecting the environment. These are all functions that are aligned with the objectives outlined in the LG Act, for which the local government sector is responsible.
3. Notes that the local government sector seeks to work closely with the State Government on developing its stated economic and growth agenda, and provide a smart, sustainable and inclusive future for all South Australians.

The six key objectives

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

Freight and supply networks

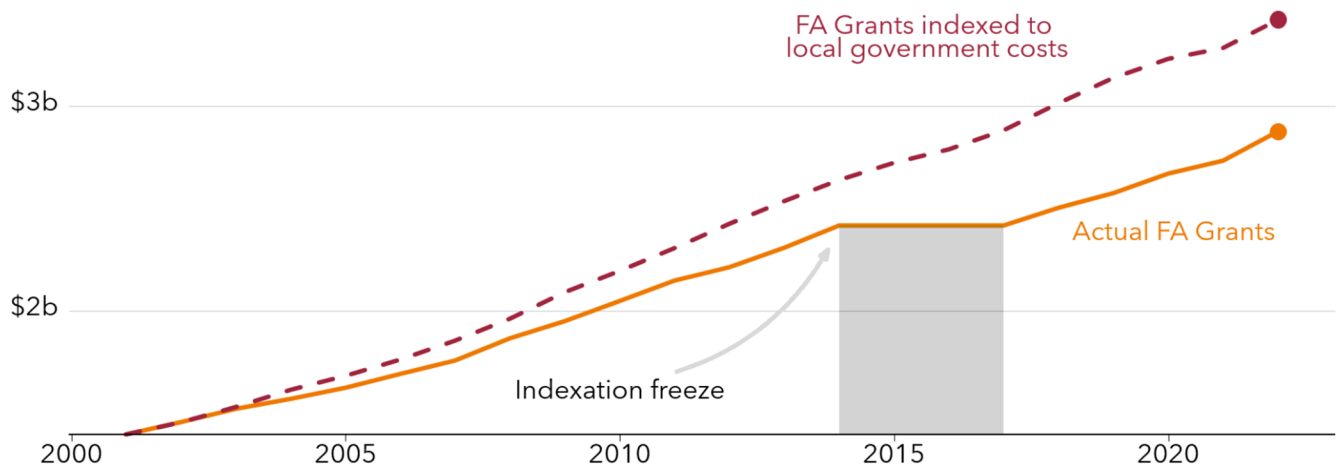
A key enabler of an efficient, accessible and productive freight sector is in ensuring that adequate road corridor maintenance actions are supported, particularly in regional areas. Road networks are critical to the transportation of a range of goods across the state, this includes the movement of raw materials, mining materials, equipment, and primary produce to local and export markets. Accordingly, federal Financial Assistance Grants are an essential component in adequate road investment and maintenance activities, and these grants have not kept pace with rising costs.

Research released recently by the Grattan Institute demonstrates where this Commonwealth funding is deficient (refer Figure 1).

Commonwealth funding for local government has failed to keep up with costs

GRATTAN
Institute

Financial Assistance Grants 2001-2022, actual value and estimated value if indexed by local government costs



Notes: Values determined by taking value of grants in 2001 and indexing annually according to (a) the method outlined in the Local Government (Financial Assistance) Act 1995 (population and CPI growth), with an indexation freeze starting in 2014-15 and ending in 2016-17 (orange); (b) population and growth in the SA local government price index (red).
Sources: Department of Infrastructure, Transport, Regional Development, Communications and the Arts 2023a, The South Australian Centre for Economic Studies 2023, ABS 1999

Figure 1: Grattan Institute report *Potholes and pitfalls: how to fix local roads*

The Grattan Institute suggests local roads are in a state of dangerous disrepair and recommends an extra \$1 billion is needed each year to ensure councils can adequately maintain them. The Grattan Institute's report *Potholes and pitfalls: how to fix local roads* recommended the Federal Government increase untied funding to councils through Financial Assistance Grants.

In response to this report, and in a major step toward better road safety, connectivity and productivity across South Australia's local roads, the Federal Government did announce significant increases to its flagship road infrastructure programs. The funding boost will be phased in over five years to eventually double Roads to Recovery from \$500 million to \$1 billion per year, increase Black Spot funding by \$40 million per year and merge the existing Heavy Vehicle Safety and Productivity Program (HVSPP) and Bridges Renewal Program (BRP) to create a new Safer Local Roads and Infrastructure Program (SLRIP).

The LGA welcomes the announcement regarding increased funding and emphasises the importance of strengthening road safety and improving freight productivity outcomes on local roads. More than 75% of Australia's roads are managed by councils. For many smaller councils in regional and remote areas, they are much more financially constrained, which in turn limits their options to keep local roads in acceptable conditions.

Increasing funding under the new SLRIP from \$150 million to \$200 million will deliver positive outcomes for communities and industry. However, it is noted that the early November 2023 announcement by the Federal Government for \$41 million in funding to flow to 11 projects through the BRP resulted in no gains to South Australian projects.

Currently, the BRP and HVSPP permit applications lodged by local councils, and these applications must have the support of the relevant state or territory government, which provides an assessment and

merit scoring for the project. Additional clarity for councils around the state's prioritisation agenda for road infrastructure investment will provide harmonisation and reduce the burden on both the South Australian Department for Infrastructure and Transport and councils that want to apply for funding from these federal programs. This clarity will move towards ensuring that the efforts from all sides are best directed to projects of the most holistic value for the state.

This intersection demonstrates that a strong partnership between State and local government is a key enabler to ensuring adequate access to funding through the above programs flows into South Australia over the period covered by the next Strategy.

Considerations also need to be made in road and bridge asset maintenance activities that support a move towards freight transport decarbonisation to meet next zero commitments. This means preparing for the potential impacts to road infrastructure planning, particularly for the local government sector, of freight vehicles that were previously considered 'oversize and overmass'.

Most heavy vehicles in Australia are imported from Asia, Europe or North America. Australian heavy vehicle standards are more than 90% harmonised with international vehicle standards (depending upon the vehicle category), such as United Nations (UN) regulations. The push towards incentivising cleaner and greener vehicles for heavy freight means the Australian adoption the UN "Euro VI emission standard". This is outlined by the National Heavy Vehicle Regulator in their [2020-2025 Productivity Plan](#).

As a payload critical industry, there would be no commercial incentive to justify an investment to upgrade without an increase in mass limits to maintain existing levels of productivity. This increase will have a critically significant impact on freight corridor planning over the next 20 years as existing corridors will need to be maintained and in many cases upgraded to support this transition. Again, unlocking funding strategies to assist councils offset the cost impacts of these changes will be crucial to assist freight productivity as that industry moves towards net zero targets.

Water

The LGA notes the Strategy Discussion Paper references the strategic initiative being led by SA Water on the Resilient Water Futures project (RWF). Infrastructure SA may be aware that the LGA is a key member of the Strategic Advisory Committee for the RWF, and one of RWF's main objectives is to see the delivery of a 50-year Urban Water Strategy for Greater Adelaide. This is due to be released in mid-2024. The LGA acknowledges the concurrent development of the Urban Water Strategy, through the RWF, and the State Infrastructure Strategy.

Early themes that are emerging from the RWF show that there is a need for carefully planned action in relation to sustainable water security for Greater Adelaide, even in the short term. There is a strong need for a more integrated water supply system, for example between different sources of potable water, recycled water and stormwater, to diversify the supply mix and make us less dependent on rainfall. This will require an adaptive plan, where water supply options can adapt to a changing climate, changing population, and other change drivers.

The RWF is also recognising that many councils play an important role in an integrated water system, through the provision of water, wastewater and stormwater services to many communities. Strong collaboration between all stakeholders, including councils, will be important in delivering an adaptive and integrated water plan.

In relation to enabling sustainable and affordable water supplies for South Australia into the future, the local government sector recognises its obligation to conserve water resources, protect water quality,

provide water for the environment and effectively manage storm and flood water. Further, councils are committed to contributing equitably to improving water management infrastructure and processes, notwithstanding the responsibilities of federal and state governments.¹

All member councils that responded to the LGA secretariat in relation to this submission indicated future water security as one of the most critically important factors to plan for over the coming years as our climate changes.

In particular, councils noted the following:

- Reliance on the River Murray will become increasingly problematic as the climate changes and alternate options for water supply must be considered. This may include requiring new developments to be more self-sufficient in the collection of rainwater at site or being more dynamic with levies and costing of water consumption for heavy users. It will also need more nuanced collection and use of recycled water supply for some purposes where potable water is not required.
- A major infrastructure priority should be in transitioning Adelaide towards becoming a water sensitive city, incorporating water sensitive urban design (WSUD). The Strategy should address water provisioning for more efficient water capture, treatment and reuse, including for stormwater and wastewater, to reduce pressure on other water sources. 'Marion Water' was provided as a positive example of a recycled non-drinking water program distributing water to parks, schools, reserves and industry within that council locality that could be used as one model to assist this transition.
- Greater consideration needs to be given to increasing permeable surfaces to enhance stormwater management through retention and detention of water that would otherwise be run-off. Potential actions could include mandating use of permeable surfaces through the Planning and Design Code.
- There is sector support for the Northern Adelaide Irrigation Scheme, which aims to achieve growth in agricultural industries through increased access to water resources. However, clearer articulation is needed within key strategies, for example the Strategy and the GARP, and across organisations (e.g. SA Water, local government, private landholders) to support consolidated access to resources to support this program.
- The Northern Water Supply Project currently underway proposes a desalination plant for the upper Spencer Gulf. This project has the potential to transform the region and remove the reliance on freshwater through the River Murray. Along with complementary water management and stewardship activities, the sector notes it is important to continue exploring climate independent water sources such as desalination plants.
- To safeguard water sources into the future, we need to take an integrated, holistic and future focussed water planning approach. This has been recognised by the respective Regional Landscape Boards constituted under the *Landscape South Australia Act 2019 (SA)* (the LSA Act). The LGA notes that the LSA Act is currently under statutory review by an Independent Reviewer, with a report due to be tabled in the South Australian Parliament early in 2024. The LGA has also made a submission to that review, which is publicly available on the LGA website. The LGA also understands that the current State Landscape Strategy, which aims to support sustainable management of the natural resources in South Australia, including water, is also currently under review.

¹ LGA Policy Manual 4.3 Water Resource Management | LGA South Australia

Sewerage

SA Water generally provides new sewerage connections in the Adelaide metropolitan area (and large country towns) and/or where there is a short-term commercial incentive for it to do so.

In the remaining parts of South Australia, wastewater networks are predominantly managed and maintained by local councils, through community wastewater management schemes (CWMS). Councils do not have access to the same level of systems, machinery and specialised staff as SA Water.

The State Government only allocates around \$4.5 million per annum for new CWMS systems. Consequently, CWMS schemes rely on a user-pays charging system to recover the costs of operation, maintenance and replacement, which can lead to CWMS charges for local communities exceeding SA Water's sewerage charges where they provide this service. This presents a challenge for those communities that have limited capacity to pay for those costs and may lead to underfunding of CWMS services by councils.

CWMS arrangements limit efficient investment in sewerage schemes and represent a bottleneck, limiting growth in industry, housing for workers and therefore employment. Accordingly, this represents a major constraint to the potential economic development of South Australia, particularly in regional areas.

Energy

The LGA supports the economic ambitions of the state for net zero carbon emissions by 2050 and to deliver modernisation of electricity distribution networks for securing reliable and affordable clean energy into the future. The LGA also supports commentary in the Strategy Discussion Paper around provisioning for the forecast growth in electrification across the state over the coming period covered by the Strategy.

The LGA notes the State Government's partnership with the RAA to construct and operate Australia's first statewide electric vehicle (EV) charging network. Infrastructure provisioning over the coming period covered by the Strategy will be integral in supporting projects such as the RAA's EV charging network, and to ensure that early adopters in the regions are adequately serviced by charging infrastructure to allay range anxiety. This infrastructure will also support tourism outcomes as climate conscious travellers seek to explore the local regions in ways that provide a low carbon footprint.

However, for many years State Government legislation, through rate prohibition clauses, has compelled councils to grant a discount on council rates to electricity generators by exempting improvements such as electricity generating plant and equipment from capital valuations. The mandatory rating discounts were [appropriately] granted when most electricity generators were in State Government hands. As private providers have entered the energy market, regulatory reform has not kept pace with the changed market conditions.

The result of this regulatory constraint is that when council set annual rates revenue targets for budgeting purposes, in practice, this revenue is not equitably collected across all users of council services, infrastructure and assets. The significant loss of rates revenue from private industry means that, by default, private ratepayers within the community, including families and small businesses, are effectively subsidising these energy producers' rates. These costs would otherwise be borne by the relevant energy provider and form part of their total overhead operating costs, as is the case for other landholder businesses.

A 2020 report prepared for the Legatus Group notes that the competitiveness of South Australian regions in attracting renewable energy developments will not be impacted if the rating policy is amended, particularly if rates levied are comparable with Victoria. Consequently, there would be no negative impact on investment and employment opportunities in South Australian regions as a result of levying appropriate rates on electricity generators.

In contrast, an opportunity exists to provide a financial, economic and social boost to South Australian regions. Rate payments retained within local economies is estimated to provide sufficient stimulus to sustainably create up to an additional 43 permanent full-time equivalent regional jobs, assuming the Victorian regulated formula approach is adopted. Maintaining current rating policy may indeed prevent these additional regional employment opportunities from occurring.

On behalf of members, the LGA advocates for legislative changes to enable a more equitable distribution of rate charges across all landholders, including electricity generators which have benefited significantly from the longstanding rate prohibition clauses.

Digital connectivity

The LGA notes the State Government's announcement in October 2023 in relation to a significant investment in regional mobile infrastructure in the Limestone Coast. This project, and the \$5.5 million State Government commitment to funding Telstra's 'South East SA Project', will be an interesting test model to determine whether this is feasible to roll out to other areas where digital connectivity is not yet adequate to meet global developments in cyber security threats to critical infrastructure. In addition, there is benefit in monitoring developments on this project relating to customer service and digital infrastructure's role in supporting regional economic development.

The LGA notes that some member councils questioned the funding outlay to local councils of 5% of the overall project cost, and whether this type of digital infrastructure development should be a core function of council.

It is noted that digital connectivity is a key driver in creating equitable societies. It is understood that around 18% of South Australian households still do not have access to the internet which risks creating and fostering the digital divide, excluding many people from fully participating in society, education and employment.

Recommendations – Objective 1

4. Noting the recent road infrastructure funding announcements by the Federal Government, State and local government need to act in partnership to advocate for and unlock an equitable portion of this funding benefit for South Australia. This could be achieved through establishing working groups or as part of the work to be undertaken by the Local Government Coordinator through the proposed State-local Government Accord.
5. There is a shared responsibility across all tiers of government in securing sustainable water futures in South Australia. Members viewed securing access to water as one of the key infrastructure needs over the period to be covered by the next Strategy. This will be supported and enabled by integration across strategies, including with the development of both the State Infrastructure Strategy and the Urban Water Strategy when both are finalised.
6. The Strategy needs to acknowledge and address the inherent constraints to economic development and growth for those localities where potentially underfunded CWMS' are the primary system for the treatment and management of wastewater.

7. That the State Government consider annulling the rating prohibition clauses for electricity generators to support a more equitable distribution of rate charges across South Australian ratepayers.
8. Given the State Government investment in the Telstra South East SA Project, it is recommended that this digital connectivity project is closely monitored to determine whether this model has merit to consider for other localities where digital services and connectivity require improvement.

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

Regional planning

Infrastructure and regional planning activities need to be closely aligned to ensure effective delivery of outcomes. As referenced in the Strategy Discussion Paper, the State Planning Commission (SPC) recently concluded a consultation period on the GARP Discussion Paper.

Through a process to engage with members on a response to the discussion paper supporting development of the GARP, the LGA has overwhelmingly confirmed that infrastructure is a critical issue in delivery of development plans and will be a key issue to delivering the growth anticipated for Greater Adelaide. Indeed, the challenges in this space are not in planning per se, but in *infrastructure planning*.

Results from internal consultation with members show that there is a vast array of infrastructure challenges faced in planning for future developments. Of the key issues identified, public transport, road upgrades, water management, public open space and community services (social infrastructure) have been identified as the most challenging aspects that must be better coordinated into the future, to support the growth agenda on offer for the state.

Presently, infrastructure provision occurs in an inconsistent and ad hoc way with a lack of long-term infrastructure planning by service providers. In built-up suburbs where general infill is occurring at high rates, often tripling the number of dwellings in a street, developers make no direct contribution to the provision of infrastructure. Conversely, where a developer is delivering a master planned neighbourhood, they often pay for all the trunk infrastructure to service that development.

The residential growth investigation areas, satellite cities and employment land investigations areas will be crucial to support anticipated growth. However, for these growth areas to be successful there needs to be corresponding infrastructure provision such as an integrated public transport network (preferably rail), freight by-passes, strong linkages to social infrastructure and open space provision.

As the SPC looks to engage in further regional planning for the six regions, from early 2024, similar challenges will be presented for the planning action for each of these regional plans. However, some nuances will need to occur at local levels to address more localised opportunities and challenges.

In developing the Strategy, Infrastructure SA could look to the Victorian model of Precinct Structure Planning for inspiration about how to plan socially and economically connected communities.

Recognising that any interstate and overseas modelling considered always needs to be tailored for the local context here in South Australia.

In relation to cost burden of regional infrastructure planning:

- Rural and regional councils shared concerns that, due to the concentration of Adelaide centred population mass and distance to the more regional areas of South Australia, costs for infrastructure planning and implementation may be disproportionate, or not shared equitably, across the state.

These members highlighted the cost burden to rural and regional ratepayers. Mechanisms are needed to minimise the potential for this inequity to occur and this challenge could be highlighted within the Strategy.

- The concern regarding high financial burden to ratepayers in driving some infrastructure development activities is also shared by some metropolitan councils. For example, those councils in areas that bear a heavy load in current and future planned greenfield development such as Playford, Gawler and Mount Barker.

The LGA also notes that the eight South Australian boards of Regional Development Australia (RDA) are currently undertaking a prioritisation process to identify key infrastructure projects and studies across regional South Australia.

The aim of this process is to help governments and industry focus on progressing vital projects that will make the greatest impact in terms of economic growth and community liveability. It is understood that the prioritised list, once completed, will help inform a range of planning and investment decisions.

Given the unique connected placement and partnership of the RDAs to all levels of government across Australia, their insights into prioritisation of projects will be an important tool to assist in fostering closer ties to deliver infrastructure projects that regions need and want.

Along with tangible objectives and targets that the LGA would like to see articulated through the Strategy, the development of a prioritisation agenda needs to engage with and send a message to the market around key targets to aim for through infrastructure development.

Affordable housing

When considering what actions are needed to support sufficient, fit-for-purpose housing, the Strategy needs to consider an emphasis on design quality and housing design that encourages built form outcomes that are environmentally responsive and consider the long-term running costs for dwellings (not just short-term building costs).

Councils also noted:

- The proliferation of low-quality housing in both greenfield and infill development that purport to be 'affordable housing' belies the ongoing costs to residents in heating and cooling costs in the long term. Educating about and incentivising or supporting comparatively low-cost improvements can make a difference, for example, lighter roofing colours, high quality insulation, solar orientation (where installed) and tree canopy retention.
- Effective measures to improve energy efficiency could be achieved by improving the Planning and Design Code to improve passive design and climate change aspects (and greening) and appropriate resourcing to ensure these are enforced. The introduction of a sustainability rating assessment tool into the planning system would assist in supporting home builders, homeowners and relevant authorities and provide resilient housing for our changing climate.

In addition, it is noted that often a key barrier to growth for many regional towns is access to affordable housing. The LGA is pleased to be working with the Office for Regional Housing (at Renewal SA) on this issue.

The LGA's SAROC commissioned research into the major barriers preventing the development of regional housing. After extensive consultation with developers, the building industry, and councils, the following barriers were identified:

- Trades and material shortages in regional areas – exacerbated by a global pandemic.
- A shortage of qualified planners, engineers, and other experts to assist councils to support development in a liveable manner.
- Affordable access to utility connections, such as power, water and sewage.
- Difficulties in developers and home buyers securing housing finance (including the application of high loan-to-value ratios).
- Absence of economies of scale in many regional housing markets increasing building costs, costs associated with the extension or establishment of essential services infrastructure.
- Insufficient resourcing or expertise in regional councils and with other stakeholders to conduct detailed regional housing supply and demand audits and connect this data with commercial partners capable of delivering residential housing projects.

To address these regional barriers, the LGA is strongly supportive of the pilot program being established by the Office for Regional Housing that will see more than 30 new homes built for essential workers across regional South Australian towns. This will provide benefit to the areas of Mount Gambier, Port Augusta, Ceduna, the Riverland and the Copper Coast.

Houses delivered under the scheme may be sold to private investors under long-term lease arrangements and the construction of these homes is expected to reduce pressure on the private rental market. The learnings generated through the pilot will help the State Government understand how best to scale up and expand this scheme to other regions across the state.

To support this program, the LGA is currently consulting with the Office for Regional Housing on a 'Regional Housing Toolkit' for councils. This toolkit will provide guidance on how to advance housing development proposals for assessment through the Office for Regional Housing and Housing Australia. When finalised, this toolkit will be made publicly available via the [LGA website](#).

Public transport

Noting that the Strategy Discussion Paper articulates that the transport sector represents 29% of South Australia's total emissions, a significant amount feedback was received from members around the need for a more coordinated approach to integrated and mass public transport options for identified major growth areas.

Examples provided by members that articulate this dire need for transport infrastructure provision include:

- The Town of Gawler suggesting transit nodes be embedded at every major greenfield development; pointing to the success of the O-Bahn servicing Golden Grove, and central rail access in Mawson Lakes as demonstrative models that have worked previously.
- In the case of Playford Council, it advises that with the exception of the Riverlea Park Housing Estate residential development, no consideration has been made for public transport in its council, despite being one of the key areas identified for new land supply to support urban growth. This has the effect of creating and maintaining car dependent communities, which will impede the transition of transport to net zero.
- The lack of public transport options in the Rural City of Murray Bridge is a significant barrier to supporting growth into this location. Suitable public transport has been identified by this council as

an immediate and pressing infrastructure need for Murray Bridge to support its recognition under the GARP as a satellite city. Public transport connection from Murray Bridge to Adelaide City through the Adelaide Hills could also open up further parcels of land to support growth and employment opportunities through these locations. The need for transport provision could also expand to the wider region around Murray Bridge, including the locations of Mannum and Taillem Bend.

South Australia, and in particular Adelaide, is unlikely to become less car-dependent in the next three decades without substantial infrastructure investment. While this development should not be fully at the expense of existing infrastructure for those who have limited options but to utilise a car, some councils observed that the Strategy Discussion Paper did not adequately emphasise infrastructure provision for walking, cycling and other active transport, and/or forms of micro-mobility. Particularly for the metropolitan context, and centralised satellite hubs, along with integrated and mass public transport, these aspects will be a key lever in moving towards decarbonisation of transport, as well as making our cities more attractive and liveable.

Health and wellbeing

Local government recognises federal and state governments have a responsibility to provide quality health care and that council's role is limited to local or regional preventative public health activities. Councils have committed to liaising with federal and state governments to maximise the benefits of community preventative health activities offered.²

Research suggests that the social infrastructure of a community shapes its social capital. This refers to the programs (such as volunteer organisations, sports and religious groups and associations), policies (like public transport, housing and education) and physical elements of a community (such as libraries, parks, green spaces and playgrounds) that facilitate bringing people together.

The City of Charles Sturt was recently awarded a Highly Commended Council award at the recent Minister for Health and Wellbeing - Excellence in Public Health Awards for Ngutungka (place of knowledge) library hub. This facility is a vibrant, attractive and modern community hub that will enhance the connections and creativity within their community. It is a next-generation, integrated community place that is recognised as a centre of excellence for literacy, learning, innovation and discovery.

This is one example where local councils play a pivotal role in building community resilience through creating safe, equitable and respectful public environments, such as community centres, sporting clubs, libraries, parks and playgrounds; and providing the opportunities for participation and social connection through programs and services that support residents across all life stages.

Investment in local institutions that bring people together and promote social connection needs to be supported. However, many councils do not have extensive budgets to support action in this area.

The LGA membership notes measures that can reduce the long-term burden to our health system and support health and wellbeing outcomes include:

- Accessible and walkable tree-lined streets. Retention and growth of tree canopy and green 'infrastructure' provide active cooling as our climate changes and encourages being outdoors.
- Prioritisation of infrastructure to support physical activity and opportunities for connection and socialisation at the local community level. This can be achieved through the provision of quality,

² LGA Policy Manual 3.1 Public Health | LGA South Australia

attractive open spaces, as well as recreational, cultural and sporting facilities that are safe and suitable.

- An increase in investment to support councils to upgrade dated community social infrastructure to ensure that these facilities are accessible and inclusive for all ages and abilities.
- An increase in investment in digital infrastructure in regional areas to support telehealth technologies.

Additionally, everyone has the right to feel safe through their travels – whether walking, riding a bike, or catching public transport. Councils are recognising that for women and gender-diverse people, perceptions of safety are particularly important. Feeling unsafe often leads to changes in behaviour – avoiding travelling alone at night, avoiding public transport, or even refraining from going out at all. This cautious behaviour can profoundly hinder access to opportunities.

Local governments around Australia are seeking to enhance safety and inclusion for diverse residents. For example, the New South Wales ‘Safer Cities Program’ has provided evidence backed research to toolkits and other resources to address safety in cities and towns. The City of Marion has also commenced work in this area, through their ‘[Safe Space Project – Report 2022-2026](#)’.

Again, to support positive health and wellbeing outcomes, inspiration could be drawn from the Victorian model of [20-minute neighbourhoods](#) which aims to support safe, accessible and well-connected places with thriving economies.

Childcare

The LGA notes that in October 2022, the State Government established a Royal Commission into Early Childhood Education and Care (the ECEC Royal Commission). Among other findings and recommendations, the [ECEC Royal Commission’s Report](#) again confirmed a widely acknowledged experience in the community regarding the lost economic benefits because parents, in particular women, are unable to participate in the labour market at their preferred level. The report also commented that the Commonwealth’s Child Care Subsidy currently underpins the overall functioning of the early childhood education and care market. While it has successfully increased access in a range of areas, it has been unable to ensure universal availability of early childhood education and care, particularly in the regions.

The [Grattan Institute](#) has also commented that *“Boosting women’s workforce participation is one of the biggest economic opportunities for the Australian Government. And making childcare cheaper is the biggest policy lever available to reduce barriers to women’s workforce participation and support women’s long-term economic security. Making childcare cheaper will also enable more children to receive the benefits of early learning and care.”*

The Strategy needs to acknowledge the role of infrastructure development as part of the approach to improve statewide access to early childhood education and care. Further, that this will have the potential for a significant positive impact across South Australia. This flow on benefit will be multifaceted, from boosting the talent pool for skilled workers to driving economic development and creating social cohesion and connected communities.

An example of where a market failure in this field prompted local government to step in was in Streaky Bay. Through community consultation, council identified within its Strategic Management Plan to support and investigate future childcare facility arrangements. This process resulted in the recent opening of a new facility, which provided jobs to local childcare workers as well as catering to

significant local demand for child care placements to support other working families stay in local employment across a range of technical skills and trades, including healthcare professions.

Education and skills

In ensuring that South Australia is well equipped with the resources to enable growth, productivity and prosperity, access to higher education and training will be important over the next 20 years. Councils noted that higher education and training is concentrated in Adelaide City and metropolitan areas. This is resulting in tertiary education attainment levels to be lagging, even where population of some regions is burgeoning, such as Adelaide Hills, Fleurieu Peninsula and Kangaroo Island.

Supporting educational opportunities for regional and remote students, including Aboriginal and Torres Strait Islander students and those with a Culturally and Linguistically Diverse background, to develop a locally skilled workforce, retain young people in their communities and drive vibrant local economies is a critical priority for these regions.

The Strategy supports the need for opportunities for universities, TAFE and other education facilities to establish regional innovation hubs, specialty research centres, and employment and technology parks in regional centres, especially in areas of current or predicted future high growth. This will provide a range of statewide educational access points to support students in reaching their potential and retain knowledge and skills within the local economy.

Recommendations – Objective 2

9. To be effective, the Strategy needs to be closely aligned to objectives of the GARP. Alignment across the Strategy and regional planning is also required when the SPC commences its proposed program of consultation on regional plans with the six country regions in 2024. Consideration also needs to be given to other long-term infrastructure plans currently under development outlined earlier under 'General Recommendations'.
10. The Strategy needs to support a framework that guides future targeted infrastructure investigation. For example, detailed infrastructure investigation will be required for the identified growth areas in the GARP (and other regions once established), including engagement and collaboration with the growth area councils to ensure that future infrastructure can be delivered in a coordinated and timely way.
11. The Strategy could consider a role for infrastructure delivery schemes, in accordance with the *Planning, Development and Infrastructure Act 2016*, and councils to ensure fair and reasonable developer contributions for greenfield, strategic infill and general infill are being made. With these contributions providing the funding to deliver infrastructure in accordance with the schemes such as larger stormwater pipes, playground equipment etc. As a model, Victoria has established infrastructure contributions that are supported by infrastructure planning to determine developer contributions.
12. The LGA recommends that Infrastructure SA continues to engage with the RDA boards to ensure that the Strategy shows strong alignment with the South Australian RDAs list of prioritised infrastructure projects once determined.
13. To support long term affordable housing solutions, the Strategy needs to provide a greater focus on design quality and housing design that promotes greater emphasis on environmental responsiveness and considers the long-term running costs to residents for dwellings constructed.

14. The Strategy needs to highlight the importance of pilot programs such as the Regional Key Worker Housing Scheme. These programs demonstrate a model for successful State-local government collaborative partnerships and how together, governments can help secure long-term access to new, fit-for-purpose and affordable housing in the regions.
15. Challenges such as skills shortages and absences of economies of scale for some housing markets is a key barrier to economic growth and must be addressed if the Strategy is to succeed over the proposed 20-year term.
16. The Strategy must highlight greater focus on an integrated transport network that promotes and encourages the use of public transport and active/pedestrian modes of travel. It also needs a more considered and coordinated approach to mass transport options for identified major growth areas, for example Murray Bridge and Playford council areas.
17. Recognise in the Strategy that investment in social infrastructure will lead to more equitable and socially cohesive places. This development needs to be targeted to those areas that currently lack integrated social infrastructure planning, for example through a rapid growth trajectory that has created islands of urban development that are not adequately supported by access to social infrastructure.
18. The Strategy needs to acknowledge the role of infrastructure development in improving statewide access to early childhood education and care. The flow on benefits will be multifaceted, from boosting the talent pool for skilled workers to driving economic development and creating social cohesion and connected communities.
19. Support opportunities through the Strategy for regional education hubs to decentralise education and training, with the aim of keeping students connected in their communities and to build capability and capacity in the regions to support the growth agenda.

3. Accessible and inclusive infrastructure supports social inclusion and economic participation.

Regions

The LGA is aware of the recently completed federally commissioned Independent Strategic Review of the Infrastructure Investment Program (IIP Review). As a result of the recommendations of the IIP Review, the Federal Government announced decisions to no longer provide funding at this time to the following projects in South Australia:

- Hahndorf Township Improvements and Access Upgrade
- Main South Road Productivity Package
- Old Belair Road upgrade, Mitcham
- Onkaparinga Valley Road - Tiers Road - Nairne Road Intersection Upgrade
- Truro Bypass

The relevant affected councils are understandably deeply disappointed by this funding loss, with both the Mount Barker District Council and Mid-Murray Council making public statements about how this announcement will impact their local communities. The commentary of these councils highlighted how infrastructure delivery has lasting impacts on local communities, in potentially delivering road safety benefits, improving freight movement outcomes, enhancing tourism and cultural activities, promoting economic growth, and enhancing liveability and social inclusion.

The IIP Review (page 34) noted that maintenance is a broader issue for asset owners, and demand for maintenance and renewal will continue to increase in the face of increased pressures on the road network associated with transition to net zero and impacts of climate change in extreme weather patterns.

The LGA notes that the IIP Review made six recommendations that have direct impact to the local government sector. These are outlined in the Executive Summary to the IIP Review and are numbered as recommendations 2, 7, 8, 9, 10 and 11.

On balance, the LGA supports the recommendations of the review, noting the initial Federal Government response to the IIP Review shows that some of these recommendations have been accepted and further commentary on this has been included earlier in this submission.

However, it is noted that more detail needs to be provided on the extent of adoption of those initiatives that have been announced. Pending this information, the LGA may provide a more nuanced view of likely benefits and challenges to the sector of the proposed changes to infrastructure planning and funding pathways.

If the Federal Government is to adopt more of the IIP Review recommendations, there may be significant changes to a range of processes such as funding access, planning and reporting requirements. The local government sector is a willing partner and intends to play a constructive role in processes that will unlock fair and equitable opportunities for the sector. However, where possible, efforts should be streamlined to ensure best value is realised and as far as practicable, reduce duplication across layers of government.

Regional and remote areas

The Grattan Institute report on local road infrastructure cited above, highlighted what our members have been experiencing in practice when it comes to funding of road maintenance activities:

- Regional and remote Australians already face a high rates burden.
- The under-spend on road maintenance is much greater in regional and remote areas.
- Regional and remote councils manage vast road networks with limited scope to raise revenue.

The regional requirements are nuanced, and must include capability, capacity and funding for local road infrastructure maintenance. For example, the Yorke Peninsula Council has previously called for increased federal funding as this is essential to the safety and productivity of local roads. With nearly 4000 kilometres of roads (not including Federal and State Government-owned roads) situated within the district, Yorke Peninsula Council understands how vital these roads are to the community. In the 2022-23, they had almost 530,000 visitors, which again highlights the importance of a smooth and safe drive in the region. This investment is not just about a smoother drive, it is an investment in economic health, safety, and overall wellbeing.

In addition to road asset maintenance activities, our rural and regional membership also report inadequate local resourcing to maintain and improve local building asset infrastructure, for example buildings and sites of historic or cultural importance. Noting that in many cases, these facilities provide the social infrastructure that regional townships need to ensure liveable and connected communities.

Along with costs of everyday business as usual works, and in many cases a low-rate base, regional and remote areas are inherently challenged in delivering a full range of the asset maintenance and renewal functions without access to funding and grant schemes that are targeted to these localities. In

many cases, this means that tough decisions are having to be made in terms of prioritisation agendas for tight budgets.

Closing the Gap

Local government acknowledges and recognises Aboriginal and Torres Strait Islander people as the First Peoples of Australia and respects their culture and practices. Councils, along with federal and state governments need to make an ongoing commitment to working together to provide services to support Aboriginal and Torres Strait Islander communities.³

The LGA supports action in Closing the Gap and notes the commentary in the Strategy Discussion Paper relating to community infrastructure targets and essential service provision aligned with achieving Closing the Gap targets. The LGA also cites relevant commentary within this submission that address matters relating to Closing the Gap targets across the Strategy's proposed objectives.

Governments at all tiers need to seek ways to better understand the services and infrastructure that will support Aboriginal and Torres Strait Islander people and communities in culturally safe and appropriate ways. This includes provisioning for education and community capacity building, as well as acknowledging the need to extend beyond infrastructure provision and delivery. For example, facilitating access to land can support building of sustainable business models (e.g. cultural and tourism perspectives) or social entities supporting knowledge sharing opportunities (e.g. community and social inclusion perspectives).

Recommendations – Objective 3

20. Note the recommendations made by the IIP Review, particularly those that relate to the local government sector. The LGA provisionally supports these recommendations noting the Federal Government has already announced acceptance of some of the IIP Review recommendations. The LGA notes that some of the recommendations would require strong partnerships between State and local government to be able to deliver these effectively and would welcome further opportunity for consultation on the further adoption of any of the IIP Review recommendations. The Strategy should seek to reinforce the fostering of strong partnerships regardless of whether the Federal Government intends to accept more of the IIP Review recommendations.
21. Note the challenges faced by rural and remote communities in providing adequate infrastructure maintenance and renewal. The Strategy needs to highlight a need for equitable funding access to ensure these communities remain connected to the rest of the state.
22. The local government sector would welcome opportunities to work with the State Government on achieving Closing the Gap targets and supports the delivery of state infrastructure that is culturally safe and appropriate and builds the capacity and capability of Aboriginal communities. This can be achieved by providing funding opportunities to support councils in upgrading and renewing infrastructure with a cultural lens, in partnership with local Aboriginal organisations.

³ LGA Policy Manual 3.4.7 Aboriginal and Torres Strait Islander People

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

Decarbonisation

The ability of governments and private organisations to account for embodied carbon is a major gap in transitioning to a net zero future, because we do not have a clear understanding of the carbon emissions associated with the use of specific products and processes. Local governments are developing carbon neutral commitments and plans and are interested in reducing exposure through transitioning to low-carbon alternatives. High-carbon products such as bitumen, cement and steel are a major priority for the sector, so better understanding their embodied carbon and how emissions could be reduced by transition to green steel is critical.

The local government sector is aware that the State Government is focusing on the development of local capacity to produce green steel, which is an encouraging development. We need to ensure that this capacity is directed at domestic needs to meet our local infrastructure demands before excess is exported.

The LGA secretariat notes that according to the export chart shown on page 12 of the Strategy Discussion Paper, fossil fuels (coal, oil and gas) are not listed and query whether this may be included in the 14% 'confidential items'. Greater transparency of the amount of South Australian fossil fuels that are extracted and exported will enable better understanding of true carbon neutrality status, by taking into consideration fossil fuels that will be burnt elsewhere.

The Strategy should be clear in prioritising carbon reduction efforts in the following order:

- a) Avoid emissions through not undertaking unnecessary or duplicate projects.
- b) Minimise emissions through project design, material selection and process.
- c) Offset carbon emissions through local projects.
- d) Offset carbon through projects not in South Australia.
- e) Carbon capture and storage.

It is essential that carbon capture and storage be the last resort to achieve net zero emissions.

South Australia has achieved impressive levels of renewable energy generation, in part due to high uptake of domestic solar panels. The LGA supports the continued rollout of domestic and small- and large-scale commercial capacity.

Local government has a role in educating the community regarding domestic solar opportunities, and the LGA is currently exploring the opportunity to develop localised virtual power plants that aim to support delivery and assist with managing distributed energy networks. For example, the City of Mitcham has established a 'Community Renewables' program as a way to harness renewable energy from the local community, reducing electricity costs and supporting grid stability to reduce incidence of blackouts.

This is a new area for local government and sharing of experiences, establishment of clear governance and procurement procedures will be important to ensure all due diligence is met and fully understood by the local government sector.

Circular economy

Transitioning towards a more circular economy is necessary for South Australia to achieve its net zero emission targets. At the LGA Ordinary General Meeting (OGM) on 14 April 2023 (item 8.2), the LGA member councils voted to formally recognised the climate crisis and declared a Climate and Biodiversity Emergency.

Councils acknowledge that urgent, ambitious and immediate action is required at all levels of government to address the climate crisis by reducing emissions. Further, they are committed to advancing waste management practices to provide high quality, innovative and sustainable waste management services that comply with environment protection requirements and support the transition towards a more circular economy.

To achieve national carbon emissions targets, South Australia needs to reduce the amount of material and products consumed and progress its transition towards a more circular economy.

It is understood that 45% of global Green House Gas (GHG) emissions can be attributed to 'products'; the production of materials, products, and food (including the management of land). The remaining 55% of global GHG emissions are attributed to energy systems and energy for buildings and transportation.

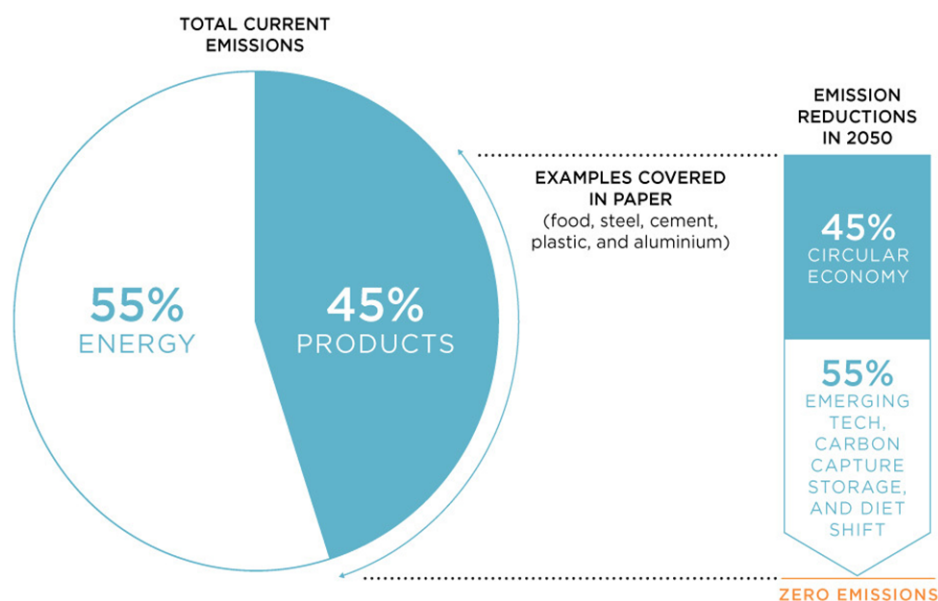


Figure 2: Ellen MacArthur Foundation, "Completing the Picture: How the Circular Economy Tackles Climate Change" (2021)

Figure 2 shows that in addition to reducing emissions from energy systems, meeting climate targets will require South Australia to tackle emissions relating to 'products' to address the remaining 45%.

Transitioning towards a more circular economy is a key action to tackle emissions relating to 'products'.

Transitioning towards a more circular economy is more than just improving waste management and recycling processes (although these are an integral part). Achievement of a circular economy requires a fundamental change in material consumption.

The foundations of a circular economy include avoiding creating waste, maximising material usage over multiple lifetimes and extending the use of materials (refer Figure 3). The '10 Rs of the Circular

Economy' represent various strategies that can be employed to reduce product generation, noting that recycle and recovery are at the end of the lifecycle of the material/product process.

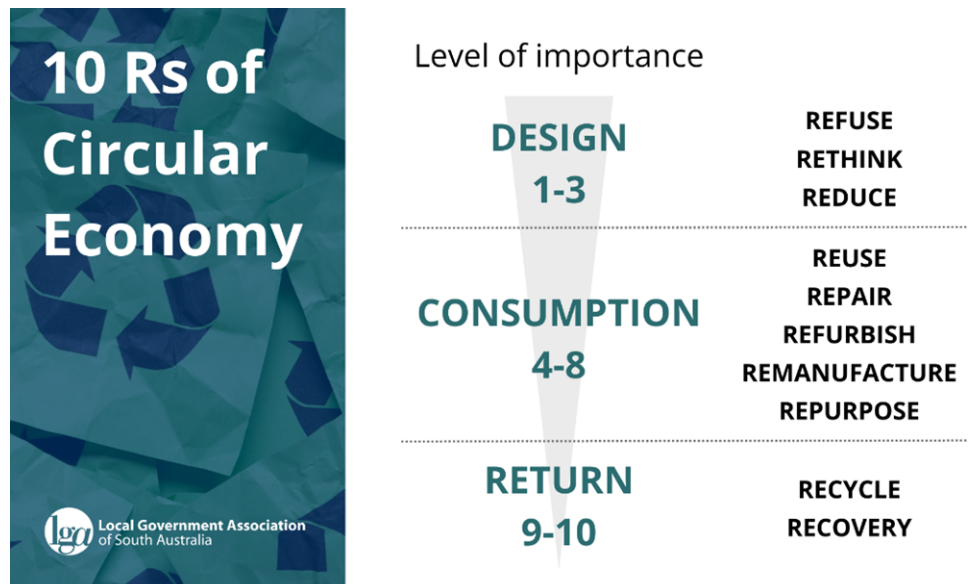


Figure 3: 10 Rs of the Circular Economy

A change in the way we approach infrastructure design is required. Better utilisation of existing materials, ensuring materials are reusable and can be recycled and recovered in a way that produces high quality secondary raw materials is needed to transition towards a more circular economy. This requires industry and project developers to consider end-of life options for materials at the outset of a project as well as increased coordination and project planning.

This model aligns with the international shift towards product stewardship principles and current Federal Government proposals in relation to end-of-life management of large-scale solar photo-voltaic systems. The Federal Department of Climate Change, Energy, the Environment and Water recently consulted on their discussion paper for the regulation of these products.

As the owners and operators of major waste and recycling infrastructure across South Australia, local government is left with the responsibility of the 'end-of-life' options for a wide variety of materials which can be low-value, contaminated and/or hazardous. The costs, financial and otherwise, of this material management is left with councils, and by extension ratepayers, not those who benefited from the material use during its lifetime, nor those responsible for the waste generation.

Australia's waste, recycling and resource recovery sector has experienced significant shifts beginning with the China National Sword policy introduced in 2018 and the introduction of Australia's waste export bans through the *Recycling and Waste Reduction Act 2020* (Cth). This has resulted in sizable fluctuations in the commodity markets for recyclate. Challenges establishing onshore market capacity for recycling and reprocessing has further compounded these challenges. It is understood that to increase the market demand for secondary raw materials that are being produced, the quality and recyclability of material being utilised in the first place needs to be improved.

These challenges have substantially increased councils' costs associated with waste and recycling.

To support the development of onshore commodity markets for secondary raw materials being, industry needs to consider design and consumption principles at the outset of projects to avoid waste generation and enable circularity of materials. In addition, new infrastructure should prioritise reuse of materials and use of recyclate (where appropriate) in projects to support end market development of materials.

Achieving economies of scale for some waste material streams is a challenge for South Australia. Investment in strategically located infrastructure and processing facilities that enable recovery of materials is necessary for material circularity and to ensure the viability of recycling.

Recommendations – Objective 4

23. The LGA notes the significant gains South Australia has already made by increasing renewable energy generation, these efforts are supported by members. To reach net zero, carbon accounting, including embodied carbon, must be standardised and clarified. Further, carbon reduction efforts need to be prioritised in such a way that carbon capture and storage are considered a last resort.

24. The inherent challenges and cost to the local government sector in managing existing end-of-life activities for materials and products must be acknowledged. Transitioning to a true circular economy will require partnership at all levels of government to:

- Look for ways to stabilise the recyclate commodity market, such as by regulatory methods, or assisting in sourcing new and emerging markets for this product.
- Work to improve the life-cycle management of materials and products, increasing their quality and desirability for further uses.
- Embed the circular economy concept into infrastructure planning as a fundamental aspect of design, using incentives or other policy levers to drive this shift.
- Invest in strategically located infrastructure and processing facilities to enable sufficient recovery of materials for circularity and to ensure the viability of recycling.

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

Planned resilience

In making South Australia prosperous, liveable and adaptable means planning our resilience in the face of the climate change 'megatrend'. As identified in the GARP, the LGA shows strong support for the guiding outcome to provide greener environments. However, changes to current policies will need to be made to ensure the outcomes can be achieved in current and proposed residential densities in built-up areas. Aligning planning policy with these goals may be difficult, as policies favouring fast-tracking greenfield developments may contradict the intent of creating a greener environment. There needs to be stronger overall strategy in relation to protecting existing vegetation and tree canopy, as well as recognising that tree canopy targets cannot be met without trees on private land.

Climate resilience is an extremely important outcome and one that should be given significant weight in both the Strategy and the GARP. A focus on climate mapping that would, amongst other things, identify areas impacted by rising sea level and ensure housing built today is designed to accommodate climate change and the forecast environment in 2050 and beyond.

In planning for a more climate resilient future, partnerships must be fostered between governments and communities to look for ways to embed the traditional ecological knowledge of Australia's First Nations people. This must be done in a culturally safe way, ensuring consultation and inclusion is maintained from conception to decision making. The Strategy could look towards the guidance of South Australia's First Nations Voice to Parliament once established, to seek meaningful ways to set actionable policies to support the utilisation of Aboriginal and Torres Strait Islander land management processes that can enhance resilience of the Australian environment.

It is noted that the Strategy will span a period of expected changes to the South Australia's climate, including that it is becoming hotter and drier, and experiencing extreme events like heatwaves, bushfires and flooding, which are increasing in frequency and intensity. Infrastructure in South Australia must increase its resilience to able to withstand these changes over time.

In addition, the LGA has been working with Green Adelaide to support the development of its Urban Greening Strategy and eagerly awaits its release early in 2024. The LGA is specifically concerned about the impact on urban greening which is posed by the activities of SA Power Networks (SAPN).

At the LGA Annual General Meeting (AGM) on 26 October 2023 (item 8.1), the LGA member councils voted to support the following item of business:

"...coordination and advocacy to reconcile the Electricity Regulations, which suppress canopy coverage, with state government targets set to increase canopy coverage."

To progress this matter, the LGA has written to the Hon Tom Koutsantonis MP, Minister for Energy and Mining, to advocate for a review of the Electricity (Principles of Vegetation Clearance) Regulations 2021 (the EPVC Regulations) to address the following matters:

- The barriers imposed by the EPVC Regulations to the state achieving its urban greening agenda.
- The need to accommodate existing trees.
- The need to review the list of allowed and permitted species (which form part of the EPVC Regulations) to facilitate the urban tree canopy.
- The need for the Office of the Technical Regulator to take a stronger leadership role in administering the Regulations, rather than deferring to SAPN.

Along with members, the LGA is committed to continuing to work with SAPN to resolve issues related to the existing conflict between SAPN needs to preserve vital power networks and the state's urban greening agenda.

However, electricity infrastructure is one of the most suppressive influences on growing tree canopy on public land due to the requirements imposed by the EPVC Regulations. In particular overhead powerlines, and allowed and permitted species lists are significant impediments to councils achieving adequate canopy cover to build capacity and resilience in our communities as the climate changes.

Food security

When consulting on the response to the GARP discussion paper, the LGA received feedback from members about food production areas and food protection/security. The Environment and Food Production Area (EFPA) is intended to protect land from urban development. Interestingly the EFPA does not capture all of the land that has been identified by the Department of Primary Industry and Regions as primary production priority areas (refer Figure 4). This is also the case for areas in The Barossa Council, Adelaide Hills Council, Light Regional Council and the City of Onkaparinga.

The protection of primary producing lands and food security serve multiple purposes including:

- Achieving the aspirations of living locally.
- Ensuring that there will be food security and adequate food supply to support a growing population.
- Supporting the state's net zero emissions target by growing and using food within the state for example, reducing emissions due to reduced food miles.

The Strategy and GARP need to show an alignment that supports the preservation of land that is best suited to primary production activities within the changing climate and the forecast environment in 2050 and beyond.

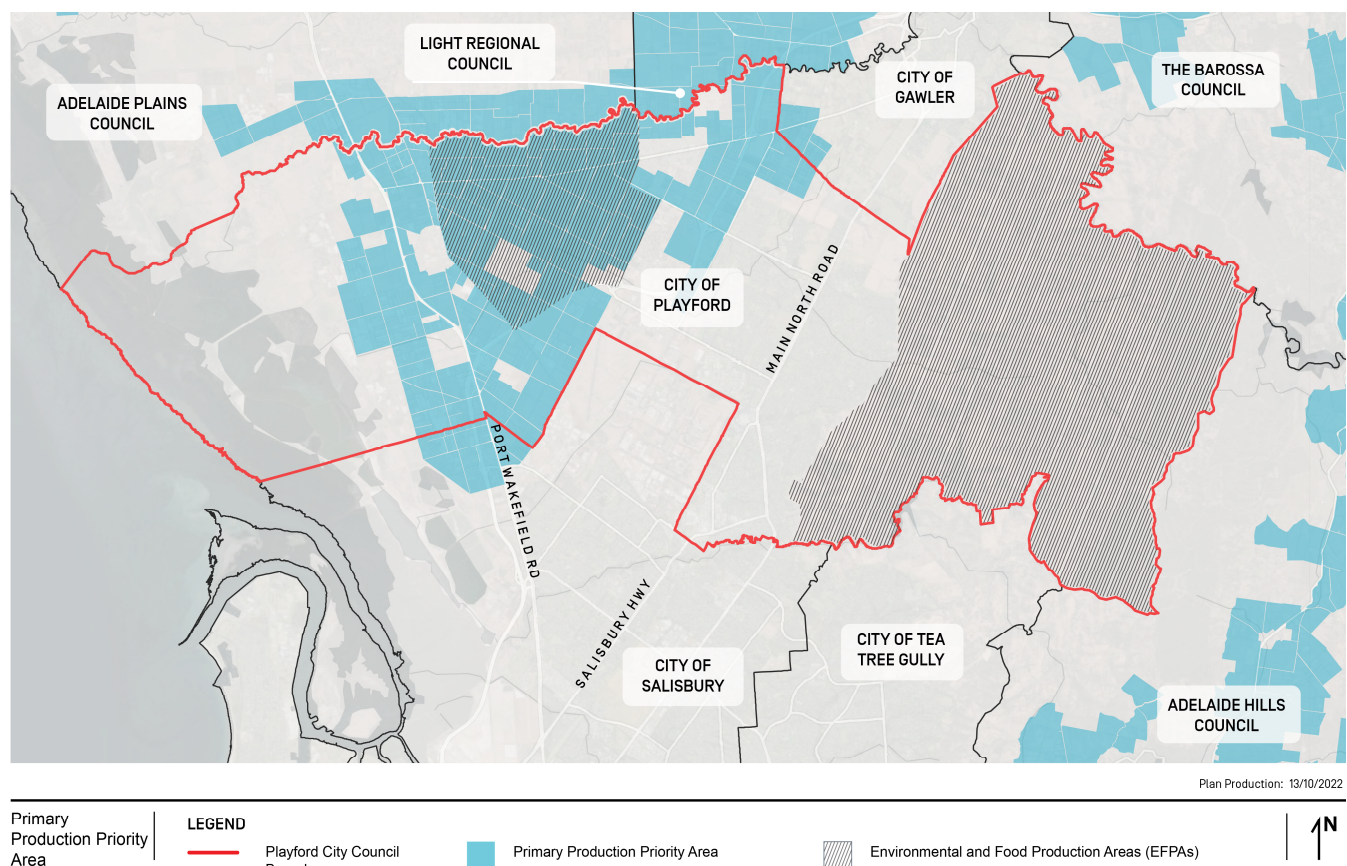


Figure 4: Environment and Food Production Area and Primary Production Priority Areas in the City of Playford

Recommendations – Objective 5

25. Available climate data should be considered to minimise the vulnerability of future development from climate change. This could be achieved through mapping current climate data and identifying areas that are likely to experience increased risk of hazards. This should also be considered in the investigation of growth areas. For example, identifying areas likely to be impacted by sea level rise over this century, such as the Riverlea Park Housing Estate which is four metres above the current sea level and will need to manage sea level rise that is already impacting underground water, forcing it to bubble up to the surface.
26. The Strategy could look towards the guidance of South Australia's First Nations Voice to Parliament once established, to seek meaningful ways to set actionable policies to support the utilisation of

Aboriginal and Torres Strait Islander land management processes that can enhance resilience of the Australian environment.

27. The Strategy could highlight the inherent conflict between the urban greening agenda, which will help us mitigate the significant effects of climate change, and the management and control of vital energy transmission infrastructure in South Australia.
28. The Strategy should note and plan for protection of lands to ensure adequate suitable provisioning for food production areas and food protection/security.

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

Workforce and labour

As identified earlier in this submission under ‘affordable housing’, the LGA’s SAROC commissioned research into the major barriers preventing the development of regional housing. One of the biggest barriers is the current and worsening shortage of skilled workers in a range of key areas. If this is not alleviated, South Australia will be prevented from realising the full potential of the proposed broad economic and growth agenda outlined by the State Government.

When this information is read in conjunction with other commentary under ‘education and skills’, it is clear there is a desire at the local government level to unlock decentralised training and education centres and hubs to encourage skills development and worker retention in regions once workers are adequately trained.

There is significant time required for investing in upskilling the next generation of the workforce. Depending on the field, in some cases this training could take years to mature, from the inception of curriculum to the first graduates coming into the workforce. Therefore, to ensure that existing skills shortages are not exacerbated, the planning work on upskilling these workers needs to start now and be prioritised.

In addition, consideration could be given to more dynamic education and training programs such as apprenticeships for those fields (unlike traditional trades such as plumbing, electrical and carpentry) where this type of education has not previously been available. For example, in urban planning roles where there is currently an acute shortage of workers.

Sustainable procurement

The local government sector acknowledges that all purchasing practices have the ability to deliver outcomes beyond the simple delivery of goods, services and works. Sustainable procurement is an approach to assessing ‘total cost’ of purchasing, including economic, social and environmental costs (‘triple bottom line’). Traditionally, economic cost has been the key consideration in procurement, but this is evolving towards a ‘triple bottom line’ approach as procurement practices increase in sophistication.

With annual expenditure of nearly \$1 billion on goods, services and works, the local government sector in South Australia has a key role in delivering sustainability outcomes and objectives.

Noting that many environmental impacts occur before a good or service is procured, for example, resource extraction, design development, manufacturing, transportation and storage. As large purchasing bodies, State and local government can minimise the environmental impacts of these procurements by influencing supply market practices.

Combined with the commentary outlined under the ‘circular economy’ heading above, prioritising procurement and use of goods and materials (where practicable including recycle) that are from sustainable sources will be integral in achieving the economic growth agenda that the State Government seeks. This will be supported within environmental sustainability parameters that the community increasingly expects governments to strive for and be market leaders in.

Recommendations – Objective 6

29. The Strategy needs to prioritise the importance of upskilling the workforce and skilled worker education and training which will unlock the potential for further economic growth in South Australia. In addition to training, consideration needs to be given to incentives and other benefits to attract and retain workers in areas of current and proposed high growth. This could be combined with investigating decentralising education and training centres to offer greater statewide education choices.
30. The Strategy needs to highlight the role of State and local governments in supporting best practice principles in relation to sustainable procurement.

Conclusion

As outlined in this submission to the Strategy Discussion Paper, the LGA recommends that the State Government consider ways to move towards greater integration on the development of key statewide strategies.

In addition, strong partnerships between State and local government will unlock potential to deliver meaningful outcomes, lower the costs for all governments, reduce duplication in building public infrastructure, enable better use of existing assets, and provide consistent and clear mechanisms for industry on funding of infrastructure projects.

Local government’s vision is for effective partnerships in infrastructure planning and funding that create productive, liveable and safe South Australian communities. To this end, the LGA welcomes further opportunities for productive and meaningful engagement with Infrastructure SA, and other relevant State Government bodies, as they work towards the development and delivery of the Strategy into 2024.

148 Frome St
Adelaide SA 5000

GPO Box 2693
Adelaide SA 5001

T (08) 8224 2000

E lgasa@lga.sa.gov.au

www.lga.sa.gov.au



10 November 2023

Mr Anthony F Shepherd, AO
Chair of Infrastructure SA

c/o: infrastructure@sa.gov.au

Premier's Climate
Change Council

Level 6, 81-95 Waymouth
Street, Adelaide
SA 5000

GPO Box 1047
Adelaide SA 5001

Ph: +61 8 463 4461

Email: pccc@sa.gov.au

Dear Mr Shepherd,

Thank you for the opportunity to provide input into South Australia's next 20-year State Infrastructure Strategy (the Strategy).

The Premier's Climate Change Council (the Council) is established under *South Australia's Climate Change and Greenhouse Emissions Reduction Act 2007*. The Council is the State Government's key advisory body on matters associated with reducing greenhouse gas emissions and adapting to climate change.

The Council commends Infrastructure SA on the release of the South Australian 20-Year State Infrastructure Strategy Discussion Paper.

In particular, we applaud the identification of climate change mitigation and adaptation as a megatrend impacting infrastructure in South Australia. The scientific advice is that the need to act now is becoming more and more pressing, particularly as global emissions are yet to be brought under control.

The UN Intergovernmental Panel on Climate Change states that to limit average warming to 1.5°C, global greenhouse gas emissions must peak before 2025 at the latest and decline 43% by 2030.

The Council notes that the 20-year State Infrastructure Strategy timeline aligns with the critical period for reducing emissions to net zero by 2050. It is imperative that all planning undertaken now strives to support net zero development. This is the time period in which we must act decisively to mitigate climate change, or it will simply be too late.

The Council is very supportive of the inclusion of the objective: 'Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities' in the Strategy.

The Council suggest that there is also an opportunity to set an objective for the strategy to ensure infrastructure is resilient to the impacts of climate change.

The Council welcomes opportunities for further engagement with Infrastructure SA moving forward.

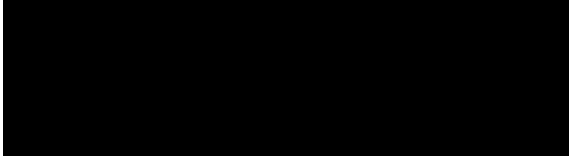
Please contact the Premier's Climate Change Council Executive Officer, via pccc@sa.gov.au if you have any queries or wish to discuss this matter further.



Government of South Australia

Premier's Climate Change Council

Yours sincerely



Martin Haese

Chair

Premier's Climate Change Council, South Australia



An Australian Government Initiative



YORKE AND MID NORTH

20 year State Infrastructure Strategy

Yorke and Mid North submission

November 2023

Regional Development Australia Yorke and Mid North (RDA Yorke and Mid North) is an incorporated association funded by Federal, State and local government. Our purpose goal is to facilitate growth in economic prosperity and improve liveability in our region. We do this by working in partnership with our stakeholders, which include local communities, businesses and industry groups, as well as local, State and Federal governments.

Responses to consultation questions

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

Opportunities for economic growth should be prioritised based on areas of comparative advantage (or emerging areas where South Australia can readily establish a competitive advantage), creating greater efficiencies and greater capabilities in downstream value chains.

Comparative advantage can be seen through two lenses in this regard – what we do and how we do it. In terms of what we do (in Yorke and Mid North region specifically), comparative advantage involves leveraging our environment and location. Specific opportunities include achieving greater productivity in broadacre cropping, expanding intensive livestock production (and processing), sustained and accelerated growth in domestic tourism, and greater population growth driven by relative affordability and compelling lifestyle propositions.

Similarly, our region (along with the rest of the State) has comparative advantage in a range of key inputs to production across sectors which support significant economic growth opportunities. Renewable energy underpinning further value adding to mineral commodities (magnetite, copper and critical minerals) and agricultural commodities represent key priorities.

In terms of how we do things, relatively tight labour markets and ongoing (likely growing) competition for skilled workers will necessitate greater use of modular and pre-fabricated construction techniques in both infrastructure construction and growth sectors of the economy (i.e. defence and mining).

Supply chains feeding into these sectors and others will also need to measure and certify the emissions created by these supply chains, with firms that are able to measure and reduce the intensity of emissions likely to perform better as clients and end-users continue to factor these considerations into the buying (and financing) decisions.

Enabling firms who are competing in supply chains where emissions monitoring and reduction are becoming more important will be crucial in supporting economic growth going forwards.

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

Much of South Australia's exports (and the vast majority of the Yorke and Mid North's) rely on sea freight to reach destination markets; as such, ports and port precincts (including Port Pirie, Wallaroo, Ardrossan and prospectively Myponie Point) represent a significant enabler and constraint to future growth.

The primary consideration in addressing the constraints impacting these ports relate to access issues caused by:

- Inappropriately configured road and rail networks into these ports;
- Restrictive land use zoning (restricting operations and frustrating complementary development), and;
- Inadequate maintenance of marine infrastructure (including the lack of properly maintained swing basins and wharf infrastructure).

Further consideration also needs to be had regarding how to activate these ports as genuine precincts – either for value adding activities conducted at ports, or as mixed-use precincts to service local residents and the visitor economy.

Alongside ports, road networks are critical in enabling local industry and logistics, with significant challenges existing to the effective functioning of these networks. Key priorities for improving road networks in the Yorke and Mid North include:

- Major freight routes – the finalization of the business case and subsequent funding for the duplication of the Augusta Highway through to Port Augusta is a key priority;
- Connecting freight routes between activity centres and logistics and industry hubs. Key examples of routes requiring attention include:
 - o Abattoirs Road, Port Pirie;
 - o Upper Yorke Road, Bute;
 - o Saints Station Road, Bowmans;
 - o Pareora Road, Pt Wakefield, and;
- Local roads servicing 'last mile' connections to freight routes. Whilst many are in-part eligible for funding via recurrent annual funding rounds, the costs associated with upgrading roads (particularly to a level suitable for freight) is often beyond small regional councils' given their extensive road networks and limited rate bases. More consistent funding programs, preferably pegged to cost escalation factors for roads, will be crucial in enabling improvements in the capacity and efficiency of these local road networks.

Rail networks are relatively limited in the Yorke and Mid North (outside ARTC lines); however, these networks will become increasingly important as development of various mineral deposits in the Braemar province progress and freight emissions come under increasing scrutiny. Improved connectivity between the Braemar province and paths to market (and potential beneficiation) for these magnetite deposits will be crucial to realizing the vision set out in the State Government's Green Steel Strategy currently under development.

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

Improving the diversity and reliability of water supply sources is absolutely critical to population, industry and irrigation going forwards as climate change places further pressure on our surface water systems and the River Murray in particular.

Key priorities in this regard include:

- Delivering the Northern Water Supply project (enable the growth of industries crucial to achieving net-zero goals, including the emerging green energy and hydrogen industries;
- Supporting relevant agencies to produce, collate and share better information on ground water and surface flows to better plan water resources;
- Making greater use of treated water from stormwater and wastewater systems. Various studies are underway investigating the feasibility of connecting the Bolivar Wastewater Treatment Plant to increase the volume of irrigation water available to the Barossa, Eden and Clare Valleys. This concept (and critically the inclusion of all three regions) is of crucial importance to securing the long-term future of the premium wine industry in South Australia.
 - o Local government should be supported to investigate and develop more efficient and productive systems for repurposing water from community wastewater management schemes (CWMS) to expand and increase the productive use of these assets.

Alongside improved resilience and diversity in supply, approaches to developing potable water and sewerage networks delivery need to enable growth is the other critical change needed with respect to water infrastructure. Network planning and delivery needs to plan for and enable growth, rather than respond to it. Network constraints are likely to impact the Copper Coast, Port Pirie and Wakefield local government areas within the period covered by the next infrastructure strategy, with the performance of the network in isolated sections (e.g. Ardrossan (capacity) and Orroroo (quality)) already a cause for concern at present.

For industry development, priority projects requiring additional water in the short-to-medium term include:

- Hillside Mine (via Ardrossan);
- Jamestown Industrial Estate (Jamestown);
- Port Pirie hydrogen and greening projects, and;
- Braemar province (iron ore mines).

While there is reasonable information regarding resources available within prescribed water areas, access to detailed information outside prescribed water areas on water volumes and quality would assist the region in more comprehensive planning in conjunction with local authorities, regulatory bodies and industry.

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

The Yorke and Mid North region has significant volumes of renewable generation capacity, with further capacity to grow by virtue of existing substations with spare capacity (e.g. Brinkworth and several on the Yorke Peninsula) and strong wind and solar loads. Future growth will require careful planning of transmission infrastructure to link with existing networks and load centres, with effective planning (across projects) and stakeholder engagement critical to secure the required easements with minimum costs and disruption to other land users.

The benefits of renewable energy and related networks can also be maximized through identifying appropriate areas for rezoning land adjacent to substations and renewable projects to accommodate demand loads, creating opportunities for investment and employment in projects which can minimize connection and transmission costs by connecting into generation projects and their enabling infrastructure.

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

Extensive work has been undertaken in the Yorke and Mid North region during the past ten years regarding connectivity, with our most recent (March 2023) survey identifying additional black spots across the region, and sites where existing black spots have either changed or become larger. Currently the region has over 250 identified mobile black spots.

Network constraints stemming from the geography and topography of many areas are a persistent challenge; key areas in this regard include the Yorke Valley and southern Yorke Peninsula, southern sections of the Clare and Gilbert Valleys, sections of the Wakefield Plains and within the Southern Flinders Ranges.

Our recent consultation on connectivity highlighted a number of adverse impacts on businesses due to poor connectivity including:

- Losses in productivity through:
 - o Not being able to monitor livestock remotely;
 - o Reliability issues affecting those working remotely, and;
- Losses in market opportunities through:
 - o Primary producers not being able to confirm current real-time pricing, or action trades;
 - o Candidates not accepting job offers due to concerns regarding remote work not being feasible
 - o Issues deploying new technology to support visitor experiences and tourism products (e.g. location-triggered interpretive technologies and augmented reality apps)
 - o Poor visitor experience (or concerns regarding the quality of visitor experiences due to limited digital connectivity) deterring certain segments of the visitor economy.

In relation to digital literacy, older cohorts (i.e. those aged 65 and older) still have lower levels of digital literacy on average, despite many having suitable devices. Varying levels of confidence of this cohort in utilising digital technology, in addition to cyber security as a concern impacts further uptake.

Small group workshops and training sessions within rural townships are having positive results, however do not capture all older members of the community. Digital inclusiveness and accessibility remain persistent challenges for many households due to affordability of both services and network-compatible devices. Technical obsolescence (via networks being decommissioned) presents a key concern for those internet users still* relying on 3G devices and those who may not have the digital literacy or familiarity to understand the compatibility of their devices.

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

Value adding to existing agriculture – processing broadacre, viticulture and expansion of intensive livestock production. Types of activities includes additional regional processing facilities (and related feasibility studies), including for wheat, barley, lentils and other legumes.

Greater access to suitable irrigation water, in particular a collective (preferably climate independent) solution for the Clare, Eden and Barossa Valleys would greatly increase the security of existing agricultural industries while also supporting new growth opportunities. Prescribed water allocation plans are part of the water supply factors for these areas, however additional volumes will need to secure activity (and growth potential) in these areas into the future given the impacts of climate change.

Improved logistics (in terms of infrastructure to support larger numbers of segregations between grades and varieties) would support new marketing opportunities for cereals, pulses and other broadacre crops. This would allow farmers to realise higher prices for crops being grown at present, as well as creating options for growing and marketing new varieties.

The potential offered by defined infrastructure corridors servicing key demand loads is significant, with the Braemar province being one of the state's most significant undeveloped resource regions. Delivering common infrastructure via these defined infrastructure corridors will significantly improve the fundability of projects in these regions, by building economies of scale and derisking investment in infrastructure and mining projects alike.

For renewable energy generation, further value can be created by ensuring zoning of land adjacent to generation projects can accommodate the activities of large energy users who may be enticed to establish next to generation projects to minimize infrastructure and transmission costs. Similarly, investment in enabling infrastructure required to co-located iron ore and hydrogen production could attract significant investment in value-adding steel production industries.

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

Capacity planning for water infrastructure (both potable, industrial and sewerage networks) is a significant challenge at present, with augmentation and extension projects currently being planned in response to growth, rather than ahead of. This, coupled with the regulatory framework and investment rules under which SA Water currently operates, represents a significant challenge for supporting growth in regional areas.

Earlier planning activities to ensure networks can be developed to accommodate growth, as well as greater flexibility in funding models to enable staged delivery (and funding) would be of significant benefit to regional development in South Australia.

More generally (across all types of infrastructure), planning frameworks that encapsulate “trigger thresholds” would be invaluable in supporting councils, regional development bodies, state and federal governments to have integrated and prioritized forward focused plans enabling financing and other supportive resourcing to be scheduled and preparedness.

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

The designation of key regional growth areas would be invaluable in building scale to attract developers, investors and services. The designation of these key growth areas would need to draw on a range of key considerations including the capacity of existing (or ability to service) infrastructure networks and services to accommodate growth efficiently.

Increasing both the supply and diversity of stock through social and affordable housing programs (i.e. one and two-bedroom units and semi-detached dwellings) represents a critical opportunity for much of the Yorke and Mid North – particularly in those areas with growing employment opportunities and access to existing services.

This type of development could be funded, at least in part, by the disposal of surplus or ageing stock which may no longer be fit for purpose within social housing portfolios, creating opportunities for first home buyers and investment in improvements in existing housing stocks as well as a funding source to offset the cost of new build programs.

Other innovative approaches to housing including for temporary workforces could be considered, for example, transportable options, tiny homes on wheels, however with key attention to the integration of the workforce / temporary workforce community into the general community through specific integration strategies,.

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

Public transport services are extremely limited in the Yorke and Mid North region. There are private bus and transportation companies that provide services to connect some townships with each other and to metropolitan Adelaide. Some councils in the region also financially support community transport operators that provide low cost transportation for individuals to medical appointments, and social inclusion events. Some community members are eligible for subsidized or reimbursements for medical appointments requiring travel to Adelaide.

Connectivity between regional centres and Adelaide, and connecting regional employment centres (i.e. Port Wakefield, Kadina, Jamestown, Port Pirie) should also be considered. Accessibility and affordability also need to be considered in this context. Many people who experiencing disadvantage whilst seeking to (re)enter the workforce can be further disadvantaged by not having their own vehicle and further hampered with no access to public transport.

Further subsidized options could be provided through existing regional transportation organisations, particularly for disadvantaged community members.

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

Clinical service planning for specialist health services servicing older populations needs to consider shifting populations and changing demographics. Local government areas on the Yorke Peninsula have relatively high migration and population growth rates – largely focused in the 50+ age bracket. Planning relevant specialist services to be delivered in situ, along with stronger primary health functions, will enable more efficient service delivery models into the future.

Likewise, strong telehealth capabilities will enable greater access to those specialist services which cannot be delivered in-region efficiently. For these telehealth services to be feasible, infrastructure in regional communities must be widely available, and staff appropriately trained to use and maintain these assets, to ensure patients and staff can rely on telehealth services.

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

Universal access to early childhood education for three-year olds is an important policy principle, however the manner and timing of the implementation of State Government's commitment to this principle is critical. Extensive and detailed analysis of a number of specific communities needs with regard to child care in the region also strongly supports the need to incorporate childcare (long day care) in many part of the Yorke and Mid North, with the following communities all currently actively planning for future services (and requiring support from State Government):

- | | |
|------------------|------------------|
| - Ardrossan | - Port Wakefield |
| - Crystal Brook | - Orroroo |
| - Kadina | - Wilmington |
| - Port Broughton | |

Improved access to tertiary education facilities is important for communities with poor levels of access – i.e. Clare and Gilbert Valleys, Goyder and Wakefield local government areas.

The establishment of two University Centres in the region, including the Copper Coast (Kadina) and Upper Spencer Gulf (Port Pirie) has been a game changer for rural and regional students. Both sites have well over 100 students enrolled with early indicators of a significant decrease in early withdrawals and deferment. Expansion of these services in regional areas (especially in communities like the three referenced above) should be investigated as a priority.

12. How can we sustainably grow these [cultural, tourism, and recreational] sectors to realise greater benefits for visitors and residents?

Support (via policy and access arrangements) that can enable multiple uses of cultural, tourism and recreational assets to improve utilization and open options for user-pays approaches to funding assets on a fair and equitable basis.

Expanded commercial uses (including temporary and longer-term uses) where possible and appropriate. This could be for a variety of infrastructure assets, from Jetties to Site Offices, to consulting rooms for visiting specialists.

Many of our existing tourism operators (both public and private), in more recent times have been impacted by highly elevated insurance costs. For some operators, this has meant they have found other ways to absorb the cost or have made the difficult choice to close certain activities with related infrastructure due to the insurance costs being out of reach. Further collaborative consultation processes across the Finance / Insurance sector, operators, regulators and related government agencies is encouraged in this regard.

Joint and multiple use (including potential commercial) use of public tourism infrastructure is already something that occurs, however to further these opportunities more 'buy in' / support from the local communities (and regular users) where the infrastructure is based needs to be sought. This then assists regulatory bodies making any necessary adjustments for contractual usage arrangements.

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

Linked with the response to Question 5, digital technologies represent a key enabler in improving in the level of access and quality of services in regional areas, making significant inroads towards achieving more equitable outcomes for regional communities.

Older populations and those experiencing socio-economic disadvantage face additional barriers in using digital technology to access services. While some service providers offer Aged Care Support Officers (ASCOs) to assist in navigating service assistance, this is not across the board.

Greater focus on digital literacy (including support and advice services) and access points are critical in this regard. Alleviating key barriers for disadvantaged people to maintain connectivity through subsidized schemes could be more universally available, not necessarily through government alone, but in partnership with telecommunications companies as part of the 'good corporate citizen' targets and objectives.

Where services need to be delivered centrally, it is important to consider that additional costs borne by regional and rural residents in having to travel to access these services, with these additional costs representing a barrier to access.

Direct provision of services in regional centres should be weighted against additional subsidies or support to address the cost differential in accessing services, but should be addressed through either additional services in-community, or additional support.

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

Ensuring appropriate support is available in accessing services (including advice around how to locate and navigate services, and transportation to physically access services) is critical in ensuring the benefits of investment in infrastructure are realized.

By way of example, there has been substantive work undertaken by the Point Pearce community to identify community infrastructure needs, including improvement / refurbishment of existing infrastructure, through to new purpose built infrastructure. To date, improvements have been occurring however have been largely dependent upon funding, including the required administration and management associated with applying for, securing and acquitting grants. For a small community with limited staff resources this means that progress is slow. Partnerships and collaboration with other organizations during recent years is providing beneficial, however could be bolstered by more targeted and increased skilled staffing within the Point Pearce community, and or partial funding support for partnership organisations keen to continue collaborative projects, for example, grant funding applications, project management and planning.

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

Expanding substation capacity in areas with favourable solar and wind loads along high voltage transmission corridors presents a key opportunity for supporting the transition to a net zero future. This will require effective planning regimes (noting relevant legislation currently being considered by the South Australian Parliament), collaborative approaches to securing transmission easements and other land access arrangements, as well as some augmentation to transmission infrastructure (as referenced at Question 4).

Alongside these network-based considerations, ensuring appropriate land use planning around substations and renewable generation is important for enabling large energy users to locate adjacent, or near, to substations and highly prospective renewable areas will help minimize distribution costs and provide opportunities for new industry in areas often lacking economic diversity.

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

Ensuring least (levelized) cost energy projects are developed first is important through the transition phase. The effect of the Hydrogen and Renewable Energy Bill in identifying sites based on generation capacity (renewable loads), existing network capacity and complementary land uses provides a useful framework for prioritizing and focusing attention on highly prospective sites for renewable energy.

The Yorke Peninsula Energy Hub is one example of projects that can make more efficient use of existing infrastructure (by way of existing electrical infrastructure located at Torrens Island) and highly prospective renewable loads.

Cyber security relating to IT for related systems needs to be paramount given the high level of cyber-attacks on critical infrastructure IT systems and the impacts on reliability of services.

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

Range anxiety remains a prevalent challenge in decarbonising transport in regional areas, with concerns regarding the coverage (and capacity) of existing charging infrastructure a particular concern for regional road users.

Both north-south and east-west corridors need to be considered when planning additional charging infrastructure, with locations such as Orroroo, Peterborough and Jamestown all playing important roles in servicing significant volumes of through traffic while being (currently) underserved in terms of charging infrastructure. Addressing these gaps (both in reality and in perceptions) and broad communication with road users will make significant contributions towards addressing range anxiety.

Further work is required to establish the viability of other emissions-free fuel sources for heavy transport, with hydrogen and biofuels both providing opportunities for different applications. Greater clarity around price paths for these alternate fuels will play a significant role in determining the rate at which these technologies are adopted.

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

Efficient supply chains underpinned by effectively logistics operations are crucial in enabling the aggregation of feedstocks required by circular economy projects. Effective paths to export markets are also crucial, ensuring firms involved in the circular economy can deliver to markets with sufficient scale to make these types of circular economy projects feasible. Port Pirie is a good example with connectivity via road and rail, and export port capable of servicing bulk and break bulk export, existing recycling and processing industries.

Livestock processing and protein manufacturing represent significant opportunities for the circular economy in the Yorke and Mid North region, with multiple projects under development or advanced planning stages at present.

At the opposite end of the scale, there are multiple opportunities to support local initiatives involving small businesses growing their capacity and engagement in the circular economy. Food organics and garden organics (FOGO) represent a significant opportunity for hospitality and food service businesses to participate in the circular economy, with greater investment needed in expertise and materials handling and recovering facilities needed to support these local initiatives.

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

Decarbonising the infrastructure industry continues to present a significant set of challenges, with the electrification of as many activities and processes as possible and switching of fuel stocks for others broadly seen to be the most feasible strategy.

To achieve this electrification, significant investment is required to increase the level of storage available at the system-level, with this storage required to provide the firming capacity needed to reduce volatility, and with it prices across the energy system.

To enable firms to plan decarbonisation projects, certainty around timing, standards and accreditation frameworks is crucial to allow firms to progress with these planning and implementation activities.

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

Building code and engineering standards need to be fit for purpose over time. As of September this year, the building code has introduced new standards for the construction of new homes. The livable housing and energy efficiency provisions will commence in South Australia on 1 October 2024. With transitional arrangements in play for South Australia with regard to the new code standards, taking into consideration the current constraints and challenges of the SA industry (supply chain issues, flood affected communities, etc) also provides further time to consider the next iteration of code conditions, further, to also consider setting the bar higher to attain green star standards in building and development. Further investment in research and development at the national level into new material usage / applications could also be of benefit.

More effective planning and funding support to encourage passive cooling via greening public areas is also critical. This may require more innovative water-sensitive urban design solutions in regional centres, where stormwater harvesting and reuse may be more challenging with less infrastructure in place to channel stormwater.

Asset owners and managers will need to be supported with training and capability development initiatives to improve the coverage and level of asset planning activities being undertaken as climate change impacts built assets in more rapidly, and more significantly.

Further research and evidence is needed to understand the impact of more frequent and extreme weather events impacting buildings, and the findings of this research need to be disseminated to those responsible for managing maintenance and development programs for infrastructure.

Equally important is the need to ensure those responsible for funding decisions understand the impacts of these types of weather and climatic conditions to ensure decision making around asset maintenance activities are properly informed of the relative costs and merits of maintenance programs.

21. What are the critical resilience issues that South Australia needs to address?

Priority resilience issues for the Yorke and Mid North (consistent with the rest of the state) include:

- Drought Resilience;
- Coastal protection and preservation, and;
- Greater capacity and expertise in emergency response.

In relation to drought, reputable forecasts funded or published by State and Federal Government agencies show that the region will experience a hotter, drier climate with more extreme weather events, with more aggressive evapotranspiration cycles meaning rainfall and drying trends will continue.

Adaptation to build drought resilience in the face of these trends requires:

- Less reliance on surface flows, and particularly the River Murray;
- Greater diversity (e.g. stormwater reuse, water treatment), and;
- Further investigations needed into making better use of existing water storages.

The Northern and Yorke Regional Drought Resilience Plan outlines a number of key activities to support resilience capacity in relation to droughts. The implementation of these regional drought resilience plans (with others existing or under development for other regions) provide a comprehensive and efficient approach to improving drought resilience across the state.

Hard infrastructure (e.g. sea walls, groynes, training walls, artificial reefs and break walls) will be needed more frequently in the future to protect built up coastal areas. Developing this type of infrastructure is a challenge for regional councils with smaller rate bases given the cost of these types of infrastructure.

Given the critical role this infrastructure plays in servicing visitors who live outside regional areas (both domestic and interstate visitors), there is a strong case for public investment with local government to support the delivery of these projects, to the benefit of society beyond those who live in coastal communities.

In building emergency response capacity, key priorities include:

- Supporting grass roots activities through additional equipment and training for volunteers, and planning and logistical support centrally;
- Ensuring resilient communications networks to support emergency services and community during, and immediately after, major events (particularly bushfires), and;
- Building mental health support services within regional communities.

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

Effective infrastructure planning must take into consideration the importance of maintaining and developing green corridors for a host of reasons, including wildlife protection, conservation of remanent vegetation and preventing or minimizing soil erosion. Similarly, managing canopy coverage is critical in dispersing the heat island effect. Although this problem is less prevalent in regional areas, it remains an important principle.

Coastal and riverine environments also provide valuable opportunities for managing extreme weather events. Examples include the role of sand dunes and shellfish reefs in protecting coastlines and coastal infrastructure from storm surge damage, and effectively managed rivers and creeks in ensuring stormwater runoff can be managed effectively to reduce the instances or impact of flooding events in more built-up areas.

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

Infrastructure proponents should be firmly encouraged to provide and maintain detailed information regarding project pipelines (specifically around work packages and timing) to provide industry partners with a comprehensive understanding of the investment pipeline.

Having this detailed, contemporary understanding of infrastructure pipelines could assist in:

- Projecting skills requirements and forecasting supply gaps earlier, allowing training providers and job seekers to position to meet industry needs in advance;
- Capability and credential matching by local firms to improve their ability to compete for work packages, and;
- Scheduling maintenance 'shuts' for industrial firms to minimize scheduling conflicts which stretch industry capacity.

RDAs collate various information on the investment pipeline in their respective regions, however a more comprehensive set of data would be invaluable in undertaking this forecasting work. Similar, better information would enable the identification of skills gaps earlier, creating opportunities for upskilling of the existing pool of skilled workers through training and retention strategies.

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

Ultimately the realization of the types of productivity benefits and market opportunities listed in response to question 5 is contingent on the reliability of digital networks. Without reliable networks with sufficient bandwidth capacity and adequate coverage, these productivity benefits are theoretical.

Alongside these networks, ensuring users (firms, service providers, clients and people) have strong digital literacy is absolutely crucial. This requires education and resources in community to help people find information and navigate change – not necessarily physical infrastructure.

With these factors in place, the opportunities through digitizing infrastructure become significant. There is significant potential to capture better information around condition and usage, to help make better informed decisions around managing and investing in the right projects. The use of sensors and smart cameras that provide data and live vision to devices that could be used in the context of jetty infrastructure and citizen science projects. Simple electronic jetty counters as another example, provide relevant authorities with user data that is helpful in the development of business cases for infrastructure improvement funding, in addition to asset management activities.

New market opportunities for tourism operators / tourists themselves to have access to real time information for 'smart' remote guided treks and tours, in addition to importantly having access to emergency service information in remote settings.

In agricultural settings, having access to real time data in relation to monitoring livestock, water levels, soil moisture and the like is reliant upon coverage. Potential for 'booster' type signal enhancement on existing infrastructure (eg, power poles, water towers etc) could help address coverage and real time information access.

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

The work being done through the Office of the Industry Advocate and Industry Capability Network makes a significant contribution towards local firms being able to collaborate and innovate in procurement. New approaches to tendering documentation which focus on specifying outcomes and accreditation standards, rather than narrow work package specifications, may present opportunities for further innovation.

The sizing of work packages let via procurement processes should be monitored to ensure that a wide range of firms have the capacity to meet the requirements in respect of (both in terms of physical and balance sheets).

Similarly, ongoing help and support should be made available to support firms in obtaining relevant certification and accreditation to ensure they are ready to participate in these procurement processes. This is becoming increasingly relevant in respect of carbon accreditation and accounting systems.

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

Residential developments in regional areas at scale typically takes time to sell down, meaning the holding costs of network infrastructure funded by developers is relatively high. Funding and financing arrangements that remove the upfront funding contribution for developers would enable larger land releases and housing developments, allowing developments at scale to bring down unit costs through economies of scale.

This is not to say that developers (or their clients) should not fund the cost of the infrastructure. Rather, that the timing of contributions should be staged to reflect cash flows of projects which move more slowly in regional areas.

Potential strategies for managing these upfront funding arrangements include:

- Establishing a fund with that is capitalized initially and used to deliver network infrastructure, and receives contributions from developers as lots are sold from developments connected to these network projects. The fund could also make use of a financing arrangement between the fund manager and developers accessing the fund to cover financing costs and a risk premium, and;
- Greater use of bonded infrastructure arrangements between developers and counterparties (potentially including landowners, Local and State Government).

Contact

Daniel Willson
Chief Executive Officer

E: [REDACTED]

M: [REDACTED]

Jo-anne Buchanan
Economic Development Officer

E: [REDACTED]

M: [REDACTED]



Ref: A1857142

Mr Jeremy Conway
Chief Executive
Infrastructure SA
Level 15 - 30 Wakefield Street
ADELAIDE SA 5000

Via email: jeremy.conway@sa.gov.au

South Australia's 20-Year State Infrastructure Strategy – Discussion Paper (October 2023)

Dear Mr Conway

Thank you for the opportunity to provide feedback on the recently released Infrastructure SA authored 'South Australia's 20-Year Infrastructure Strategy – Discussion Paper (October 2023)' (Discussion Paper).

Renewal SA supports the proposal for developing the updated strategy and has reviewed the Discussion Paper circulated for consultation.

An appendix provides feedback on the suggested questions related to Renewal SA's business, as per Appendix 1.

More generally, there are two critical themes in our response:

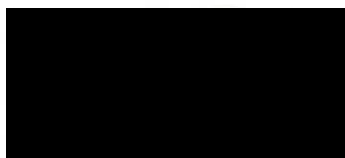
- **Water Infrastructure Provision** – The need for a well-planned and extensive increase in water infrastructure provision to facilitate the development of residential and employment land as the metropolitan Adelaide population grows. In particular, to the north of the current metropolitan area.
- **Infrastructure Funding Mechanism** – An alternative approach to funding public infrastructure for new residential development that seeks upfront, government-led funding, recouped through a well-governed recovery mechanism attached to 'infrastructure schemes' (as defined in the *Planning, Development and Infrastructure Act, 2016*). This is in contrast to the existing approach often taken, whereby public infrastructure can be delayed and required to keep pace with development, subject to ever-increasing costs making delivery difficult or non-viable – even where infrastructure Deeds may be in place.

Whilst Affordable Housing is considered by Renewal SA as a key enabler of growth – other instruments and strategies are in play in coordination with the Commonwealth government.

I would be happy to meet to discuss my comments further if this is of assistance.

Yours sincerely,





Chris Menz
Chief Executive

22/11/2023

Appendix 1 – Renewal SA Response to Selected Discussion Paper Questions

The Renewal SA position is provided below, noting that only 7 questions are considered relevant to Renewal SA, and therefore, only these have been responded to.

4. The economic context

4.4 Our productivity challenge

Consultation question 1 (p.13)

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

The increased population of South Australia can assist in fuelling economic growth, but only if the provision of infrastructure and housing can keep up to meet that growth. Government investment in infrastructure designed to meet future needs (rather than only responding to current pressure points) is required to meet these infrastructure challenges most efficiently. A particular focus is required on water investment, both in terms of supply and wastewater management.

5. Enabling Infrastructure

5.2 Water supply

Consultation question 3 (p.16)

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

It is recognised that the State Government is seeking to address future water concerns through The Resilient Water Futures project, which is planning now to ensure a sustainable and resilient water supply for Adelaide. As an outcome of this work, the proposed Urban Water Strategy should therefore seek to provide valuable advice in response to this question.

From a Renewal SA perspective, a focus towards the provision of adequate water re-use within new developments, whether that be through grey water or stormwater, both on individual private sites and in the form of community collection (public lakes, etc.), is critical in creating a local use and re-use system. Implementing these by households or development areas potentially reduces the costly requirement of storage or infrastructure at a greater scale and moving water over greater distances.

In terms of water infrastructure pressures on the network, the Outer North Adelaide Region is expected to grow at a much faster rate than any other region in South Australia, with Renewal SA owning approximately 600 hectares of land in the area that forms part of the future supply of land for housing.

The current and proposed development fronts in this region (privately and government-owned) are extensive and geographically dispersed, requiring choices and 'trade-offs' on what areas will be prioritised for water infrastructure provision. It would, therefore, be valuable for the updated Strategy to specifically identify an orderly sequence of water development in this critical region for future development.

6 Liveable and well-planned places

6.1 Coordinated planning

Consultation question 7 (p.21)

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

Aligning with the state government's proposed Greater Adelaide Regional Plan (GARP) to consider the need for future investment is an effective way to understand the infrastructure needs over a longer term.

Naturally, that understanding can then be utilised to consider what is needed in the intervening years to ensure that growth can incrementally occur over that period, while simultaneously reducing the risk of providing what could become redundant infrastructure.

Strategic development of government land can also assist (such as that owned by Renewal SA) by seeking to 'fill the gaps' within infrastructure network provision. For example, where the government develops land that incrementally expands the infrastructure network, it could provide lower costs to developers as they seek to develop land adjacent further. This can assist in an orderly provision of land supply and an effective cost sharing of infrastructure.

6.2 Affordable housing

Consultation question 8 (p.22)

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

There is naturally an opportunity for the government to improve housing affordability through an increase in appropriately zoned land or via direct intervention in development projects that provide such housing options.

However, in these two scenarios (and for the private sector), there is the obvious constant in question – often insufficient infrastructure provision.

Therefore, the purpose of this document is to find a strategic means to provide the right infrastructure for the future would assist in 'unlocking' a greater supply of various forms of housing products to the market. The State's commitment to this is evident however can be reinforced through the State Infrastructure Strategy.

Additionally, consideration of the State's participation and support of Housing as enabling infrastructure can be further considered in the final State Strategy; this may take the form of State Support where necessary to enable key industries in locations where the market is unable to circumstances make it difficult provide solutions (through, for example, the work of the recently announced Office for Regional Housing).

We would welcome further engagement on this particular area of the strategy if you wish to discuss various possible approaches.

6.6 Cultural, tourism, and recreational facilities

Consultation question 12 (p.29)

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

The government must make the most effective use of its public spaces. When developing government-owned land, and locations that belong to the state or local governments, creating iconic spaces that create a sense of community and gathering are essential for liveability goals.

8 A decarbonised, sustainable economy

8.5 Infrastructure delivery

Consultation question 19 (p.39)

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

While not addressing the direct measures here, it is important that when measures are selected, that the government leads the approach through example projects and showcasing what can be done for industry to follow.

10 A stronger infrastructure industry

10.4 Funding and financing solutions

Consultation question 26 (p.49)

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

In the context of large scale residential developments in particular, infrastructure financing through the provision of upfront government funding should be explored.

The example was given in the document of residential development within Mount Barker, and the lag of infrastructure provision. Part of this is due to an infrastructure funding approach that collects money at the time of land divisions, to essentially fill holding accounts that are then used to provide infrastructure.

The concern with this approach is the administrative burden to obtain funds required to keep up with the necessary growth enabling infrastructure. Furthermore, the costs of infrastructure increases as time goes by (markedly in recent years), risking that even with CPI increases to collection, that the funds raised won't meet the need.

An alternative approach of upfront funding, that is underwritten and provided by the state government, would allow strategic infrastructure provision prior to development, and at current costs. Renewal SA remains in close collaboration over models for funding provision with the recently opened Housing Infrastructure Planning Development Unit (within Department of Trade and Investment).

A strong model that responds and supports growth will provide a sense of confidence for the private sector to invest (and sometimes even the commercial viability to do so) and will assist the State to meet its target housing supply requirements under the federal Housing accord. Furthermore, it reduces the risk of unreachable cost escalations in the future, a well documented circumstance even where infrastructure funding deeds exit.

A recovery model charge in line with developer receipt of settlement proceeds or revenue will offset some concern from the property sector, whilst recognising the need for provision. Similarly, concern regarding the State's application of funding can still be mitigated through formal infrastructure commitments in growth areas, published and programmed in forward estimates – in order to promote investment in desired areas.

A5353890

Mr Jeremy Conway
Chief Executive
Infrastructure SA
GPO Box 2343
ADELAIDE SA 5001

Office of the Chief Executive

Citi Centre Building
11 Hindmarsh Square
Adelaide SA 5000

PO Box 287, Rundle Mall
Adelaide SA 5000
DX 243

Tel 08 8226 0795
ABN 97 643 356 590

www.sahealth.sa.gov.au

Dear Mr Conway

Thank you for advising that the SOUTH AUSTRALIA'S 20-YEAR STATE INFRASTRUCTURE STRATEGY DISCUSSION PAPER has been released for consultation.

I note your comments that feedback from Government agencies is not required, with staff being consulted during the preparation of the paper. I would however like to raise that whilst the discussion paper addresses the need for improved access to healthcare services and thereby assisting in reducing the pressure off the state's hospital system and infrastructure, that a pressure on our healthcare is the outflow of patients from the hospital setting.

There is an increasing need and demand on aged care, mental health and social care infrastructure. The transfer of patients from this area of need relies on available beds and treatment opportunities in facilities outside of the hospital setting. The delay in moving patients from a hospital, results in blockages in available beds to treat patients requiring treatment in an acute setting. This has a direct impact on ambulance ramping.

Our metropolitan public hospitals are consistently operating at a high occupancy rate, with acute hospital beds occupied by patients who are clinically ready for discharge and waiting for suitable accommodation or placement in the community. In September 2023, there were approximately 220 beds occupied across the metropolitan system with this cohort of patients.

This cohort is expected to increase with an ageing population and rapid expansion in the northern and southern suburbs of Adelaide. The projected demand for maintenance care beds, which are designed to accommodate and support patients who have ongoing care needs (ageing, disabilities, complex social issues) but no longer require hospital admission, is expected to increase by 63 percent (based on 2020-21 baseline), equivalent to 280 more beds by 2036-37.

I would recommend an inclusion in the Strategy of the growing infrastructure needs in aged care, mental health and social care infrastructure. Accessible housing, being disability ready, is also a growing need across the State and the lack of availability is an additional blockage of being unable to move patients with disability needs of the hospital setting.

I would like to thank you for the opportunity to provide input into the Strategy, and support your statement that new models of health care harness the power of technology and innovation and offer opportunities for improving efficiency and patient outcomes. Our virtual care centres are a testament to this and we look forward to further innovation opportunities across the Health system.

Yours sincerely



DR ROBYN LAWRENCE

Chief Executive

24 / 11 / 23

24 November 2023

Mr Anthony F Shepherd
Attention: Strategy Team
Infrastructure SA
GPO Box 2343
ADELAIDE SA 5000

Dear Mr Shepherd

South Australia's 20-year State Infrastructure Strategy Discussion Paper

Thank you for the opportunity to provide SA Water's input as a part of the public consultation process for the 20-Year State Infrastructure Strategy Discussion Paper.

In assessing the Strategy there are synergies that complement the Greater Adelaide Regional Plan (GARP), which is a key input into our 30-year master plan developed to maintain water and wastewater services to existing customers while also supporting new growth. Further, there is also alignment with Resilient Water Futures – a 50-year integrated water management strategy for Greater Adelaide that SA Water is developing on behalf of the State Government.

SA Water provides safe, clean drinking water and reliable sewer services to more than 1.8 million South Australians. We also play a critical role in driving economic outcomes for our growing state, including supporting water dependent businesses, enabling population growth, and investing in infrastructure to support development opportunities.

[Our Strategy 2020-25](#) sets our strategic areas of focus through to 2025, while also having a view towards 2050. It recognises the decisions we make have a long-term impact on the wellbeing of our customers and community and the future sustainability of both our business and the South Australian economy and environment. We see alignment between a number of SA Water's strategic focus areas and the six objectives of the 20-Year State Infrastructure Strategy Discussion Paper.

Given the synergies between South Australia's 20-year State Infrastructure Strategy, and the GARP, the new Strategy must be developed in close collaboration across government to carefully plan and coordinate the delivery of infrastructure to support economic prosperity for South Australia.

SA Water supports the development of the next 20-Year State Infrastructure Strategy, and we are pleased to see that water is called out as being fundamental to underpinning the growth of the state. SA Water is committed to continued collaboration with Infrastructure SA during the Strategy development process.

The attached submission outlines key considerations that SA Water believe are critical to further enhance the Strategy with respect to future water services including:

- The importance of considering SA Water's legislative and regulatory frameworks when developing future growth models.
- Having an integrated water management approach that considers all available climate independent water supply options.
- Ensuring that the infrastructure funding structures of the future are fit for purpose, fair and adequately support both the upfront investment required and infrastructure renewal.

OFFICIAL

- Enhancement to collaboration and planning across agencies, utilities, Councils and industry partners.
- Recognition at the earliest planning stages that water and wastewater services are a connected system and the impacts on service standards for existing customers must be considered as infrastructure is augmented.

We welcome the opportunity to meet with you and other representatives from Infrastructure SA to further the conversation on how we work together to meet the state-wide infrastructure needs of South Australia over the next 20 years, ensuring the availability of critical water and wastewater infrastructure is fully considered.

To assist in arranging a meeting, please contact Rachael Neumann, Manager Key Stakeholder Relations at [REDACTED]

Yours sincerely



David Ryan
Chief Executive

Attachment 1**Overview**

Water services are fundamental to supporting the growth and prosperity of our state and we are pleased to see a number of key considerations highlighted in the discussion paper, including the criticality of water in supporting our state's growth, prosperous and livable communities, and a healthy environment.

We support the recognition of the Resilient Water Futures project as key to informing future infrastructure investment needs, and the acknowledgement that a greater use of integrated water management such as increased use of recycling schemes is critical. Further, greater coordinated infrastructure planning across government will enable a more integrated and accurate view of the infrastructure required to deliver better outcomes for growing communities.

The discussion paper references a vision to support economic growth and prosperity, and a water supply that is sustainable and affordable, and we support the recognition that water security, cost and lack of distribution as key inhibitors to industry investment and growth.

As stated in our consultation response to the Greater Adelaide Regional Plan (GARP), significant challenges have emerged in recent times relating to the delivery of water and wastewater services. These challenges have highlighted that the policies and practices that have supported state growth through urban development effectively for many years are now in need of urgent review and modernisation to ensure they are effective for the future. Further, to ensure water systems remain resilient, consideration needs to be given to ongoing, sustainable water infrastructure renewal without creating intergenerational inequity by deferring investment.

SA Water's governance and economic regulation framework

SA Water is a public corporation established under the *South Australian Water Corporation Act 1994* that is wholly owned by the Government of South Australia. As a public corporation, SA Water is required to operate commercially, unless directed otherwise.

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 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. ESCOSA reviews SA Water's submission to see whether the proposed expenditure is prudent and efficient.

Prudent expenditure has clear justification driven by SA Water's legislative or regulatory obligations, expected benefits to customers that outweigh the costs, and a clear expectation from customers that an outcome should be achieved and that they are willing to pay for that outcome.

Expenditure is likely to be considered efficient where it represents the lowest sustainable (or long-term) cost of achieving the intended outcome. ESCOSA accepts or denies total expenditure by taking into consideration the costs and benefits from the investment and pricing impacts on customers. ESCOSA determines a revenue cap, which is the maximum amount of revenue that can be recovered from customers.

OFFICIAL

For SA Water to most efficiently discharge its duties and have infrastructure investment approved by ESCOSA, clarity on long-term growth projections is imperative. Greater detail is needed on the medium term (~6 years), timing and scale of development and growth areas and associated infrastructure investment needs.

A state-wide pricing policy exists whereby the majority of SA Water customers pay the same price for water no matter their geographic location in South Australia, with costs of delivering services shared across customers who received our regulated services. It is important that we consider the impact of investment decisions on all customers.

Further, SA Water is accountable for complying with a vast number of regulatory requirements, including from the Environment Protection Authority, SA Health, and the Office of Technical Regulator, together with performance against 22 ESCOSA service standards, in the sale and supply of retail services to our customers. Service standards relate to our customer service, connections, responsiveness, and restoration performance. They are an important consideration for infrastructure service delivery, particularly with regards to maintaining adequate water pressure and flow and for removing wastewater for existing and new customers.

Climate change impacts

The Government of South Australia has committed to ensuring a secure, sustainable, and resilient water supply for future generations. A key step in realising this commitment is the creation and delivery of the Resilient Water Futures Strategy – a 50-year urban water strategy seeking to deliver integrated water management for Greater Adelaide. We are encouraged to see the discussion paper reference the Resilient Water Futures strategy as it outlines an adaptive path forward to anticipate and respond to changes in climate and population increases over the next 50 years. As such, water source availability and the options for efficient waste disposal are critical considerations that must be made well in advance of developments proceeding.

To achieve sustainable and resilient water supply, we support an 'Integrated Water Management' approach that considers all available options. Stormwater and recycled water schemes have the potential to improve the overall community water resilience by supporting local/neighbourhood greening, cooling and liveability. Individual scheme resilience can establish storage by recharging groundwater aquifers and utilising either neighbouring stormwater or recycled water systems or the drinking water system when required.

For new infrastructure, it's important that best practice adaptive planning is undertaken to account for a range of climate scenarios and for existing infrastructure, improved resilience actions must be informed by appropriate climate vulnerability and risk assessments utilising up to date high quality information. The assessments should include physical risk, governance risk and those related to transitioning to a lower carbon economy.

Blue-Green Infrastructure seeks to integrate both "whole of water cycle" and "nature-based solutions". It combines both Green Infrastructure (urban greening, green wall/roofs, green spaces, nature links etc), and Blue Infrastructure - integrated urban water management (recycled water, stormwater, desalination etc) and water sensitive urban design. It's a holistic approach to urban infrastructure, planning and design. To realise the maximum benefits of Blue-Green infrastructure, infrastructure planning needs to facilitate interconnection of smaller-scale, decentralised and distributed Blue-Green systems into both larger grids (local-scale) and/or centralised infrastructure networks (regional-scale). This also needs to be underpinned by holistic planning and management of urban water, land, and energy in terms of their multi-functional and socio-ecological value, as well as community capacity building and education around the benefits of blue-green infrastructure at all scales of application e.g. region, residential and suburb.

OFFICIAL

To support industries to transition to a global net zero future the strategy should consider continued investment in renewable energy generation, storage and transmission. SA Water views this as a priority which is reflected in our ambition and plans to achieve net zero emissions by 2030.

SA Water is an essential service provider and investment in hard-to-abate emissions such as fugitive emissions from wastewater treatment plants is required to decarbonise the wastewater sector. Investment in the creation of bio-sequestration offsets will support the transition to net zero and include significant co-benefits for the state. SA Water is well positioned to support the realisation of biodiversity and water quality benefits for bio-sequestration offsets grown on SA Water land.

Further, we suggest consideration be given to leverage State Government procurement to incentivise circular practices in government and the supply chain. For example, ensure contracts specify the consideration of circular principles in the goods and services purchased, as well as embedding these principles in the planning, design and construction of new infrastructure. An example government could consider is incentivising waste reprocesses to maximise the diversion of waste from landfill. In addition, it could consider investing in strategic projects to assist in preventing the generation and management of difficult waste a e.g., asbestos and PFAS contaminated spoil.

Funding infrastructure

The discussion paper raises the issue of funding and financing solutions for a range of state infrastructure. Funding models for water infrastructure are in need of urgent review.

Beneficiaries of water services have always been expected to make financial contributions to any network upgrades to enable their development or growth. Historically, funding has come from a combination of beneficiary, government, and SA Water investments. This may be in the form of upfront private funding of infrastructure or in the case of land development, may be via an augmentation charge calculated by SA Water based on infrastructure requirements to service including the cost of completing the work, the size of the area and the number of allotments that can be served. Where infrastructure upsizing provides future benefit to other regulated customers, SA Water has contributed to costs which have been recovered over time from customers of our regulated services.

This funding model has worked well in the past, but accelerated growth and cost increases in infrastructure delivery necessitates a reconsideration of the most efficient, effective, and fair way to fund infrastructure upgrades in future.

We recommend that investment frameworks consider how state water infrastructure such as water storages, trunk mains, pumping stations, and treatment plants to support long term growth and development are funded.

Greater clarity is required on who funds infrastructure delivery to support timely expansion of the water and wastewater networks and other required augmentations. Further, consideration needs to be given to new and existing customers to ensure they are serviced in line with customer service standards, the cost of new infrastructure is fairly distributed across all beneficiaries and SA Water customer bills remain as low and stable as possible.

Cross government collaboration and planning

Upfront and ongoing effective collaboration and planning across agencies, utilities and Councils will be required to enable an integrated and accurate view of the infrastructure required to deliver better outcomes for growing communities and the commercial and industrial sector.

OFFICIAL

This will assist SA Water to have early visibility of intent and timings to enable adaptive planning, including planning for future regulatory submissions, as well as certainty in advance as to how infrastructure delivery will be funded.

An existing limitation is the inability for us to deliver infrastructure before a development progresses. For example, all infrastructure investments to be funded by SA Water customers are reviewed by ESCOSA to determine if they are included in the regulatory asset base and investments are often not deemed as prudent until a contractual agreement with developers is made. This is sometimes out of sync with anticipated housing lot build-out times and the timelines required to construct the headworks infrastructure to deliver services to the new developments.

Capacity of available existing and new water sources and treatment facilities, creation of infrastructure corridors, appropriate and timely land zoning, and allocation of space for water and wastewater infrastructure all need careful consideration and provisions made early in the development planning process. Without early consideration of these elements, commercial viability, cost planning and appropriate cost recovery mechanisms cannot be addressed in a timely and efficient manner.

For efficient delivery of growth infrastructure, there should be a shared vision, clarity of roles and effective communication across all participants in the infrastructure ecosystem.

Regulatory reform including policies, frameworks and practices would enable a consistent, integrated, and collaborative approach between all essential services providers in the state, including SA Water to ensure that solutions addressing social, sustainability, resilience and economic considerations are considered.

To support the skilled labour needed to deliver a transparent infrastructure pipeline, a view on timing and sequencing across sectors would be beneficial, to avoid having multiple megaprojects or capital programs having similar phases running at the same time, which spreads local resourcing too thin, and can result in the importation of more expensive labour and challenges with supply chains.

Having a central agency that coordinates planning across all key infrastructure providers and, is responsible for maintaining growth forecasts that all other participants utilise, is critical. To this end opportunities to centralise the responsibility for demand projections for which all utilities and service providers can use for planning should be considered.

Infrastructure resilience

Water infrastructure resilience relies on ongoing, sustainable renewals. Our 2024-28 Regulatory Business Plan, lodged to ESCOSA in August 2023, balances immediate risks to infrastructure and maintains current customer service standards, with the costs paid through customer bills. Our 2024-28 proposal prioritises affordability for customers without substantially addressing long-term capital pressures which raises the question of intergenerational equity. The lower allowed renewals investment in the current regulatory period (2020-24), is creating increased pressure for future investment. As such, we recommend infrastructure renewals needs to be highlighted within the Strategy to address this issue and avoid impact on levels of service and/or cost for future generations.

Consideration should be given to mini grids which can withstand climate induced or other natural or human induced events and stay online during blackouts in the wider network in turn maintaining, and possibly increasing, the reliability of our services.

OFFICIAL

SA Water recommends a focus on improving internet connectivity, especially in rural areas, to remove current limitations that hinder the effective implementation of digital technology, and to enable infrastructure transformation including expansion of smart networks and digital meters for water services.

Establishing a Government Digital Asset Strategy to mandate the use of digital operating concepts for infrastructure deployment and operations could be modelled on successful frameworks such as the Victorian Digital Asset Strategy.

Cyber security standards are becoming more stringent in response to the increasingly dangerous cyber security environment, which brings increased costs of compliance. For example, the introduction of the Security of Critical Infrastructure (SOCI) act has resulted in increased costs that could be subsidised by the government to lower the barriers of doing business in the state.

SA Water foster research and innovation in the development of smart city initiatives, including smart homes and smart suburbs. Further, support in this area will help integrate advanced technologies to improve efficiency and sustainability within our communities.

SA Water recognises existing significant infrastructure constraints for transporting freight to South Australia. Rail is a critical element of infrastructure and any disruption to rail freight routes to South Australia from Western Australia and the eastern states can have significant impacts on the supply of critical goods such as water treatment chemicals to ensure water quality remains in line with what our customers expect and compliant with the Australian Drinking Water Standards.

From a water and wastewater supply perspective, critical resilience issues also need to take into account aging infrastructure, network contingency and redundancy to ensure reliable services. Network outages due to both planned or unplanned events i.e., natural disasters, power outages (climate change / cyber-attacks) will have increasingly wider impacts in areas where populations are growing. System flexibility and integration of both centralised and decentralised (smaller-scale infrastructure) schemes will be increasingly integral to achieving resilience.

South Australian Film Corporation Submission:

South Australia's 20 Year State Infrastructure Strategy – Discussion Paper

Background:

Established in 1972 as a statutory authority, the South Australian Film Corporation (SAFC) is South Australia's leading screen authority and investment agency, supporting the development, growth, and promotion of the state's screen production sector.

The SAFC's submission reflects this purpose and does not purport to reflect the views of individual members of the South Australian screen industry or the Government of South Australia.

SAFC is responding to Question Number 1 relating to economic context.

The SAFC wishes to express its thanks to Infrastructure SA for the opportunity to provide input into this consultation and is available to provide further information upon request.

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

Increase investment in Screen Production Studios Infrastructure

South Australia's world-class film and television industry is an important contributor to the state's diverse economy and vibrant culture. The South Australian screen industry exports the intellectual property (IP), knowledge and creativity of South Australians to the world, drives innovation and harnesses digital technologies, showcases the diversity of our people and landscapes, and attracts inward investment, skilled migrants, and new businesses to our state.

Deloitte Access Economics reported that in 2019-20, screen production expenditure (excluding game development) contributed a total of \$165 million to South Australia's GSP and employed 2,040 FTE employees in the state. This points to significant growth from earlier Deloitte Access Economics reports on screen production in South Australia – with the total contribution growing at an average annual rate of 15 per cent between 2017-18 and 2019-20.

The Australian screen industry is experiencing record levels of drama production with national expenditure exceeding \$2.3 bn for the second year running.

The Federal Government has announced its intention to introduce minimum Australian content obligations for streaming platforms operating in Australia. This regulation (effective from 1 July 2024) will require streaming platforms to commission new Australian production.

Regulation of streaming platforms presents a once in a generation opportunity for South Australia to unlock international investment, create sustainable jobs and drive economic growth by growing the volume and value of film and television production in the state.

South Australia's screen industry has many comparative advantages over other states and is perfectly positioned to take advantage of the new economic opportunities arising from increased local production.

- South Australia has a fifty-year track record as the home of Australia's most awarded and iconic screen stories.
- The accessibility and variety of filming locations makes South Australia more cost-effective than any other capital city.
- Recent State Government investment (delivered through the South Australian Film Corporation) to attract, train and retain a skilled workforce has tripled the size of the industry.

To maximise the opportunities of streaming content regulation, South Australia will need to invest in expanded physical studios infrastructure through a purpose-built new studio facility on government or private land.

The availability of high-quality physical infrastructure including studios is a key factor in the attractiveness of any jurisdiction for screen production. One of the most significant capacity issues facing the sector at a global and national level is a shortage of film and television studio space. Studio facilities nationally, including the State Government owned Adelaide Studios, are at capacity.

Adelaide Studios is a purpose-built, energy efficient studio facility located close to the heart of the CBD. The establishment of the Adelaide Studios in 2011 has been a critical enabler of the significant industry growth that South Australia has achieved in the years since. It is currently at 100% occupancy.

Feedback from the industry is that whilst the Adelaide Studios facility is highly regarded, the size and availability of film and television studio space in South Australia is insufficient to meet the growing needs of high value productions or to service the volume of productions already seeking to base in South Australia. The lack of studio capacity is constraining industry growth.

A significant opportunity exists for South Australia to harness our strengths as a state to create a world-leading studio production precinct. This can be achieved through:

- co-locating South Australian research capability with the screen industry at a new studio facility, for example maximising the connection with the university sector and existing South Australian innovation districts through the SA Economic Activity Zones framework
- combining South Australia's nation-leading renewable energy generation with state-of-the-art practices in construction and operations to enable circular sustainable production which is increasingly required by streaming platforms
- connecting a new studio to Adelaide's 10gigabit GigCity internet connection, harnessing our state's advantages in digital infrastructure as one of the most connected cities in the Southern Hemisphere

The most suitable location for the new studio infrastructure is in metropolitan Adelaide, within a 25km radius of the CBD.

**Conclusion:**

The Australian screen industry is growing at record levels and, as the nearest screen industry centre to the eastern seaboard with a fifty-year track record, South Australia is well-positioned to gain a greater share of national screen production along with its accompanying federal government and international investment.

Expanding South Australia's screen production studio infrastructure will enhance the state's existing offering at Adelaide Studios, unlock higher productivity and stimulate economic growth by substantially increasing the volume and scale of high-value film and television production in the state. The screen industry is a high-tech, future facing industry that attracts young people, supports a well-paid and skilled workforce, adds cultural value and, with three jobs created elsewhere in the economy for every four jobs created in the screen industry, delivers an economic multiplier in adjacent industries including tourism, hospitality, construction, transport, and professional services.

Infrastructure SA: Online Submission Form: 2000 words + pdf uploads**Consultation question 5: What are the barriers to increased adoption of digital technology to improve productivity?**

- Digital Skills Gap: A significant barrier is the lack of digital literacy and skills among the health workforce and many patient cohorts to utilise digital technology efficiently. Digital literacy education programs and simple to use technology supporting both end users is required to progress the adoption of digital healthcare. Clinicians and patients to be brought on the journey to ensure technology will make tasks more efficient and can be relied upon.
- Integration Challenges: Integrating new digital technologies with existing health systems and processes can be complex and costly, making sure the digital technology is fit for purpose to support ease of use is essential to ensure safe and effective uptake, with the aim of improving productivity of healthcare delivery.
- Scalability: ensuring enterprise-wide effective solutions that support the delivery of healthcare utilising digital technology across the care continuum e.g., from primary care (GP) to tertiary health systems (specialist hospital services).
- Digital infrastructure: to enable the safe and effective use of technology in healthcare delivery across settings e.g., remote surgery capability to support rural/remote health services and patients.

To overcome these barriers, governments, industry organisations, and educational institutions can play a crucial role in providing training, support, and incentives to encourage digital adoption. Additionally, fostering a culture of innovation and digital readiness within healthcare organisations can help address some of these challenges.

Consultation question 7: How can South Australia better coordinate infrastructure investment to support a growing population?

- Integrated Infrastructure Planning: Develop a comprehensive, long-term infrastructure plan that considers the needs of a growing population. Integrated plan should cover health, transportation, housing, utilities, education, and other critical sectors. Integration between different infrastructure projects is key to avoiding inefficiencies. For example development/expansion of precinct approach to health planning which could incorporate both public and private health services, university sector, co-locate essential services (housing, utilities, education), and private companies to enable cross-collaboration and innovation across sectors.
- Public-Private Partnerships: Explore opportunities for partnerships between the public sector and private companies to fund and deliver infrastructure projects.

- Multi-Modal Transportation: Invest in a diverse range of transportation options, including roads, public transit, cycling infrastructure, and pedestrian pathways. Promote the use of sustainable and environmentally friendly transportation modes to reduce congestion and pollution. Supporting multi-modal transportation to health hubs/ precincts will decrease the reliance on building further car parking facilities for staff and patients.
- Long-Term Financing: Establish dedicated funding mechanisms for infrastructure development or redevelopment, to ensure a stable source of funding for projects over the long term, and effective finance allocation with a long-term commitment.

Consultation question 9: How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?

A well-integrated public transport network that seamlessly connects buses, trams, and trains to support access to healthcare. This network should be connected to major health facilities and community services. Ideally improved convenience to access the public transport across Adelaide and outer Adelaide is essential to promote use and uptake, reducing the reliance on car traffic to busy hospital areas. Parking /transport is a significant limitation for the community to access healthcare, particularly the cost of parking at the SA Hospital sites.

Consultation question 10: What investments would support a more efficient and productive health system that meets our growing and changing needs?

- Health Infrastructure: Invest in modern healthcare infrastructure, including hospitals, clinics, and healthcare facilities, to accommodate the growing population and deliver advanced medical services. Upgrade existing facilities to meet current standards and ensure they are equipped to handle emergencies and pandemics, with a long-term outlook for both upgraded and new facilities to maximum efficiencies.
- Telemedicine and Health IT: Develop and expand telemedicine capabilities and health information technology infrastructure to improve access to healthcare services, streamline patient records, and facilitate remote monitoring and consultation. Ensuring healthcare is connected digitally from primary to tertiary care is essential to support people across the care continuum in an efficient and safe manner.
- Build Health Precincts: A health precinct is a concept that involves the clustering of healthcare-related facilities, services, research institutions, and educational institutions in a specific geographic area or campus-like setting. This approach aims

to create a synergistic environment where healthcare providers, researchers, educators, and industry partners can collaborate and innovate to improve healthcare outcomes and advance medical knowledge. Health precincts are often strategically located with easy access to transportation hubs, making it convenient for patients, healthcare professionals, and researchers to access the facilities. Health precincts may attract healthcare-related industries, such as pharmaceutical companies, biotechnology firms, and medical device manufacturers, promoting collaboration between academia and industry.

- Integrated Infrastructure Planning across sectors to support co-location of services/agencies e.g., universities, education, welfare, housing, health services as a 'one-stop shop' approach to deliver services to South Australia's vulnerable communities.
- Supporting the health sector by improving access to specialist outpatient services in the community through building ambulatory hubs in close proximity to hospitals, to provide timely care in an outpatient setting and reduce the foot-traffic of day patients/ outpatients to a busy hospital site.

Consultation question 11: How can infrastructure support improved education and skills outcomes for South Australia?

- Modern Learning Environments: Infrastructure investments can support the integration of universities seamlessly into hospital / health environments, supporting education and learning, and career development. Integration of learning and research hubs can support development of the future workforce required in health.
- Research and Innovation Hubs: Investment in research and innovation hubs, including technology parks and innovation precincts within health precincts, fosters collaboration between educational institutions and industries, driving economic growth and job creation.

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

- Aboriginal Health Clinics and Facilities: Build and upgrade Aboriginal health clinics and facilities, especially in remote and underserved areas, to improve access to culturally appropriate healthcare services. These facilities should be designed with the input of Aboriginal communities and may include birthing centres, primary care clinics, and dental services.

- Telehealth Infrastructure: Expand telehealth infrastructure to provide remote communities with access to medical consultations, specialists, and diagnostic services. This can help bridge the gap in healthcare access for those living in distant or isolated areas.
- Community Health Centres: Establish or improve community health centres to provide more comprehensive holistic services that considers broader social and emotional wellbeing needs. These centres can address a wide range of health issues, including chronic disease management and maternal and child health.
- Aged Care Facilities: Develop aged care facilities that are culturally appropriate and provide care for Aboriginal elders. These facilities should respect cultural traditions and provide high-quality care in a culturally safe environment.
- Education and Training Centres: Establish Aboriginal health education and training centres within health precincts to support the development of Aboriginal and non-Aboriginal healthcare professionals.
- Transportation Infrastructure: Improve transportation infrastructure to ensure that Aboriginal communities can access healthcare services more easily.

Consultation question 15: What infrastructure investments will support industries to transition to a global net zero future?

- Green Healthcare Facilities: Build and retrofit healthcare facilities with environmentally sustainable features, such as energy-efficient building designs, renewable energy sources (solar panels / electrification/rainwater harvesting), and use of sustainable or recycled construction and fit out materials eg floor coverings.
- Energy-Efficient Healthcare Buildings: Invest in smart building technologies to reduce energy consumption in healthcare facilities.
- Sustainable Transportation: Develop infrastructure to support sustainable transportation options for healthcare workers and patients, such as bike lanes, electric vehicle charging stations, and efficient public transit connections to hospitals.
- Telemedicine Infrastructure: Expand telemedicine infrastructure to reduce the need for in-person healthcare visits.
- Healthcare Supply Chain Efficiency: Invest in green supply chain infrastructure for healthcare facilities, including efficient distribution systems, supply chain optimisation, and the use of eco-friendly packaging and materials.
- Medical Waste Management: Implement advanced medical waste management systems that prioritise recycling, composting, and waste reduction.

- Eco-Friendly Medical Equipment: Replace or retrofit medical equipment with energy-efficient and low-emission technologies.
- Community Gardens and Green Spaces: Create community gardens and green spaces near healthcare facilities to promote physical activity, mental well-being, and a connection to nature.
- Research and Innovation Hubs within Health Precincts: Invest in research and innovation hubs focused on developing sustainable healthcare technologies, practices, and solutions. These hubs can drive the adoption of green healthcare practices and technologies.

13 November 2023

RE: SOUTH AUSTRALIA'S 20-YEAR STATE INFRASTRUCTURE STRATEGY – DISCUSSION PAPER FEEDBACK

To whom it may concern,

This letter is being provided as a submission from State Theatre Company South Australia to Infrastructure SA (ISA) to help inform its development of the next iteration of South Australia's 20 -Year State Infrastructure Strategy.

State Theatre Company South Australia is a statutory authority of the South Australian Government; the Company Board is subject to the general control and direction of the Minister for Arts, and the Company maintains funding and administrative relationships with the Department of Premier and Cabinet and Arts SA. This submission does not represent the views of any of these individuals or government entities. Rather, it is made by the Company in our capacity as the largest professional theatre Company in South Australia, one of its major cultural institutions, with a leadership responsibility for the theatre industry and its artists and arts workers.

Future investment in contemporary Cultural Infrastructure will be vital to ensure the state's arts industry and maximise the social and economic benefits the industry delivers for our community. It is increasingly recognised that South Australia's current cultural infrastructure is, broadly speaking, not sufficient to meet the SA Government's Economic Vision for a state that is smart, sustainable and inclusive. In respect of live performance infrastructure, the recent renovation of Her Majesty's Theatre has provided an outstanding theatre attraction in Adelaide and boosted the sector. However, the other state-owned facilities, both in Adelaide and regionally, need renewal. This infrastructure was created with a once-in-a-generation investment by government (assisted by fundraising from the public) in the early 1970's as part of an expansive vision for an outward looking state with a globally connected society and economy driven by tourism and cultural exchange.

Though it is difficult, another once-in-a-generation investment is now required to resurrect and reimagine these existing assets, as well as invest in new ones. Adelaide has grown and is growing, and the cultural sector is more dynamic both locally, nationally, and internationally than in previous decades; there is increasing demand from local audiences and tourists for cultural product and the current state of South Australia's cultural infrastructure is holding back opportunities, especially in live performance. Meanwhile, other states, especially Victoria, Queensland and New South Wales, are bounding ahead with significant strategic investments in cultural infrastructure that will drive their economies for decades to come.

The development of the next 20-Year State Infrastructure Strategy provides an unmissable opportunity to consider how South Australia will manage a significant backlog of need for investment in Cultural Infrastructure and plan for future investment. Without this, the State risks being unable to maintain a viable arts sector. Beyond that, with strategic boldness, and a rigorous, comprehensive and sustainable program of investment, our state has an opportunity to yield profound economic and social benefits.

With reference to the Objectives identified in the discussion paper, this would:

- **[Objective 1] Unlock higher productivity and economic growth to improve our living standards**
 - We advocate for further analysis of the economic multiplier effect of investment in cultural infrastructure, with its close economic links to nighttime economic activity, tourism and education in particular.
 - Also, it must be recognised that operating contemporary cultural infrastructure maintains a skilled workforce who are employed widely across the state in major events and other services.
- **[Objective 2] Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities**
 - The arts sector is a key driver of a successful, multicultural and inclusive society that celebrates and represents a diverse community and First Nations culture.
 - Attracting well skilled professionals requires a lifestyle proposition with an abundant calendar of live performances across theatre, music, dance and other artforms. Cultural Infrastructure is key to this lifestyle proposition.
- **[Objective 3] Accessible and inclusive infrastructure supports social inclusion and economic participation**
 - The cultural infrastructure the state currently enjoys, especially in relation to its non-public spaces (rehearsal, administration, production etc) requires investment to be inclusive to people of all abilities.
 - Properly supported, good cultural infrastructure creates employment pathways for people from a range of economic backgrounds through a variety of career opportunities, both on stage and in technical, production, marketing and administration, and other roles.

The Discussion Paper specifically asks [6.6]:

How can we sustainably grow these [cultural, tourism and recreation] sectors to realise greater benefits for visitors and residents?

We advocate that over a 20-Year planning cycle, Infrastructure SA considers:

- A short-term program of investment in maintenance and renewal to ensure that current Cultural Infrastructure is appealing and safe for users and allows for first class professional arts activity. Fit outs and upgrades of existing theatre facilities is a vital first step to ensure their use and value are maximised.
- A short-term program of investment that ensures the state's main arts statutory authorities are housed in facilities that are adequate for now and enable them to grow into the future, under financial arrangements that do not hamper their delivery of excellent artistic programs. This need has recently been analysed by the Department of Premier and Cabinet with recommendations to seek more sustainable accommodation for key arts companies. A shortage of rehearsal and creative spaces for small to medium and independent artists was identified in the 2019 – 2024 Arts Plan for South Australia, but this shortage has not been addressed as a result.
- A longer-term program of investment, over the 20-year cycle, for new live performance venues. The current cultural infrastructure does not meet the demands of the state's professional live performance companies, as well as its prolific festival calendar. The 2019 – 2024 Arts Plan especially identified the need for a 'black box' performance space with a 350 – 450 seat capacity, and this need has not been met. Alongside that, there has also been a significant diminution in recent years of privately run theatre spaces where small to medium companies and independent artists are able to affordably present work, and this also limits the potential growth of the industry and its workforce.

We appreciate the opportunity to contribute this submission. Cultural Infrastructure in South Australia is at an inflection point, and the development of this new 20-Year strategy provides an enormous opportunity to ensure South Australia continues to be a leader in arts and culture and derives the benefits that come with that.

Yours sincerely



Mitchell Butel
Artistic Director



Julian Hobba
Executive Director



SMA 83.6.2.1

Level 5, 81-95 Waymouth Street
ADELAIDE SA 5000

Mr Anthony Shepherd
Chair, Infrastructure SA
Infrastructure SA
GPO Box 2343
Adelaide SA 5001

c/-GPO Box 1047
ADELAIDE SA 5001

Telephone: (08) 8124 4787
Email: sma@sa.gov.au

www.sma.sa.gov.au

Via email: infrastructure@sa.gov.au

Dear Mr Shepherd

Submission- 20-Year State Infrastructure Strategy discussion paper

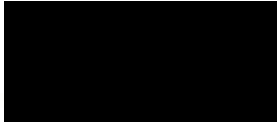
The Stormwater Management Authority (the Authority) is pleased to provide the following submission in response to the Infrastructure SA 20 year State Infrastructure Strategy (the Strategy) discussion paper for consideration.

The key themes the Authority would like to highlight with the Infrastructure SA are:

- Stormwater Management Plans: The stormwater management planning process undertaken by councils, with Authority financial and technical support, provides useful catchment based, strategic information on stormwater management infrastructure needs.
- Climate Change: It is the Authority's view that climate impacts represent a major trend and driver for increased urban flood risk. Adaptation planning needs to consider the uncertainty of future conditions such as the timing and magnitude of impacts and the space needed to accommodate future mitigation infrastructure.
- Ageing stormwater and upgrade constraints: The stormwater network is ageing. In much of Adelaide it is coming toward the end of its service life. Investigations in Stormwater Management Plans have shown that a lack of open space and space below ground are significant constraints to providing desirable levels of future flood immunity and managing water quality risks. Design and management of open space is a significant infrastructure issue in urban areas.
- Governance and funding: Stormwater infrastructure has complex funding and governance arrangements in South Australia. The Authority supports the Stormwater Expert Panel process, commissioned by the Minister for Climate, Environment and Water, to investigate sustainable and effective governance and funding changes for stormwater management infrastructure.
- Strategic Objectives: It is the Authority's view that the Strategic Objectives laid out in the discussion paper could be strengthened by additional consideration of environmental outcomes and the impacts of the infrastructure on the environment.

Thank you for the opportunity to provide this submission. If you have any queries, please contact me directly on telephone [REDACTED] or email [REDACTED]

Yours sincerely

A black rectangular box redacting the signature of Belinda Skilton.

Belinda Skilton
A/GENERAL MANAGER

Date: 10 November 2023

Attachments

- 1- Stormwater Management Authority, Submission on 20 year State Infrastructure Strategy Discussion Paper

The Stormwater Management Authority is pleased to provide the following submission in response to the Infrastructure SA 20 year State Infrastructure Strategy (the Strategy) discussion paper for consideration.

In this submission the Authority has provided some general comments across a range of themes in response to the discussion paper and where the consultation questions are relevant to stormwater management have provided a submission in line with the questions posed in the discussion paper.

Stormwater Management Authority background

The Authority is established pursuant to the Local Government Act 1999 in a spirit of partnership between state and local government. The Authority is comprised of a board of (currently) nine-members appointed by the Minister for Climate, Environment and Water, and includes nominees of the Local Government Association (LGA) of South Australia.

The Authority acts as a state-wide planning and prioritisation body for stormwater management; and promotes the management of stormwater in a way that delivers multiple benefits including flood protection, public amenity, healthy waterways and healthy coasts.

A priority for the Authority is providing financial, technical and policy support for the development of stormwater management plans (SMPs) by local government authorities. In this, the Authority is guided by its *Stormwater Management Planning Priorities for South Australia 2022*.

Stormwater management and the Strategic Objectives

Of the six Strategic Objectives proposed good stormwater management contributes to achieving outcomes against:

- Objective 2 (Liveable communities) -through reducing flooding, improving the quality of open space and the health of the receiving environment.
- Objective 4 (Sustainable economy)- fit for purpose water use.
- Objective 5 (Improved resilience to shocks) - perhaps mostly directly, good stormwater management has the potential to mitigate the impacts of the expected increasing frequency of natural hazard shocks like extreme rainfall and heat wave.
- Objective 6 (Infrastructure planning)- supporting local government to use a catchment based strategic approach to identifying stormwater management works.

It is the Authority's view that the Strategic Objectives laid out in the discussion paper could be strengthened by additional consideration of environmental outcomes and the impacts of the infrastructure on the environment.

Consultation question 3- How can we enable a sustainable and affordable water supply into the future?

Whilst centralized stormwater recycling systems are overall a modest component of the current water resource supply mix in South Australia, stormwater can provide strategic beneficial contributions where local conditions and demands are right. Centralised stormwater recycling like Managed Aquifer Recharge (MAR) schemes should remain part of the all options approach to water supply adopted in the Government's Urban Water Directions Statement¹. In addition, the passive use of stormwater in the street scape and open space should be encouraged and enabled at the local scale to reduce demand on other water sources. This requires planning of our street utilities to allow space in the verge and underground for passive stormwater reuse and better design of public open space to achieve multiple benefits.

Consultation question 7- How can South Australia better coordinate infrastructure investment to support a growing population?

Stormwater Management Plans (SMPs)² developed by Councils with support from the Authority can provide strategic catchment scale guidance on stormwater management infrastructure needs into the future across local government boundaries. These plans consider climate change and potential future development and provide cost benefit analysis that can aid a transparent evaluation of the costs.

It is important to consider stormwater infrastructure co-ordination at the catchment scale to avoid unintended consequences on the service level delivered to communities downstream of development and for costs of development on infrastructure upgrades to be transparent. Many stormwater management assets have a long service life so consideration of planning beyond 2050 is needed to efficiently manage infrastructure investment.

Open space should be considered an integral part of infrastructure planning. Into the future urban open space needs to increasingly account for multiple uses to achieve stormwater quality improvement, manage flooding and urban heat and to achieve biodiversity as well as recreational and aesthetic outcomes. Consideration also needs to be given beyond the immediate planning horizon to provide space for future staged upgrades to infrastructure in the face of climate change and longer term growth later in the century. Stormwater management planning investigations in metropolitan Adelaide have repeatedly shown challenges with managing expected runoff from increasing urban infill and the increasing

¹ Urban Water Directions Statement <https://www.environment.sa.gov.au/topics/water/water-in-urban-environments/urban-water-directions-statement/consultation-process-to-inform-the-urban-water-directions-statement>

² Approved stormwater management plans are available on the Authority's website <https://www.sma.sa.gov.au/resources/stormwater-management-plans/>

rainfall intensity of climate change due, in part, to the lack of open space available for additional treatment and detention.

The management of below ground space is also increasingly becoming a constraint to underground drainage infrastructure upgrade, the use of local scale water quality improvement and passive water use infrastructure like vegetated biofilters and to increasing the street tree canopy. Encouraging more co-ordinated planning of underground services would better manage this constrained space.

The Authority is aware of the potential to link regional plans (instrument of the planning system) to reference documents and data sets such as those developed by the Authority. The Authority would like to further explore with Planning and Land Use Services (PLUS) the opportunities possible under section 71 of the *Planning, Development and Infrastructure Act 2016*. Possible reference documents and data sets may include SMPs themselves, the flood mapping developed during SMP development and the Stormwater Management Planning Priorities work which used a data driven spatial approach to assessing catchments across Adelaide against a range of themes. Exploring this potential to better link high level planning decisions with stormwater management investigations has the potential to better support South Australia's growing population.

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

For some time SMPs have included consideration of climate change impacts on stormwater management, in particular future flood risk and infrastructure needs to mitigate these risks. SMPs, where they exist, can be used to inform planning for new infrastructure and development with flood mapping and concept level mitigation design and flood damage estimates. Where councils are yet to complete a SMP in a catchment this should be encouraged to facilitate infrastructure planning.

Historically the Authority with its council partners has delivered much of the flood mapping in South Australia. The Authority has supported this via its stormwater management planning framework, technical and grant funding support. Many of the flood studies recently commissioned for update by Planning and Land Use Services were based on existing council led studies supported by the Authority. The Authority continues to receive strong interest from councils to complete SMPs which will in turn add to or update the hazard data sets available.

The design guidance for accounting for climate change in flood studies and infrastructure design that deals with flooding is evolving, as our understanding of climate change impacts on extreme rainfall improves. The climate change design science in the key guidance document, Australian Rainfall and Runoff³ is currently being reviewed by Commonwealth

³ <https://arr.ga.gov.au/arr-guideline>

Department of Climate Change, Energy, the Environment and Water. The Authority supports this crucial update of the guidance document. Including South Australian specific data such as the downscaled climate projections invested in by State Government will assist in ensuring guidance is fit for purpose in the South Australian context. Opportunities for capacity building of the flooding and stormwater management sector should be encouraged so that practitioners are aware of best practice techniques.

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

Climate change: It is the Authority's view that climate impacts represent a major trend and driver for increased flood risk to critical infrastructure. Stormwater management has a role to play in managing the increasing risk of urban flooding expected as the climate changes. Urban flooding can pose a risk to critical infrastructure directly via inundation and damage and also indirectly through restricting access to maintain and operate critical infrastructure and through the disruption to communities and related industries and supply chains during and after a flood event.

Acknowledging the science on expected impacts of climate change is developing rapidly is important when planning for climate change adaptation. Adaptation planning needs to consider the uncertainty of future conditions such as the timing and magnitude of impacts and the space needed to accommodate future mitigation infrastructure. Adaptation planning also needs to consider the potential for complex interactions between climate impacts, for example increasing rainfall intensity and sea level rise.

Ageing stormwater and upgrade constraints: The stormwater network is ageing. In much of Adelaide it is coming toward the end of its service life. Future increases in development and increases in rainfall intensity expected with climate change mean that to achieve desirable flood immunity for the community and critical infrastructure, significant stormwater network upgrades will be required. Investigations in SMPs have shown that a lack of open space and space below ground are significant constraints to providing desirable levels of future flood immunity.

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

The Authority has recently invested with the Department for Environment and Water in the development of a Stormwater Cost Benefit Framework⁴ guidance document. This document provides guidance on how to account for a wider range of benefits and costs when making stormwater management related decisions. Cost benefit analysis that considers a broader range of benefits and costs is more likely to reflect the total benefit to the community of investment in blue and green infrastructure such as biofilters and water course restoration

⁴ <https://www.sma.sa.gov.au/wp-content/uploads/Stormwater-management-cost-benefit-framework.pdf>

activities. Developing South Australian specific economic evidence, such as willingness to pay studies, to support cost benefit analysis of blue and green infrastructure would assist in more reliable and consistent cost benefit analysis.

The Authority's stormwater management planning framework requires councils to consider the social, economic and ecological values of a catchment to set objectives for stormwater management planning. Through this framework infrastructure and non structural interventions in SMPs actively consider opportunities for blue and green infrastructure and where possible seek to achieve for the multiple benefits that can be realised. Councils should continue to be encouraged to complete SMPs.

Consultation question 24 -How can we maximise the productivity benefits of digitising our infrastructure?

The digitisation of stormwater management asset information increases the efficiency of asset management and future scenario planning as is completed in the Stormwater Management Plan development process. The approach to digitisation of stormwater asset data is not consistent between councils and can be a challenge for smaller councils with far fewer resources.

The Stormwater Management Authority supports open data sharing for better decision making. The Authority has invested in collating spatial stormwater asset data from councils with the intent of updating the stormwater network data set available on Data SA. This project is ongoing.

Consultation question 26 - What are the funding and financing options government should consider in future, to ensure its infrastructure program remains affordable and sustainable?

In South Australia, stormwater management is a responsibility that is shared between the state government, local government and private landowners. The Authority through its Stormwater Management Plan implementation monitoring work has recently published a fact sheet indicating for catchments where SMPs have been completed there is greater than \$600 million dollars of stormwater works needed with over \$200million of those works listed as high priority. These cost estimates are likely to be well underestimated give the age of some plans and the cost escalation seen in recent years for civil works. The recent Urban Water Directions Statement published by the Department for Environment and Water found that between 2014/15 and 2018/19 metropolitan councils collectively spent an average of more than \$100 million per year on stormwater management. In stark contrast the State directly contributes to stormwater management with approximately \$6million dollars a year to the Stormwater Management Fund, of which the vast majority is dispersed to councils in the form of grants.

Stormwater infrastructure has complex funding and governance arrangements and unlike other utilities there is no explicit charge for the services provided by the stormwater management system.

The Minister for Climate, Environment and Water recently commissioned an expert panel to provide advice on the governance and funding arrangements for drainage in South Australia. The Authority supports this process to investigate sustainable and effective governance changes for stormwater management infrastructure.

The Greater Adelaide Regional Plan and the Infrastructure SA 20 year strategy

The Authority notes that the discussion papers for both the Infrastructure SA 20 year Strategy update and the recent Greater Adelaide Regional Plan (GARP) appear not to use the same population growth scenario. The GARP focuses on the high growth scenario and the Infrastructure SA Strategy paper considers the medium scenario. The Authority encourages Infrastructure SA and Planning and Land Use Services to consider aligning the populations projections on which these two plans are developed in subsequent stages of plan development.

Other

The first 20 year Infrastructure Strategy included a discussion of a wide range of water related infrastructure under the heading 'stormwater'. It is the Authority's view that some of the surface water related discussion provided under the heading 'stormwater' may be better aligned with other headings. The Department for Environment and Water's recent Urban Water Direction Statement and supporting documents may assist in providing updated information for any summary.⁵

⁵ Supporting documents to the Urban Water Directions Statement <https://www.environment.sa.gov.au/topics/water/water-in-urban-environments/urban-water-directions-statement/consultation-process-to-inform-the-urban-water-directions-statement>. Urban Water Directions Statement <https://www.environment.sa.gov.au/topics/water/water-in-urban-environments/urban-water-directions-statement/consultation-process-to-inform-the-urban-water-directions-statement>.