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

Submissions from Advocacy Groups

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AUSTRALIAN MEDICAL ASSOCIATION
(SOUTH AUSTRALIA) INC.
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9 November 2023

Mr Anthony Shepherd
Chair
Infrastructure SA
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Dear Mr Shepherd

I write as Chair of the Road Safety Committee of the Australian Medical Association in South Australia (AMA(SA)). For more than two decades, our Committee has advocated for better road and traffic conditions, explained the impacts of drugs such as alcohol and marijuana on driving capacity, and examined the impacts of new technologies and human behaviour on road safety, with the aim of reducing what we regard as unacceptable levels of death and injury on our roads.

The AMA(SA) Road Safety Committee welcomes the opportunity to provide feedback to the State Infrastructure Strategy Discussion Paper. Our submission reflects our belief that this infrastructure plan can and should influence the health, well-being, and safety of South Australians for the next 20 years and can set a benchmark for the nation and its consideration of and planning for better, safer roads and traffic conditions. As such, our feedback focuses on reducing the risk of deaths and serious injuries on our roads, but also extends to the general health impacts of infrastructure planning.

Road safety and the environment

Road trauma remains a very significant cause of death and serious injury in our community, affecting disproportionally current and future working populations. This of course has implications for the economy as well as having tragic consequences for individuals and families. The Australian Road Safety Foundation estimates the annual cost of road trauma in Australia at $27 billion.[1]

Despite a multitude of programs and policies to reduce the number of deaths on our roads, the road toll is not decreasing. As I write this on 9 November 2023, there have been 97 fatalities and 715 serious injuries on South Australian roads this year, compared with 71 deaths and 652 serious injuries for the whole of 2022.

Road safety is dependent on three factors: the human (fallible drivers and passengers), the vehicle, and the environment. For the purpose of this submission the focus will be on the environment, in this case the built infrastructure: new and planned, and existing. Our feedback is outlined below.

[1] https://treasury.gov.au/sites/default/files/2022-03/258735_australian_road_safety_foundation.pdf

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1. Pedestrian safety and infrastructure

The committee is concerned that the State Infrastructure Strategy establish plans to provide adequate infrastructure for vulnerable road users, in particular pedestrians.

One of the first things we do in our lifespan, and often one of the last things, is walk. Everyone is a pedestrian at some stage. A focus on ensuring a safe walking environment is essential. As well as providing safety for those who *must* walk as their main means of transport, robust pedestrian infrastructure, including footpaths and safe crossings, will encourage greater uptake of walking by the community, which will lead to public health and environmental benefits.

The Discussion Paper notes that the number of South Australians aged 65 and over is projected to reach 24% of the population by 2051. As many older South Australians walk as a main form of transport and exercise, the provision of carefully planned and maintained footpaths and paths on which they may do this are essential.

Pedestrians are not the only users of footpaths and paths. Cyclists, small children riding bicycles and tricycles, and wheelchair users and carers are also users of these important thoroughfares.

Walking is also important for people with young children, children and students. In addition, it forms a critical means by which people interact with each other, providing opportunities for the engagement that is critical for health and wellbeing.

We ask that the absence of planning to meet the needs of pedestrians and other users of paths and footpaths be addressed in future iterations of the strategy and discussion paper.

2. Infrastructure for cycling and small-wheeled devices

Cyclists are important users of roads and other thoroughfares. Cycling is an important form of transport for workers and students, as well as a popular form of exercise.

E-scooters are also becoming increasingly common in many areas. Currently, the legal status of e-scooters and other personal mobility devices is in flux, with e-scooters, for example, only being permitted as part of localised trials. While the Committee has some reservations about the legalisation of these devices, it is essential that any plans to incorporate them as permanent transport options be recognised and reflected – as separate from motor vehicles and pedestrians – in infrastructure planning.

3 Separation of carriageways

The Committee believes that the most obvious way to minimise the risk of collisions between members of different types of road users is to provide infrastructure that enables the groups to be separate.

Complete separation where possible is ideal. However, if and where this is not possible, ‘big and fast’ should give way to ‘small and slow. Traffic calming strategies and infrastructure such as lane narrowing and narrowing corner radii can help facilitate this by reducing speeds and supporting people-friendly neighbourhoods.

However, it is essential that where complete separation occurs, planning allows for the needs of the pedestrians, such as by creating pedestrian overpasses.

4. Roads and conditions

> *Investment in infrastructure should be geared towards long-term transformation of the road system taking into account future transport needs and the requirements of future vehicles.*[2]

The design, use and maintenance of roads – from interstate highways to local council laneways – have impacts on the safety of everyone who uses them. These factors contribute directly to achievement of the strategy's second and third objectives, relating to 'liveable and well-planned places', and to accessibility, social inclusion and economic participation. Yet the discussion paper refers to roads and transport only in terms of 'freight and supply networks', ignoring the vital role of roads and other transport corridors in allowing people to move easily and safely and to performing their 'Movement and Place'[3] functions.

The Committee recommends that the strategy further examine the role of the road network in fulfilling all the strategy's objectives, and not just those that are linked to direct economic outcomes. In doing so, it will align with the objectives of the 'SA Road Safety Strategy to 2031', which has as its vision 'Zero lives lost on our roads by 2050'.[4] The Road Safety Strategy also calls for greater investment in road infrastructure, including:

- better signage
- more dual highways
- sealed roads
- rest stops on regional and remote roads
- better major intersection design
- higher standards of road maintenance
- fit-for-purpose road infrastructure for heavy vehicles.

We also call for more consideration of and funding for road maintenance, which plays a significant role in the capacity of drivers, and particularly motorcyclists, to navigate the roads. Manholes are often not level with road surfaces, which creates another risk for motorcyclists and bicyclists.

5. Speed reduction

Infrastructure should reflect government ambitions to control the speed of vehicle users and support system safety. Evidence demonstrates 30 kph limit gives a pedestrian the best chance of survival in a collision with a moving vehicle. Our position is that in areas of high pedestrian activity, the speed limit should be 30 kph. Similarly, we recommend 40kph in urban streets, 50kph on dense commuter roads and 60kph and above when safe to do so in metropolitan areas. This should be standardised across the network.

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[2] https://www.thinkroadsafety.sa.gov.au/__data/assets/pdf_file/0007/963187/SA_Road_Safety_Strategy_to_2031.pdf, page 50

[3] https://www.movementandplace.nsw.gov.au/resources/movement-and-place-around-world

[4] https://www.thinkroadsafety.sa.gov.au/__data/assets/pdf_file/0007/963187/SA_Road_Safety_Strategy_to_2031.pdf, page 6

Along with speed limits, road design is known to contribute to user safety. Parking strategies must be considered as part of overall road design and use and their impact on road safety considered. For example, the introduction of angled parking in some areas has created risky situations for road users.

6. Greening

The Committee believes that there is a role for landscaping in road safety, as highlighted in the Road Safety Strategy.[5] For example, vines, succulents or small bushes in front of or against trees and other solid obstacles such as stobie poles, especially in areas where collisions are frequent, could considerably reduce impacts and hence deaths and injuries.

However, all landscaping must be planned and maintained to ensure no loss of visibility occurs as a result.

These initiatives will also contribute to environmental and mental health targets.

7. New technology

The past few years have brought about many technological advancements that improve traffic safety. These include autonomous emergency braking, lane maintenance technology and modern safety equipment, including helmets for motorcyclists, cyclists, and users of e-scooters. We recommend that these new technologies (both in vehicles and in the infrastructure itself) be embraced where supported by evidence.

We would strongly suggest that the Centre of Automotive Safety and Research (CASR) at University of Adelaide would be the appropriate body to guide this decision making.

We also note that the development of autonomous or driverless vehicles and their implementation would have significant impacts on infrastructure, including road design, and ask that the potential for or any plans for the introduction of this technology in South Australia be reflected appropriately in all infrastructure planning and considerations.

In addition, advances in solar and other energy-efficient forms of lighting technology should be introduced along transport routes, including in parks and similar outdoor spaces, to encourage safe community use by cyclists, pedestrians and people looking for healthy outdoor recreation.

8. Medical

Timing is of the essence in emergency trauma retrievals and, given the distances in South Australia, is a challenge. There could be a role for real time remote video back up those providing emergency treatment, including ambulance officers, bystanders, general practitioners. Road and air retrieval capabilities also should be considered as part of infrastructure planning.

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[5] https://www.thinkroadsafety.sa.gov.au/__data/assets/pdf_file/0007/963187/SA_Road_Safety_Strategy_to_2031.pdf, page 15

Planning for road and air retrievals must consider existing and future aircraft and road vehicle design.

9. Public transport

Public transport is an essential part of infrastructure planning. An inclusive society must provide the means for those who cannot drive to move around our community. Encouraging people to use buses and trains has significant road safety benefits.

Reducing heavy road transport has the potential to significantly reduce the yearly roll toll.

Public transport can be made more attractive and convenient by the implementation by “Park and Ride” facilities and the ability to take bicycles, pets etc. with passengers.

Problems of security and the potential transmission of communicable diseases could be addressed by initiatives such as security cameras and improved ventilation. We would strongly support the extension of the rail network to Mount Barker, given the burgeoning population in that town.

9. Governance

There is no doubt that implementation of any policy can be affected by influences such as economics, bureaucracy and politics. We recommend the Strategy consider establishing an office of Independent Road Safety Commissioner, reporting directly to Parliament and free of any partisan political influence, similar to the Ombudsman and Auditor-General.

Community members should also be encouraged to provide ideas and input into the design, use and safety of the roads they use. Mechanisms such as the RAA’s Road Watch is one way in which members of the community can provide input into road safety.

Please contact me at rsc@amasa.org.au or directly at any time on [redacted], or via Mrs Catherine Waite of the AMA(SA) Secretariat on [redacted], to discuss this further.

Yours sincerely

Dr Monika Moy
MBBS, FRACGP

Chair, AMA(SA) Road Safety Committee

ACRS Submission on South Australia's next 20-Year Infrastructure Strategy

AUSTRALASIAN COLLEGE OF ROAD SAFETY

About the Australasian College of Road Safety

The Australasian College of Road Safety was established in 1988 and is the region's peak organisation for road safety professionals and members of the public who are focused on saving lives and serious injuries on our roads.

The College Patron is His Excellency General the Honourable David John Hurley AC DSC (Retd), Governor-General of the Commonwealth of Australia.

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13 Nov 2023

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Introduction

The Australasian College of Road Safety is the region's peak membership association for road safety with a vision of eliminating death and serious injury on the road. Our members include experts from all areas of road safety including policy makers, health and transport professionals, academics, community organisations, researchers, federal, state and local government agencies, private companies and members of the public. The purpose of the College is to support our members in their efforts to eliminate serious road trauma through knowledge sharing, professional development, networking and advocacy. Our objectives include the promotion of road safety as a critical organisational objective within government, business and the community; the promotion and advocacy of policies and practices that support harm elimination; the improvement of relative safety outcomes for vulnerable demographic and user groups within the community; the promotion of post-crash policies and practices; and the promotion of a collegiate climate amongst all those with responsibilities for and working in road safety.

The College believes that we should prevent all fatal and serious injuries on our roads; the road traffic system must be made safe for all road users; system designers should aim to prevent human error and mitigate its consequences; life and health are not exchangeable for other benefits in society; and that all College policy positions must be evidence based.

South Australia's next 20-Year State Infrastructure Strategy

According to the consultation website, Infrastructure SA (ISA) are required to prepare a 20-Year State Infrastructure Strategy and review it at least once every 5 years under the Infrastructure SA Act 2018 (SA). The current consultation process seeks feedback to inform an update to the first Strategy which was released in 2020, with a Discussion Paper being developed to provide "an overview of our economic context, current megatrends and their implications for infrastructure, relevant evidence and data as well as key issues and challenges that we need to consider in our planning." ACRS welcomes the opportunity to make this submission.

ACRS response to the Discussion Paper

a) The burden of road trauma

In the 10 years between 2013 and 2022, 950 lives were lost and more than 7,100 people were seriously injured on South Australian roads.(1) This level of road trauma has now been steady for many years, noting that South Australia's statewide road fatalities have plateaued at around 100 per year since around 2006 as shown in Figures 1 and 2.

Without radical change to the way we plan and manage our road networks, we are currently on track to see almost 2,000 people killed on our state's roads over the lifespan of the next 20-year State Infrastructure Strategy. With the discussion paper providing objectives to support a growing population, the number of fatalities and serious injuries from road crashes would be expected to be even higher without significant actions being implemented to improve road safety.

Beyond the human trauma, it should also be acknowledged that poor road safety is also a burden to the economy and the health system.

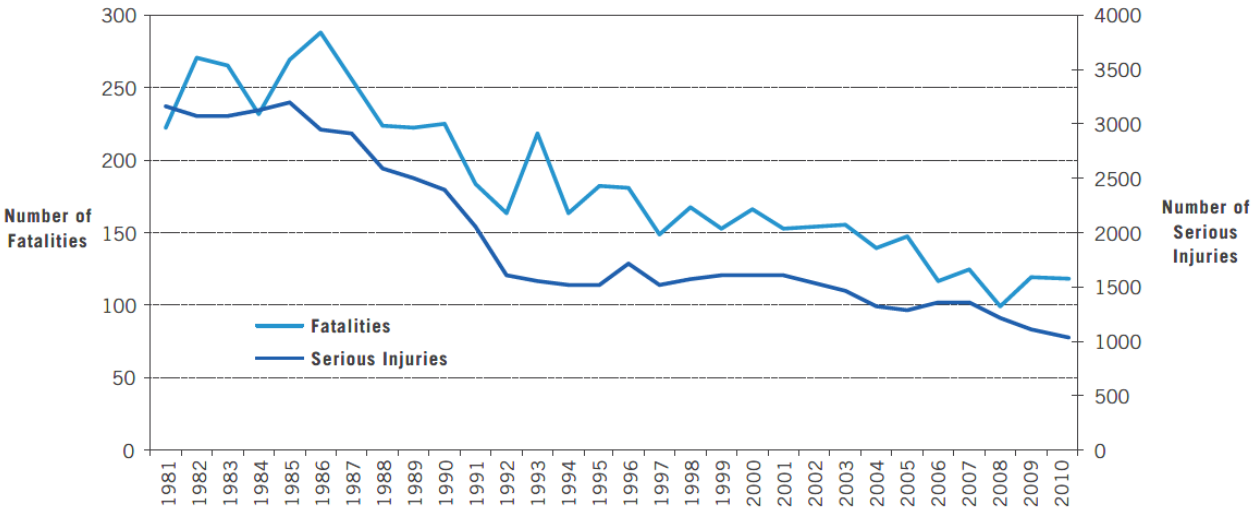

Figure 1
Source: Towards Zero Together – South Australia's Road Safety Strategy 2020(2)

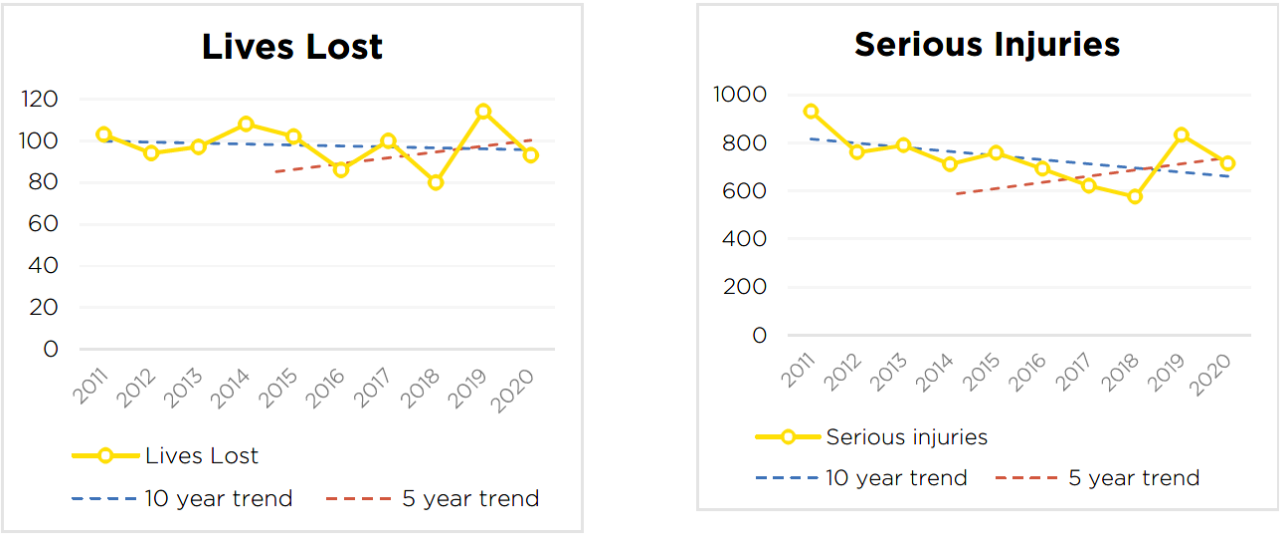

Figure 2
Source: South Australia's Road Safety Strategy to 2031(3)

b) Prioritisation of road safety

South Australia's future population deserves to experience safe travel on the road network, without the risk of being killed or seriously injured. There is good conceptual alignment between many areas of road safety and the 20-Year State Infrastructure Strategy discussion paper, such as:

- Greater use of Higher Productivity Vehicles leading to safer movement of freight (page 15);
- Aligning land use and infrastructure planning effectively to deliver infrastructure that integrates well with the communities it serves (page 21);
- Providing efficient access to public transport (page 23);

- Noting the potential benefits of on-demand bus services to reduce reliance on private car travel (page 24);
- Walkable and bike-friendly infrastructure is important for South Australia's cultural, tourist and recreational attractions (page 28);
- Understanding that improved accessibility and social inclusion leads to greater economic success (page 30).

However, it is concerning that the Discussion Paper makes no direct mention of the vital need to embed road safety into any planning vision, given that it is impossible to achieve universal liveability when people continue to be killed or seriously injured on our roads. Past experience has shown that improvements to road safety do not come quickly, or cheaply, and so a strategic approach is required.(4) As such, it is vital that the 20-Year State Infrastructure Strategy acknowledges and prioritises road safety as a key objective.

We draw ISA's attention to South Australia's Road Safety Strategy to 2031(3), with its vision of "Zero lives lost on our roads by 2050". This strategy and its accompanying Action Plan has the important targets of at least a 50% reduction in lives lost and at least a 30% reduction in serious injuries on South Australian roads by 2031. The Strategy contains the "*Principles for decision making and investment*", which states that "*road safety will be a key criteria in all decision making frameworks for investment decisions and policy setting*". We note that the document also states that these principles "*will guide the South Australian Government's decision making on transport related investments, policy setting, programs and initiatives*".

c) Modern strategic concepts for improving road safety

In addition to South Australia's Road Safety Strategy to 2031 we would like to bring the Commission's attending to the following road safety concepts.

The safe system

South Australia's Road Safety Strategy to 2031 states that "The Safe System model is regarded as international best practice and is the framework for improving road safety across Australia"(3). Austroads defines the Safe System as a philosophy that brings a public health focus to road safety that aims for harm minimisation, centred on the acknowledgement that human errors can lead to unintentional death and injury and highlighting that human wellbeing should take precedence over efficient movement(5). The key principles of the Safe System Model are that:

1. People make predictable mistakes that can lead to road crashes;
2. The human body has a limited physical ability to tolerate crash forces before harm occurs;
3. A shared responsibility exists amongst those who plan, design, build, manage and use roads and vehicles to prevent crashes resulting in serious injury and death; and
4. All parts of the road and traffic system must be strengthened to multiply their effects; and if one part fails, road users are still protected(6).

In applying this approach there must be an emphasis on prevention, not just mitigation, of road trauma through design which prevents crashes, with a recognition that:

- The road traffic system is a complex interaction of many interrelated components, involving many participants in different situations;
- Many road user errors and crashes are created by the interactions between road system components;

- The design and operation of a safe road traffic system must respond to the capacities as well as the limitations and vulnerabilities of the human user; and
- Understanding the causes of road traffic crashes and injuries requires understanding interactions within the broader road traffic system and other aspects of society.(7)

Movement and Place

This is a concept that considers road function in road design and operation and categorises the role of roads and streets based on their local context. Roads with a 'movement' function, such as motorways, provide for high traffic volumes and speeds and have little pedestrian activity or local community function. Roads with a 'place' function are typically local streets that accommodate high numbers of pedestrians, with any passing vehicles travelling at low speeds. This approach informs speed management and road design(3).

The Movement and Place approach significantly underpins the application of the Safe System and is a key way of making roads safer for vulnerable road users. Speed is a major consideration. South Australia's Road Safety Strategy to 2031 states that "Pedestrians are at greater risk of death and serious injury if hit at impact speeds above 30 km/h. The most vulnerable pedestrians are children and older people". This is evidence based – see the ACRS Policy Position Statement on Speed Management(8). Accordingly, we consider urban designs should be aiming for 30 km/h speed environments on areas with high levels of pedestrian activity such as residential streets.

Vulnerable Road Users and Active Travel

On roads where vehicles interact with pedestrians and cyclists, these users are inherently more vulnerable in crashes as they have little to no protection to mitigate the forces experienced by the human body in a collision event(9). Whilst the benefits of active travel are widely established, the risk of injury or death to these vulnerable road users is often a major barrier for people seeking more sustainable and accessible travel modes.

AusRAP

AusRAP (Australian Road Assessment Program) is the Australian version of the International Road Assessment Programme (iRAP), which involves a standardised process to apply star ratings to roads as an objective measures of the level of safety that is "built in" to the road(10). AusRAP measures and communicates the safety risk of road infrastructure and is being increasingly utilised in Australia.

On Monday 18th September 2023, Australia's states and territories announced they had agreed that they will publish AusRAP star ratings on all arterial roads by 2025, as part of a wider commitment to a national target of at least 80% of travel occurring on 3-star or better roads by 2030.

CLOCS-A

CLOCS-A or Construction Logistics and Community Safety Australia, is a national good practice approach for managing the risks and impacts associated with a construction project's on-road transport and logistics activities to improve community road safety. The primary goal of CLOCS-A is to achieve reduction in lives lost and serious injuries associated with construction logistics in Australia(11). To achieve this, CLOCS-A designates a set of minimum standards that heavy vehicles should meet (e.g. the fitment of safety

equipment or the removal of dangerous fixtures like bull bars) to reduce the likelihood (or consequences) of a collision with a vulnerable road user.

Shared responsibility in road safety

The Safe System approach seeks to recognise the responsibility shared by all contributors to the elements of the system. There is a responsibility to collectively manage all inputs so the likelihood of a crash is minimised. The responsibility also continues so that when a crash occurs, every attempt is made to minimise the likelihood it results in fatal or serious injury. Contributors to the system include the people who plan, design and build roads or vehicles, as well as anyone whose actions can influence road trauma, including road managers, vehicle manufacturers, legislators, commercial transport operators, police, employers and individual road users(6).

The ACRS has published a Policy Position Statement on "A new systems thinking approach to road safety" which highlights the need to consider the accountability of governments and government agencies in governing and managing road safety performance(7). Whilst "shared responsibility" is a principle of the Safe System, the ACRS recognises the different participants within the road system hold different levels of authority, responsibility and power.

In South Australia, all South Australian Government agencies hold the highest level of authority as (whilst they are not solely responsible for road safety) they set societal expectations, regulate the safety of roads, and oversee the delivery of system-wide safety activity through investment. The 20-Year State Infrastructure Strategy represents a vital opportunity for the South Australian government to acknowledge and action its primary level of authority and accountability.

d) Responses to selected questions posed in the Discussion Paper

Q1 What opportunities should we consider to improve South Australia's economic growth?

ACRS points out that improved road safety will contribute to South Australia's economic growth through improved safety for transport industry workers, more localised, lower speed and active transport occurring in communities leading to lower emissions, greener spaces (particularly along active transport corridors), wider housing choices and improved health through much lower road crash trauma and more active travel.

ACRS believes that the 20-Year State Infrastructure Strategy should prepare for urban areas where vehicle speeds are lower; alternate transport options are available, accessible, reliable and affordable; and the safety of active travel modes are prioritised.

As stated above, a major driver missing from the discussion paper is the officially stated vision of zero deaths and serious injuries from road crash trauma by 2050, and the 2031 target of at least a 50% reduction in deaths and 30% reduction in serious injuries.

A principle of *South Australia's Road Safety Strategy to* 2031 is: "*In planning the transport network we will consider the function of roads and the adjacent land use to provide safe movement and safe use for road users and visitors*". The *Strategy* further notes that the embedding of the "Movement and Place Approach" into the design of safer roads, suburbs and towns is a key strategy to improve safer roads for all road users.

We strongly contend that any contemporary strategy that considers transport infrastructure must acknowledge the Movement and Place Approach as a foundation towards harmonising the transport networks that serve urban development to be safe. Making strong references to the Movement and Place Approach would reinforce the discussion paper's objective: "*Liveable and well-planned places attract skilled people, support a growing population and create prosperous communities*".

We also consider that the 20-Year State Infrastructure Strategy should call for new roads to have an AusRAP star-rating of at least 3 stars. It is important to note that when upgrading existing roads to accommodate new growth, a primary focus seeking to increase road capacity and/or vehicle speeds such as by widening the formation may be contrary to the Movement and Place approach. In many cases, the narrowing of roads to re-purpose the space away from vehicles to better accommodate pedestrians, cyclists and green space is likely to provide overall improvement to South Australia's economic growth.

Q2 What infrastructure constraints are preventing a more efficient, accessible, and productive freight sector?

In locations where there are frequent interactions between heavy vehicles and vulnerable road users such as pedestrians, cyclist and motorcyclists there is an increased risk of serious consequences when a collision occurs. Whilst good separation between these conflicting users occurs around dedicated industrial lands or where productive activities occur in remote locations, knowledge intensive industries and population service areas that are strategically located close to residential areas will result in the presence of pedestrians and cyclists. In these locations there are still likely to be significant numbers of heavy vehicles performing tasks such as delivering goods or construction activity.

In these areas, it is suggested that the implementation of CLOCS-A should be considered to improve safety. This will significantly contribute to the attraction of businesses and their employees, thus contributing to a more efficient, accessible and productive freight sector.

More accessible and productive freight activity can also be supported by upgrading roads to have an AusRAP star-rating of at least 3 stars. Rather than applying AusRAP ratings on an ad hoc basis, project selection and design should involve a "Network Safety Plan", which is a tool recommended in South Australia's Road Safety Strategy to 2031 to assess the safety of regional and remote road networks and then prioritise safety infrastructure investment where it will have the most impact(3).

Q6 What investments could unlock the value of South Australia's resources?

As noted in South Australia's Road Safety Strategy to 2031(3), "*Safe Work Australia data indicates that more workers lose their lives as a result of vehicle-related incidents than any other cause of work-related death*". It further states that "*Heavy vehicles represent 7% of the kilometres travelled across the state, yet they were involved in 20% of crashes where lives were lost*".

Shifting the movement of mineral and agricultural goods by rail would reduce the number of heavy vehicle movements on our roads, and therefore reduce the exposure of resources employees and the general community to the risk of road trauma.

Q7 How can South Australia better coordinate infrastructure investment to support a growing population?

The provision of better public transport opportunities can help facilitate less reliance on private motor vehicles and consequently reduce transport disadvantage. Whilst the up-front construction costs of public transport infrastructure may be perceived as being too expensive, reducing reliance on private motor vehicles can provide tremendous long-term value when the current social cost of road crashes in Australia has been estimated to range between $22.2 and $30.3 billion annually between the years 2016-2020(12). The greenfield development associated with population growth is an optimal time to provide better public transport opportunities combined with a safe road system up-front to minimise the potential for harm to all future road users.

Q8 What can be done to support sufficient, fit-for-purpose housing to improve housing affordability?

A major drawback of new "affordable" housing developments that tend to occur on the metropolitan fringe or in regional areas is the entrenched social disadvantage that often occurs due to the higher transport costs associated with living in these outer regions. The lower up-front cost of housing in these areas tends to attract residents from lower socio-economic cohorts but lacks the more convenient travel opportunities typically available in established suburb. This tends to result in higher levels of car dependence, with the subsequent higher levels of vehicle interactions on our roads increasing the probability of collisions and trauma.

In highlighting the fact that social inequity leads to greater crash risk(12, 13), the 20-Year State Infrastructure Strategy should identify ways that all transportation modes can be made safer. This can be informed by two of the concepts previously noted. First, the adoption of a Movement and Place Approach will guide the implementation of safe transport corridors for the entire community, regardless of socio-economic status. Secondly, full and proper accountability for poorly performing road infrastructure, under a shared responsibility model which recognises differing levels of power, authority and responsibility, will drive investment to the most at-risk locations.

Q9 How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?

Highly walkable neighbourhoods encourage greater use of active travel, which can limit or eliminate the need for private car linking trips and associated park 'n' ride facilities when accessing public transport. South Australia's Road Safety Strategy to 2031 identifies "walking, cycling and public transport" as a strategic focus area, noting that "*strategic approaches are needed to improve road safety for people who walk, ride bikes and to encourage people to use public transport*"(3).

Metropolitan transport infrastructure should be founded on Safe System compliant street typologies, including features that restrict vehicle speeds to a maximum of 30 km/h and providing comprehensive and convenient walking and cycling networks linking housing with local attractions. The provision of active transport infrastructure as part of master planned growth should be a required component in new land developments.

Higher-order roads must also have high-quality walking and cycling elements, ideally separating these users from moving vehicles and having effective and convenient pedestrian crossing facilities that force vehicles to travel at low speeds, such as wombat crossings. The 20-Year State Infrastructure Strategy should recognise

that the greatest impediment to the uptake of active travel is safety(13-15). Active travel routes need to be connected, continuous (without high-risk sections or crossings), and provide proper amenity for users (wide, flat, maintained, etc).

Provision of public transport opportunities that are safe, convenient, efficient and accessible is also vital to reduce the dependence on private vehicle travel, which has been typical for outer-suburban areas located around the fringes of Metropolitan Adelaide.

Q10 What investments would support a more efficient and productive health system that meets our growing and changing needs?

Reducing death and serious injuries on our roads would alleviate pressure on our health system by reducing the demand for short-term trauma response and immediate post-crash care. Additionally, this would reduce the need for longer-term rehabilitation and management of ongoing chronic conditions for road trauma victims with life changing injuries.

We draw ISA's attention to South Australia's Road Safety Strategy to 2031, which commits the South Australian Government to adopt the National Road Safety Strategy 2021-2030 target of "*at least a 50% reduction in lives lost and at least a 30% reduction in serious injuries on South Australian Roads by 2030*"(3).

Q12 How can we sustainably grow these sectors (cultural, tourism and recreation facilities) to realise greater benefits for visitors and residents?

Design principles that facilitate highly walkable neighbourhoods should apply to all areas that cater for cultural, tourism and recreational facilities. Where such areas also have high tourist demands, particular care must be taken to design infrastructure that accommodates the high level of temporal fluctuations that are experienced in these areas.

For any such facilities located in regional areas, people accessing these areas will need to travel through rural regions which have rural roads that are often high speed, often narrow, often windy, and too often the scene of tragic crashes. For sustainable growth of the tourism and recreational sectors, any rural roads and intersections should ideally be built (or upgraded) to the highest practical level of safety and achieve an AusRAP star rating of 3 stars or more.

Q13 How can we think differently about infrastructure investment to support equitable access and a more inclusive society?

South Australia's Road Safety Strategy states that "*transport disadvantage can increase risk of road trauma*", further noting the concentration of road trauma occurring on regional and remote roads which experiences 56% of crashes where lives were lost and 36% of serious injury crashes(3). The clear link between socioeconomic disadvantage and road trauma highlights the need to provide better opportunities for regional, remote and outer-metropolitan communities who are usually much more reliant on the use of private motor vehicles which are often older models that do not have the latest safety features.

A key focus area of South Australia's Road Safety Strategy to 2031 is young drivers and riders, especially those living in regional and remote areas(3). Whilst actions to improve driver education and access to more modern vehicles may help, safer road infrastructure and more access to public transport opportunities can also limit the exposure of these communities to road trauma to help achieve a more inclusive society.

Q14 What are the opportunities for infrastructure investment to accelerate attainment of the Closing the Gap targets?

As noted in South Australia's Road Safety Strategy to 2031, "*Aboriginal people comprise approximately 2.4% of South Australia's population but are 2-3 times more likely to lose their life and 30% more likely to have a serious injury than non-Aboriginal people"*(3). It further acknowledges that "*it is likely that Aboriginal road safety data is under reported when taking into account the under representation in road safety data and the over-representation in public health data"*(3).

Investing in upgrades to rural roads that achieve an AusRAP star rating of 3 stars or more is one key way to improve road safety for rural and regional communities, including Aboriginal communities in South Australia. Investment in public transport, and safe, separated infrastructure for pedestrians and cyclists can also support improved road safety, especially in built-up areas.

Q17 What are the most significant challenges for decarbonising transport and how do we address them?

ACRS have developed a Policy Position Statement on "Climate Change and Road Safety", which highlights the fact that motorised transport, climate change and road trauma are linked(16). This Position Statement counters any apparent concession that societal impacts such as road trauma and climate change are unavoidable by highlighting the fact that life and health are not exchangeable for economic or efficiency benefits.

To achieve the rapid decarbonisation of transport that is urgently required to meet sustainability targets, our key policy positions are summarised as follows:

1. *Governments should implement the Intergovernmental Panel on Climate Change (IPCC) recommendations because unmitigated climate change will result in road traffic injuries and other direct health and economic impacts.*
2. *Governments must immediately invest in active travel, public transport, and sustainable freight options, and disincentivise personal fossil fuel-based transport.*
3. *Default 30 km/h speed limits for all residential areas.*
4. *Governments should upgrade current infrastructure to prioritise active travel and public transport.*

We recommend that the above priorities be adopted in South Australia's next 20-Year State Infrastructure Strategy.

Q25 How can government continue to encourage collaboration and innovation in procurement?

The procurement process relating to road infrastructure should adopt the requirements set out in South Australia's Road Safety Strategy to 2031, such as achieving a minimum AusRAP star rating of 3 stars or more for the planning, design and construction phases of road projects. Procurement evaluation should also place a high emphasis on tenderers' approaches to workplace and road safety, when considering that "*work-related road crashes in Australia account for approximately half of all occupational lives lost and 15% of lives lost in road crashes nationally*"(3).

Q26 What are the funding and financing options government should consider in future, to ensure its infrastructure program remains affordable and sustainable?

The planning of infrastructure projects should consider the social cost of road trauma and realise the economic benefits by providing infrastructure than minimises harm.

Conclusion and Recommendations

ACRS supports the broad aims of the 20-Year State Infrastructure Strategy and recognises that the associated discussion paper is necessarily a very high-level strategic document outlining ways forward for ISA to determine the infrastructure South Australia needs for the next 20 years.

Accordingly, we make the following broad recommendations to inform the 20-Year State Infrastructure Strategy by improving the safety of South Australia's residents, workers and visitors:

1. South Australia's Road Safety Strategy to 2031 and its associated Action Plan be referenced in the 20-Year State Infrastructure Strategy as a key companion strategy, including with an explicit acknowledgement of the opportunities to improve road safety through infrastructure planning, showing that the government acknowledges and is actioning its primary level of authority and accountability.
2. Incorporate the Movement and Place approach as a key concept within the 20-Year State Infrastructure Strategy.
3. That ISA has a stated objective that urban designs should be aiming for 30 km/h speed environments in areas of high pedestrian activity such as on residential streets.
4. That ISA call for a requirement that all new and improved roads have an AusRAP star rating of at least 3 stars.

We appreciate the opportunity to make this submission and contribute to improved road safety for all road users in the South Australia. Please do not hesitate to contact us should you need any further information.

[redacted]
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13 November 2023

References

1. Department for Infrastructure and Transport. Data SA South Australian Government Data Directory - Road Crash Data: Government of South Australia,; [updated 12 July 2023; cited 2023 5 November]. Available from: https://data.sa.gov.au/data/dataset/road-crash-data.
2. Department for Transport EaI. Towards Zero Together - South Australia's Road Safety Strategy 2020. https://www.dit.sa.gov.au/__data/assets/pdf_file/0020/82163/South_Australias_Road_Safety_Strategy_to_2020.pdf: Government of South Australia; 2020.
3. Government of South Australia. South Australia's Road Safety Strategy to 2031. https://www.thinkroadsafety.sa.gov.au/__data/assets/pdf_file/0007/963187/SA_Road_Safety_Strategy_to_2031.pdf: Government of South Australia; 2021.
4. Wooley J, Crozier J, McIntosh L, McInerney R. Inquiry into the National Road Safety Strategy 2011-2020. https://www.roadsafety.gov.au/sites/default/files/2019-11/nrss_inquiry_final_report_september_2018_v2.pdf: Office of Road Safety; 2018.
5. Shelton D, Beer K, Tan T, Mani A, Beer T. Guide to Road Safety Part 1: Introduction to the Safe System. https://austroads.com.au/publications/road-safety/agrs-set: Austroads; 2021.
6. Office of Road Safety. National Road Safety Strategy Fact Sheet: Vision Zero and the Safe System: ORS; [cited 2023 5 November]. Available from: https://www.roadsafety.gov.au/nrss/fact-sheets/vision-zero-safe-system.
7. Australasian College of Road Safety. ACRS Policy Position Statement: A new systems thinking approach to road safety. https://acrs.org.au/wp-content/uploads/A-new-systems-thinking-approach-to-road-safety-FINAL.pdf: ACRS; 2023.
8. Australasian College of Road Safety. ACRS Policy Position Statement: Speed Management. https://acrs.org.au/wp-content/uploads/ACRS-Speed-Management-PPS-2023.pdf: ACRS; 2023.
9. Corben B. Integrating Safe System with Movement and Place for Vulnerable Road Users. Austroads Research Report AP-R611-20. https://austroads.com.au/publications/road-safety/ap-r611-20: Austroads; 2020.
10. Austroads. Australian Road Assessment Program (AusRAP) [updated September 2023; cited 2023 5 November]. Available from: https://austroads.com.au/safety-and-design/road-safety/ausrap.
11. National Heavy Vehicle Regulator. CLOCS-A: Construction Logistics and Community Safety - Australia [cited 2023 5 November]. Available from: https://clocs-a.org.au.
12. Steinhauser R, Lancsar E, Bourke S, Munira L, Breunig R, Gruen R, et al. Social cost of road crashes. Report for the Bureau of Infrastructure and Transport Research Economics. https://www.bitre.gov.au/sites/default/files/documents/social-cost-of-road-crashes.pdf: ANU; 2022.
13. Pearson L, Gabbe B, Reeder S, Beck B. Barriers and enablers of bike riding for transport and recreational purposes in Australia. Journal of Transport & Health. 2023;28.
14. Buttazzoni A, Nelson Ferguson K, Gilliland J. Barriers to and facilitators of active travel from the youth perspective: A qualitative meta-synthesis. SSM Popul Health. 2023;22:101369.
15. Cavill N, Davis A. Active travel and mid-life: Evidence on attitudes and on the role of the built environment. https://extranet.who.int/agefriendlyworld/wp-content/uploads/2022/11/active-travel-mid-life-full-report.pdf: Centre for Ageing Better; 2021.
16. Australasian College of Road Safety. ACRS Policy Position Statement: Climate Change and Road Safety. https://acrs.org.au/wp-content/uploads/ACRS-Climate-Change-PPS-2023.pdf: ACRS; 2023.

Bike Adelaide

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"May sustainable transport systems be at the heart of Adelaide's success as a people-friendly and environmentally responsible city."

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13 November 2023

SA's 20-Year State Infrastructure Strategy

Bike Adelaide wishes to submit the following feedback on the 20-Year State Infrastructure Strategy.

We note the distinct lack of focus on active transport as the basis for solutions over the next 20 years, indicating that car-oriented infrastructure will likely continue to dominate transport investment, despite transport being the single largest source of carbon emissions. We also note that public transport has not be given appropriate consideration in its capacity to mitigate and offset many of the transition and decarbonisation challenges stipulated in the Discussion Paper, especially given transport emissions are expected to continue rising over the next decade.

South Australia has much lower rates of walking, cycling and using public transport to work and school, and has no major rail projects underway. South Australia also has among the lowest per capita and total spending on active transport compared to other Australian states, which is demonstrated by the lower-than-average rates of cycling. Bike Adelaide is especially concerned that the Discussion Paper has taken an unambitious approach to our State's future, possibly in recognition of the huge opportunity cost of building the Torrens to Darlington motorway. We have stated elsewhere that project will have generational outcomes that will compromise South Australia's ability to meaningfully invest and develop suitable public transport network improvements. Our assessments appear to have grounding having read the Discussion Paper.

Given the low cost but high impact of active transport infrastructure in achieving the Discussion Paper's stated aims of decarbonising and building resilient infrastructure, we urge a greater focus on active transport to address the State's ongoing problems with congestion, car-dependency and rising transport emissions.

We provide here responses specifically to questions:

Section 5.1 Freight and supply networks	2	What infrastructure constraints are preventing a more efficient, accessible, and productive freight sector?
Section 6.3 Public transport	9	How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?
Section 7.2 Regional and remote areas	13	How can we think differently about infrastructure investment to support equitable access and a more inclusive society?
Section 8.3 Transitioning transport	17	What are the most significant challenges for decarbonising transport and how do we address them?

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

- Lack of support and subsidies to encourage or facilitate transitions to small electric vehicles and large electric cargo delivery bicycles.
- Need for subsidies and potentially investment in domestic production capacity of electric delivery vehicles and large cargo bikes to reduce congestion and number of large trucks performing small urban deliveries. EcoCaddy has demonstrated that large cargo bikes and trailers are an efficient and cost-effective way to move large amounts of material in denser urban areas.
- Need to facilitate access to urban delivery hubs to allow distribution by large e-cargo bikes.
- Lack of supportive on-road infrastructure that facilitates e-cargo bike use, privately and commercially. Major corridors need cycling connections to allow delivery bikes to bypass traffic, facilitate commercial adoption of cargo bikes and accelerate private adoption of cargo bikes.

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

- Increase off-peak frequencies for buses, especially during increased activity periods eg late night shopping.
- Standardise weekend fares to off-peak rates.
- Simplify suburban routes
- Prioritise local walking and cycling access to suburban railway stations with direct paths, wayfinding and priority crossings in station precincts and common walking routes to stations.
- Adjust bus/train timetables to facilitate quick transfers on key routes,
- Investigate reserving/recommissioning rail corridors to develop future rail services eg Pooraka, Rosewater and Reynella lines, investigate underground city rail loop for through services,
- Daily regular commuter services from Murray Bridge and Mount Barker, Victor Harbor to Adelaide.
- Establish state intercity and regional bus/coach service integrated with Adelaide Metro network and services ie payment/ticketing, connecting to suburban hubs/service interchanges
- Improve cycling storage amenities at railway stations and tram stops to encourage intermodal journeys.
- Commit to incremental extensions of the tram network to ease inner-urban congestion and provide attractive alternative to buses.

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

- Additional funding into the State Bicycle Fund (SBF), alongside developing a variety of funding models to suit the different needs and capabilities of local governments to raise funding and deliver projects. SBF currently only provides funding on 50/50 basis, which for some councils, still puts important projects out of scope, or is a funding level too low to be desirable.
- E-bike subsidies to households and to commercial operators where large e-electric cargo bikes could feasibly replace delivery trucks.
- State funding for adult cyclist training and support for businesses wanting to transition work to bicycles or e-cargo bikes.
- Assisting regional and remote councils to develop local cycling networks and installation of important baseline infrastructure and facilities eg bike racks, repair stations.
- Ensuring a percentage of a road project's funding is dedicated to delivering pedestrian and cyclist facilities. Where facilities cannot be accommodated in the project, or decrease the amenity, or deliver status quo outcomes (ie a road widening project delivers multiple motor lanes and slips lanes but bike lanes are either removed or reinstated in a less safe environment), funding should be allocated to provide an improved route nearby (eg improvement to local road corridor as alternative cycling corridor).

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

- Introduce e-bike subsidies for members of the public to access, taking into account:
    - pensioners and older people with reduced means but need for independent mobility
    - people ineligible for a drivers license
    - people living in areas with poor access to public transport and high car dependency

    - people wanting to swap a car for an e-cargo bike, especially for families considering larger e-cargo bikes
- Improve frequency of public transport services to improve convenience, providing a more desirable alternative to private car use.
- Lack of a State Cycling Strategy to guide State and local government investment in cycling infrastructure and network development. The Strategy needs to be completed, with targets set for cycling modeshare and transport funding pegged to those targets.
- Lack of State Government funding options available to local government to develop and implement different scales of active transport infrastructure; more flexible funding arrangement are needed to ensure more local governments can access the kinds of support and funding they need to develop high quality local networks.
- Lack of coordination between State and local government to support children getting to school. The Way2Go program is popular but voluntary, and cannot service all schools in SA. Many parents also do not feel comfortable letting their children walk or cycle to school because of the nature of our urban roads, despite a nominal 75% of students wanting to make their own way to school. A significant amount of traffic can be removed by better funding and supporting:
    - the Way2Go program to be delivered at more schools, more consistently;
    - schools and councils to develop local school area transport plans such as in NSW, to promote active transport and reduce children's car dependency and danger from cars.

Our responses are not intended to be exhaustive. But given the lack of content in the Discussion Paper that focuses on active transport, we hope that our comments are taken in good faith with a view to better incorporating sustainable transport as a bigger part of the solution, not an aside.

Regards,

David Elliott, Chair

Submission on the 20 Year State Infrastructure Strategy

October 2023

Commissioner for Children & Young People

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South Australia's 20-Year State Infrastructure Strategy
Infrastructure SA

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Thank you for the opportunity to provide input into the 20 Year State Infrastructure Strategy on behalf of children and young people living in South Australia.

As the inaugural Commissioner for Children and Young People for South Australia, I promote and advocate for the rights, interests and wellbeing of all children and young people living in South Australia and help to bring about improvements to the systems that negatively impact on them most.

I have heard from many children and young people about what they like and dislike about their local environments, the difficulties they have moving around, and their concerns about needing fast internet access and charging facilities wherever they go. Where young people live, the facilities available to them locally and in local towns and cities, and their ease of access to school, activities and employment have an enormous impact on their lives and can mean the difference between getting on well in life and being impoverished. However, their views are seldom considered.

The voices of children and young people will be critical to the success of the State Infrastructure Strategy. I recommend that Infrastructure SA engages meaningfully and appropriately with children and young people to thoroughly understand their unique and diverse current needs, and their valuable perspectives as the voice of future generations. Their desire for equitable access to opportunities to live, learn, earn, and play, and to be connected, creative and confident requires an inter-agency, coordinated approach to infrastructure that meets their priorities, as outlined in this paper.

In particular, the priorities of children and young people that I have highlighted in this submission are relevant to the following consultation questions:

1. What opportunities should we consider to improve South Australia's economic growth?
5. What are the barriers to increased adoption of digital technology to improve productivity?
7. How can South Australia better coordinate infrastructure investment to support a growing population?
8. What can be done to support sufficient, fit-for-purpose housing to improve housing affordability?
9. How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?
10. What investments would support a more efficient and productive health system that meets our growing and changing needs?
11. How can infrastructure support improved education and skills outcomes for South Australia?
12. How can we sustainably grow cultural, tourism and recreational infrastructure to realise greater benefits for visitors and residents?

13. How can we think differently about infrastructure investment to support equitable access and a more inclusive society?
14. What are the opportunities for infrastructure investment to accelerate attainment of the Closing the Gap targets?
20. How do we better account for the impacts of climate change in our infrastructure, to support improved resilience?
23. How can government and industry work together to support the supply of skilled labour needed to deliver a transparent infrastructure pipeline?

If you have any questions or need any further information, please do not hesitate to contact me.

Yours sincerely,

Helen Connolly
Commissioner for Children and Young People
Adelaide, South Australia

Introduction

Under the *Children and Young People (Oversight and Advocacy Bodies) Act 2016*, each State authority 'must, in carrying out its functions or exercising its powers, protect, respect and seek to give effect to the rights set out from time to time in the United Nations Convention on the Rights of the Child'.

The question of how South Australia should plan for its future infrastructure needs to take into account the interests of children and young people. Not only do under-18s form 23 per cent of the SA population, they also represent future generations. This is the generation we need to thrive if SA is to prosper in the next 20 years. If we can create a place that supports all our children and young people and is an attractive place for them to live and work, we might reverse the brain drain and the risks associated with the increasing proportion of the population that is aging in SA.

In my conversations and interactions with thousands of children and young people during my time in office they have raised a number of concerns with me about where they live and how it impacts their lives. They have also told me what they need and would like access to live better, more connected, supported, healthier and happier lives. I have provided these insights here to help inform the State Infrastructure Strategy for the future of South Australia.

Priorities for young people in relation to infrastructure focus on:

- Child and youth friendly places and spaces;
- Access to high quality internet and Wi-Fi connections, and charging facilities;
- Well-connected places where they can walk or cycle to school, uni, work and activities, or safely, easily and cheaply access direct public transport;
- Greener, climate resilient environments; and
- Access to employment information and opportunities, no matter where they live.

Child and youth friendly places and spaces

Committing to providing child friendly and child safe environments for children and young people is not merely something that is 'nice to do'. It is a requirement under international conventions that are embedded in State Legislation.

South Australia's children and young people are proud of where they live. They feel good about what is around them and care about how visitors perceive their towns and regions. However, they also call for more youth specific and friendly infrastructure that will support their development and inspire their career aspirations.

Having infrastructure specifically designed to meet the needs of young people involves investing in creating places and spaces in which they can gather, express themselves, and see themselves being positively reflected within their local communities. This kind of shared investment in local infrastructure helps enable them to develop a personal identity, while also contributing to building regional sustainability through connection, confidence building and creativity amongst young people.

Investing in youth specific infrastructure sends children and young people the clear message that they are valued and important members of their local communities and a place where they will want to stay.

When asked what a youthful place is, young people have told me that it is somewhere where 'anything is possible' where 'tribes' of young people can get together to try out new ideas, express themselves and just 'be young and hang out' without fear of being hassled, judged or moved on.[i]

New developments and infill rarely take these needs into account, and this shows. In 2020, the Australian Urban Observatory found that liveability is poor beyond Adelaide's inner suburbs, in terms of economic, social, environmental and health objectives, as well as the availability of affordable housing close to public transport.[ii] This included access to childcare, community centres, libraries, GPs, sporting facilities, swimming pools schools, museums, cinemas and theatres.

Young people have told us they want spaces that are well planned, have open borders, allow connections, virtually and physically, are open, inclusive, public, and welcoming. They want places which offer things to do and places to be, including somewhere that you can speak your mind, stand up for what you believe in and express your rights.

They would like to have the opportunity to experience and have opportunities to participate in creative pursuits locally and young people spoke about the significance of seeing more colour, art and greenery, both from an aesthetic perspective, and in terms of the pride and optimism this generates.

Young people said that having a local central hub for young people to gather is critical to their needs. This hub would ideally be an all-weather structure, open and centrally located, with space to sit on the ground, as well as other seating. The hub should be big enough for high volumes of young people to gather, and for it to be 'neutral territory'.

Creating spaces where groups of young people can coexist and connect but are also able maintain their independence is considered critical. A space that is neutral, communal and owned by young people has the hallmarks of an ideal youth hub. The hub must also have interconnectivity, Wi-Fi and phone charging stations, with access to high-quality Wi-Fi seen as essential.

Access to speciality shops and precincts are a major reason for young people to travel to specific localities, with many young people expressing the view that clustering fashion, music and coffee together is the best way to activate areas in which young people will gather.

Clean public toilets should be an essential feature of any community space, with handwashing facilities, soap, sanitary bins and free period products to ensure that those who menstruate feel comfortable in public places during their periods. Otherwise, we know that many girls avoid undertaking sport and social activities for fear of being caught short.[iii]

Regional young people in particular say they want more investment in public spaces and places where they live, which need to be welcoming to children and young people and

want them to stay. They want more fun activities in the community outside of school, and opportunities to be creative. Swimming pools, jetties and better playgrounds are priorities for them.

Libraries

Public libraries have unique value to children and young people, both to inspire them to read and to provide them with a safe and inclusive place to be at the heart of their community. This role should not be undervalued. It is providing vital support to improving the literacy of our community and I urge governments to invest in public libraries for the future of South Australian children.

Encouraging children and young people and their parents and families into libraries, provides a great opportunity to inspire more reading. From the early years, libraries help to engage parents in fostering a love of reading with, to and by their children. They also provide multiple opportunities to re-engage young people to read at a later age.

Libraries are one of the few places at the centre of local communities where children and young people are welcomed, and which are free to access. They offer a safe space with clean toilet facilities and Wi-Fi access at no charge – things that young people really value. There are often comfortable places inside and outside libraries where parents are comfortable for their older kids to 'hang out'.

I have heard from children and young people across South Australia how libraries are important safe places for them to go. They are somewhere they can catch up with friends, read, play games, listen to music, charge their phones, access free Wi-Fi, and generally know they will be comfortable, whatever the weather.

Having a safe place to 'hang' is particularly important to teenagers, who may be nervous to meet friends in public places. The unobtrusive presence of library staff and other library users provides them with a reassuring safety net.

Libraries offer a range of onsite and online services. They provide access to technology and run programs and classes for free, or a small fee, that increase skills. Some offer outdoor games to their members, enabling them to enjoy the outside spaces around their library, as well as the facilities inside. There are homework clubs and school holiday programs which often incorporate fun activities such as art, Lego, 3D printing and online gaming.

Libraries tend to be situated in bushfire safe places. In hot weather they are cool, in cold weather they are warm, and many manage to keep the power on during local blackouts. Extreme heat poses a major health risk in South Australia and libraries provide a vital cool space where community members can keep cool for free.

In emergencies, such as bushfires and floods, some libraries provide a safe space where members of the community can gather and access information. This important role should be encouraged where possible particularly in areas where schools are closed on extreme fire risk days.

Swimming pools

Swimming skills are critical to the safety and enjoyment of activities in and around water, which form a major part of the recreational activities of South Australians. It is vital, therefore, that all South Australian children learn to swim and about safety around water.

Between 1 July 2022 and 30 June 2023 17 people died from drowning in South Australia[iv] at the beach, in rivers or creeks, in lakes and dams, in the ocean or harbour, in a swimming pool or in a bathtub or spa.

Non-fatal drowning is much more common, with about three non-fatal drowning incidents that require hospitalisation occurring for each fatal drowning[v] - many more incidents occur that do not result in hospitalisation. Non-fatal drowning can result in varying levels of brain and other organ damage, or in death by pneumonia or other causes at a later date.

Many SA children do not have access to swimming lessons because there are no public pools close to their home or school. The 2017 South Australian Statewide Swimming Pool Audit[vi] identified that an indoor pool with lifeguard supervision is the benchmark for provision. The audit identified many areas of SA that have no public swimming pool at all, while other areas only have access to outside pools that are only open on hotter days, while other pools have limited access because they are situated on school grounds. Some changes have been made since the Audit, including plans for an indoor pool in both Payneham and Mount Barker, and an updated Adelaide Aquatic Centre. However, there have also been pool closures, such as that at Leigh Creek. In addition, swimming infrastructure has not kept pace with areas of housing growth.

I am aware of current gaps in public swimming pool availability in the following areas:

- Ceduna
- Henley Beach/Outer Harbor
- Leigh Creek
- Lower Yorke Peninsula
- Roxby Downs
- Stirling/Crafers.

Community access to school facilities

Schools are often the most significant pieces of social infrastructure in a local community, particularly for sport, so it makes sense for this space to be utilised effectively by those who live close by.

There is significant literature and evidence outlining the economic, health and participation benefits to communities who have access to school infrastructure. Supported in principle by the Department for Education, school leaders have been at the forefront of responding to and managing requests for use, but these arrangements have largely been ad hoc, relational, and reactive.

Many operational barriers at the school level are cited as the major reason as to why these community assets are not available outside of school hours. Management and

usage agreements could be established in partnership with local councils, sports clubs and community organisations. The reality of schools as community hubs could then be realised.

Access to high quality internet and Wi-Fi connections, and charging facilities

Connection is everything

Access to fast and reliable phone coverage, internet and wireless connectivity is vital to almost every part of the lives of children and young people at home, at school, in the workplace, and everywhere they go. They have grown up in a world where their ability to maintain relationships, to be engaged in their education and communities, to access services, information, and future study or employment opportunities, depends largely on their digital access.

Based on my extensive consultation with young people, I have found that they don't make a hard and fast distinction between what bits of their lives are online and offline. They describe technology as a 'part of life now'; the way they connect to the people and places they care about, the services they need, and their worlds of learning, earning, and play. Online is simply another place where they exist – it is part of their everyday life.

Digital access is increasingly seen as an 'essential' utility that we rely upon with the same predictability as electricity, clean water, and effective sewage systems. Public health policy in many jurisdictions nationally and globally, including in South Australia, is increasingly recognising digital inclusion as a social determinant of health. As such, digital access is a means of realising fundamental rights set out in the United Nations Convention on the Rights of the Child (UNCRC), including the rights of all children to a quality education (Articles 28 and 29) healthcare (Article 24), information (Article 13), play (Article 31) and participation in decisions that affect their lives (Article 12). It is also central to safety, citizenship and social and economic participation in work, education, and the community.

Unreliable connectivity

Children and young people have complained to me that their digital access is unreliable and described having internet connections that 'can disconnect regularly'. Although they may not speak about the 'Internet' per se, they highlight their frustration at the barriers and negative effects of not being able to fully participate online.

Many young South Australians rely on free public Wi-Fi in public shopping centres, fast food outlets, and libraries to complete homework and important 'life admin' tasks. These tasks include organising transport, accessing online banking, taking or swapping shifts at work, and booking health or other appointments. Children and young people describe using public Wi-Fi 'wherever I can'.

Access to high-quality free Wi-Fi and phone charging stations are seen as essential features of public spaces for young people. Even simple solutions, like Wi-Fi and charging facilities at bus, train and tram stops can make a real difference.

'Data dead zones' are a common concern, with young people regularly complaining about areas where there is no Wi-Fi access. While children and young people living in

rural and remote areas are particularly affected by this, there are also numerous 'dead spots' with poor mobile phone reception and Wi-Fi connection in metropolitan Adelaide.

Where public Wi-Fi is available, it's often not fit for purpose; it's unreliable, slow, and often has poor security, meaning connection to important services such as mobile banking apps is restricted.

Digital exclusion

Digital access and digital inclusion are not shared by all children and young people across South Australia. A wide divide exists between children and young people from different social, economic, and geographical backgrounds. This divide ranges from those who have no digital access, or partial or interrupted access, to those who have full access.

I have heard from children, families, and schools across South Australia, that basic access to technology is not a given for many. In addition to slow broadband in many areas of the State, there is poor access in remote and regional SA, with many families unable to afford internet access or digital devices.

Rates of access in SA are poor in comparison to other States.[vii] Indigenous young people are particularly prone to digital exclusion, as are those who live in regional and remote areas.

A significant number of children and young people live without regular access to a device, data, or Wi-Fi with which to connect to the internet. This impacts the ability of the child or young person to do their homework, connect socially, access online services, or complete other 'life admin' tasks.

Many young people describe having digital access as being just as 'important' as having access to transport and electricity. The inability of some children to have access to digital technology in the same way other children do is increasingly seen as an issue of systemic discrimination.

During the Covid-19 pandemic in particular, young people reported that digital access was central to how they coped, accessed information, and stayed connected with others and their learning.[viii] As their social outlets moved online, those without stable digital access were severely disadvantaged.

Young people who had limited or no digital access spoke about the difficulty of having to share an unstable internet connection with several others in a household, and the impact this had on their schooling. Some described being unable to complete tests or tasks at home, as well as being unable to access libraries, or other places they would usually go to access computers and Wi-Fi. Without access to critical digital infrastructure in these safe physical community spaces, many were unable to connect, receive information, and participate socially and economically over long periods.

Of the 253 young people who participated in my 2020 Devices, Data and Digital Life Survey[ix]:

- 20% said they always feel unsafe without a phone – young females were more likely than young males to identify this as an issue;

- 15% said not having a stable internet connection was always a problem;
- 12% said the cost of connecting to the internet was always a problem;
- 8% said not having enough data for homework was always an issue;
- 7% said access to Wi-Fi at home was always a problem;
- 5% said not having enough data to get shifts for work was always an issue.

Those who have no, limited, or low-quality digital access, face additional barriers that can negatively impact their education and other aspects of their lives. A lack of reliable digital access has further impacted on disadvantaged young people as poor digital literacy development can create a disparity in employability skills later in life, particularly when being compared to peers who have had digital access for the whole or most of their lives.

Starting in early childhood, digital devices are becoming embedded into learning and school. In some cases, the expectation is that even children under five will know how to interact with smart whiteboards, large touch screens, or iPad type devices that log into a digital roll or record the completion of a learning outcome. For children who have had no access, and who have not acquired these skills at home, they may be unable to immediately engage with the content, as they must first learn how to use the device. If school is the only place they get to practice their digital skills, this can impact on their enjoyment and learning from an early age, as they struggle to keep up with their peers.

As children progress through school, strong connectivity is even more essential. Without adequate access, young people report that it is nearly impossible to complete homework, fully participate in shared projects, communicate with teachers and peers via email, or do any compulsory operating system updates. Time spent resolving these issues of access takes time away from engaging in education, leaving some young people further behind their peers.

Some students described how 'lunchtime classes with technology' contributed to their feelings of 'being punished for being poor' rather than being adequately supported.

Children and young people describe the impact of digital exclusion on their school experience as being 'much broader than just on their learning'. They see it as a social issue; one that impacts the way they relate to their peers, how they feel about themselves, and how they connect to their school. The impacts of limited access to the internet also extend beyond a student's time at school. Children and young people's participation in their community, their social lives, and their pursuit of future work or study opportunities, largely depends on the degree of digital access they have.

Children and young people link digital access to their feelings of preparedness for the future, reporting that a young person with no access to devices or data would be least likely to feel 'up to date with schoolwork', 'confident applying for jobs' or 'connected to others'. They also recognise that limited digital access can be a barrier to accessing community services or activities that are key to positive health and wellbeing, both mental and physical.

Children and young people report that barriers to digital access can make it difficult to find information and services, apply for jobs, and meet entry-level job requirements that

relate to knowledge and skills of software and devices. This can really hamper their ability to 'get ahead' and to feel confident about their future.

In most areas of work, young people are expected to have a smartphone and reasonable access. For example, in entry level jobs in hospitality and retail, young people are expected to use technology to manage rostering or finding people to cover or swap shifts, and to receive and respond to compulsory training requirements.

Living in an area with no or poor reception, can really dim down a child or young person's connection to community, and the people they care about. Without a reliable connection, children and young people describe feeling 'lost' and 'unsafe'. They may be 'caught out' without money if they cannot access online banking to transfer money from their savings to their spending account. They may not be able to plan their public transport journey without access to bus timetables, or the option to recharge a MetroCard online.

Well connected places where you can walk or cycle to school, university, work and activities, or safely, easily and cheaply get direct public transport

Fit for purpose public transport infrastructure

If South Australia is to be fit for economic and social growth, it must provide good, regular, safe public transport links for all. Transport is one of the top five issues young people across the State have raised with me repeatedly. Almost 1 in 5 of all Adelaide Metro patrons are primary or secondary students.[x]

The major challenges young people identify as barriers to having their transport needs met are cost, accessibility and safety.[xi] Transport is central to how young people experience their community and means that these barriers impact their capacity to participate fully in almost every aspect of their lives.

There are strong links between children and young people's mobility and their overall social inclusion and wellbeing. Children and young people are among the most transport disadvantaged members of their community. Without alternative modes of transport (such as having a driver's license or parents, friends, and caregivers to give them a lift), children and young people can become socially excluded or isolated.

I frequently hear that children and young people in the northern and southern suburbs, as well as those further away, that they never visit Adelaide because neither their parents nor schools can afford to take them.

Transport disadvantage has a demonstrable impact on school attendance, gaining and maintaining employment, as well as on a child or young person's capacity to make and maintain their social connections. This is further exacerbated for those who have a disability, low socio-economic status or geographical remoteness.

The provision of infrastructure is one of the tools the State Government has which it can use to improve the lot of those who are least well off and improve equity and fairness in the populace. By adopting public health and wellbeing as key principles in how infrastructure is planned and developed the government can ensure new areas of growth and the expansion of existing developments can be optimised.

Public transport routes in Greater Adelaide primarily travel along major arterial routes in a hub and spoke configuration, and some new developments lack roads that can carry public transport routes. Many young people have expressed that they need to travel against the grain, both within and between suburbs, often for relatively short distances. This means they may lose hours from their day taking two buses or a bus and a train to travel the three or four kilometres needed to get to uni, or to a part-time job that offers them crucial work hours after school or on weekends.

Young people describe how poor access to public transport limits their ability to access education, employment and social activities. Many young people said they regularly travel 1-2 hours each day to attend school, sport and work Reliance on public transport that may not be regular, cheap or reliable can be a real barrier to seeking and keeping employment in regional areas in particular.

Walkability

We cannot expect children to play outside and run around if there is nowhere safe for them to go that they can get to without a car.

We know that some areas of Adelaide are considered to be entirely reliant on private car travel. The Global Observatory of Healthy and Sustainable Cities[xii] found that Adelaide 'does not appear to have transport planning policies incorporating health-focussed actions or air pollution policies related to transport or land use planning.' Only 54 per cent of residents have nearby access to public transport stops with regular services and no neighbourhoods in Adelaide have the population density levels recommended by the World Health Organisation to increase physical activity.[xiii]

As a result, South Australian children and young people are some of the most obese and least active in the world. According to the 2021 South Australian Population Health Survey 12.6 per cent of children are obese.[xiv] The Australian Physical Activity and Sedentary Behaviour Guidelines recommend that children aged 5–17 years should do at least 60 minutes of moderate to vigorous intense physical activity every day[xv] - in 2021, a quarter of children aged 5–17 years reported meeting this level.[xvi]

Physical activity in children and young people is vital - childhood is the most sensitive period of human development in which to promote long-lasting health-enhancing behaviours. The benefits of regular exercise include better health and fitness, better mental wellbeing, improved physical literacy, and the long-term prevention of chronic disease.

Active travel to school is an easy way for kids to be physically active as part of their daily routine. However, poorly designed infrastructure, lack of safe footpaths and adequate cycle lanes, and road safety concerns are a barrier to walking and cycling in most neighbourhoods, including Adelaide itself.

Fear of road accidents means parents are reluctant to let their children outside by themselves – a look at their local area will often lead them to conclude that it is not safe for children to play, cycle or even walk there. In Australia, transport injuries are the most common cause of death and the second most common cause of injury resulting in hospital admission for children aged 0-14 years.[xvii] Across SA, there were 218 road crashes in 2020 which resulted in a pedestrian casualty, of which 38 were under the age of 18.[xviii]

The Australian Urban Observatory has provided walkability data for Adelaide's metropolitan suburbs.[xix] The 'walkability' of a route is calculated based on the proximity of schools and other destinations; street/path connectivity; and dwelling density.[xx] Planned growth areas like Hackham are deemed car-dependent, with Sellicks Beach having one of the worst walkability scores in Greater Adelaide, meaning it is entirely car dependent.

We also know that places where growth is proposed, like Goolwa and Victor Harbor, Murray Bridge, Gawler and the Inner North are extremely dependent on car transport.

Improve traffic and road safety around schools

It is essential that the State Infrastructure Strategy includes improvements to the walkability and safety of its neighbourhoods around schools and other educational institutions.

I recommend that the State Government coordinates its approach to improving traffic, road safety and infrastructure around schools by working with local government, school communities, children and young people, families and Governing Councils to understand local concerns and potential solutions to improve road safety.

In their postcards to me many children have reported that they currently do not feel safe when arriving and leaving schools due to the traffic at those times and they have solutions for what it would make it safer when arriving and leaving schools. They want cars to slow down, traffic crossings and safer footpaths and bike lanes. Governing Councils have also raised this as an issue requiring an urgent inter-agency response.

I recommend that the State Infrastructure Strategy includes the provision of safe footpaths, cycle paths and crossings within the immediate area of all schools, shops, sports facilities and parks, with good street lighting, effective signage, and speed restrictions in line with those recommended by the World Health Organisation.[xxi]

Greener, climate resilient environments

South Australian children and young people consistently raise concerns about climate change in the context of conversations about poverty, health, education and transport.[xxii] This highlights the significant impacts of climate change on children and young people's daily lives, the people, places and animals they care about, and how they feel about the future.

Children and young people are deeply protective of their ability to be outdoors and want more parks and recreational facilities that take advantage of South Australian biodiversity.

Children and young people recognise the impact of climate change and pollution on their local community. They recognise the importance of trees and green spaces to improve the appeal of their local area and address air quality issues and heat stress. They have many ideas on how to address climate and environmental challenges, and they want the tools to empower them to do so themselves.

Improving skills outcomes

We know that fewer young people are taking a linear journey from education and training into work than previous generations, and the time it takes to get from school to work is

increasing. However, many young people tell me this is contrary to the pressure they feel at school when subject selection from year 10 is portrayed as a major life decision and one they are increasingly concerned about.[xxiii] This decision is called for at a time when most young people are still exploring their own interests and skills.

Despite a growth in the variety of jobs available, many young people are still not aware of the options available or what this means for them. On a personal level this can affect engagement and aspiration and young people feel inadequately prepared for the job market. They feel the current education system is letting them down. They want more practical information to be made available to them about current career and work options, and about how to get the jobs they want.

Many people support children and young people in their transition from school, including parents, guardians, and educators. However, this is becoming more difficult as many of these traditional supports don't understand what opportunities exist and how best to prepare for them.

My conversations with those involved in preparing young people for work highlight concerns that preparing young people for life after school continues to operate largely in isolation and in a self-interested way that depends on the individual contacts of students, their families and their teachers, which builds on existing inequities. What is needed is a systemic approach that builds collaboration and shared responsibility for developing adaptable future workforces across the State and its diverse communities, this is the only way to achieve the productivity and innovation gains central to competitiveness in an increasingly globalised world and address the brain drain.

Feedback from young people involves disrupting the traditional 'Pathways' mentality in favour of better approaches that are more flexible and allow young people to properly explore. A more favourable approach would incorporate Ecosystems thinking which recognises the shared interest that multiple stakeholders have in children and young people's schooling outcomes and how each entity can better improve this journey and take greater responsibility for the outcomes that it produces.

The development of future work skills should be at the core of preparing our young people for their future, and educators, government, employers, and the community all have a role. It is essential that the perspectives of young people are included in designing creative solutions that engage young people to be future work ready and ready to remain in South Australia.

Accessing information

Children and young people want to be able to find and access practical and up to date information easily, and to be able to explore this in detail both online and offline. Many young people talk about wanting to have the ability to talk through things with an adult. Whether that was a career advisor if they are exploring their interests, or an industry professional if they wanted to hear more about a job or field.

There are a number of websites available to young people that allow them to explore jobs and careers broadly as well as find how they fit with their interests. However, many of

these sites seriously lack an engaging user experience and a connection to their audience. There is limited capability to access personalised results or, when narrowing down interests, sites tend to force the user to make binary choices that are not reflective of the real world.

Poor linkages and other design issues also mean that rather than being able to 'click through' and 'explore' a job and how it relates to an interest, the information is dispersed. Often this includes means the separation of the study, skills or experience that typical work in that field requires along with information about job security, course information and where jobs are located.

Not all children and young people have the same experience of career guidance in school. While some schools have career nights, guest speakers or careers advisors who have the time to assist them, there is a significant variance between schools and the information children and young people receive.

Strengthening the VET narrative

I strongly support the promotion of VET as a valued and skilled pathway. In recent years the obsession with ATAR scores has led to students who complete VET studies feeling that their efforts and achievements are undervalued. I would welcome repositioning VET within secondary schools to combat the current focus on university education as the only pathway of choice, which results in students making inappropriate career choices, encourages skills gaps, and can create high university drop-out rates.

The presentation of vocational pathways as a credible option requires early and continual discussion of careers for children and young people throughout their education. We know that children and young people's career aspirations are shaped early by the reality they experience in the world around them. The proposal that stakeholders should be involved in improving outcomes is essential. Meaningful, targeted and ongoing consultation and engagement with trainees, apprentices and potential learners will ensure that the systems and offerings are appropriate to the needs of students and employers.

Inclusive access

Inclusive access is vital to the success of any skills program. In addition to meeting the diverse physical and neurological needs of young people, this must include consideration of cost and the barriers faced by young people from poorer, Indigenous and more regional backgrounds. Additional support must be provided to those who need it, including consideration of free training, free transport, and digital access for those who cannot afford the technology or internet connection they require to complete their training.

Young people in regional South Australia have repeatedly raised concerns about their lack of access to training opportunities, with even those in Adelaide's outer suburbs are faced by prohibitive travel costs and journey times.

Migrant and refugee young people experience a range of barriers to training which must be addressed, including language and communication, cost and cultural 'clash'.

Work readiness

Employers continually complain that young people are not work ready and young people do not feel that they are learning skills in school that are relevant to their future.

Young people are aware of the importance of learning the skills required for life and for the workforce but there are few opportunities for most students to access meaningful work experience, voluntary work or internship opportunities.

Recognition of the need for supplementary human skills development alongside more specific training is essential and is something young people are eager to gain. They need to be better equipped with the 'soft' and enterprise skills they will need to be work ready.

Work experience and volunteer work can offer valuable ways to provide insight into the reality of work. Formal contact with the world of work can also help demystify and debunk commonly held misconceptions about particular industries, including gender stereotypes. However, businesses and NGOs are often reluctant to offer young people work or voluntary experience. Building trust with industry and business is important to ensure young people are provided with the opportunities to be adequately prepared for the current and future demands of industry and for employers to have confidence in the training and preparedness of young people to meet future challenges.

In a survey I undertook of small businesses throughout metropolitan Adelaide I found that while most businesses consider employing young people just over half felt that young people were 'ready' or 'sometimes ready' for work. This was rarely attributed to technical skills but to softer skills such as financial literacy, communication, and confidence in tackling problems.

Engagement with Children and Young People

Many of the people who are currently being consulted about the State Infrastructure Strategy will not be in power and may not even be alive in 20 years' time. It is essential that children and young people from across South Australia are engaged effectively, so that they can provide their unique insights both as young people today and as future adult populations.

It is important to hear firsthand from children and young people from a variety of backgrounds, including:

- Aboriginal and Torres Strait Islander children and young people;
- Children and young people from refugee and migrant backgrounds;
- Those with caring responsibilities;
- LGBTQIA+ young people;
- Children and young people with a disability;
- Those living with chronic illness; and
- Children and young people living in relevant metropolitan and regional communities.

Understanding the nuances and complexity of young people's experiences provides insights into where Infrastructure SA and other agencies need to focus their coordinated efforts.

Our young people have unique perspectives on what makes a place tick. They provide lived insight into how to attract, train and retain young talent; how to be resilient, how to be clean and green; and how to ensure our actions are inclusive and visionary. Young people have developed views about both the benefits and negative aspects of growing up in different parts of the State. They know what they want, and they would like to be invited to participate in meaningful opportunities to share their ideas with decision makers and community leaders.

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[i] Youthful Adelaide: What young people have said will make Adelaide more youthful, CCYP, April 2019, https://www.ccyp.com.au/wp-content/uploads/2022/01/Youthful-Adelaide.pdf

[ii] Liveability Report for Adelaide, Australian Urban Observatory, 2020, https://auo.org.au/wp-content/uploads/2020/03/AUO_Scorecard_Adelaide.pdf

[iii] Menstruation Matters: The impact of menstruation on wellbeing, participation and school attendance, CCYP, March 2021, https://www.ccyp.com.au/wp-content/uploads/2022/03/Menstruation-Matters.pdf

[iv] Royal Life Saving National Drowning Report 2023, https://www.royallifesaving.com.au/__data/assets/pdf_file/0009/76824/National_Drowning_Report_2023.pdf

[v] Non-Fatal Drowning in Australia, Royal Life Saving Society of Australia, 2021 https://www.royallifesaving.com.au/__data/assets/pdf_file/0016/37312/3985_v4_RLS_NonFatalSymposium_ReportHR_PROOF_LR.pdf

[vi] South Australian Statewide Swimming Pool Audit, Recreation SA, 2017 https://static1.squarespace.com/static/5fa3397f6a9cac3086a1d3f7/t/60877ec5b423496d4d4759ae/1619492588829/SOUTH+AUSTRALIAN+STATEWIDE+SWIMMING+POOL+AUDIT.pdf

[vii] Australian Digital Inclusion Index 2022, https://www.digitalinclusionindex.org.au/dashboard/National.aspx

[viii] Reflections on COVID-19, In their own words, South Australian young people reflect on the impact of the coronavirus on the world and their futures, CCYP, June 2020, https://www.ccyp.com.au/wp-content/uploads/2022/03/Reflections-on-COVID-19-In-their-own-words-South-Australian-young-people-reflect-on-the-impact-of-the-coronavirus-on-their-world-and-their-futures.pdf

[ix] My Digital Life: Understanding the impact of digital poverty on children and young people, CCYP, August 2021, https://www.ccyp.com.au/wp-content/uploads/2022/03/My-Digital-Life-Understanding-the-impact-of-digital-poverty-on-children-and-young-people.pdf

[x] Department for Infrastructure and Transport. 2021- 2022 Annual Report. Available at https://www.dit.sa.gov.au/about_us/governance_reporting/annual_ report/dit-annual-report-2021-22-online-version

[xi] Safe and Sound: Views and experiences of young people on public transport, CCYP, June 2023, https://www.ccyp.com.au/wp-content/uploads/2023/05/Safe-and-Sound-Report.pdf

[xii] Healthy and Sustainable City Indicators Report: Comparisons with 25 cities internationally: Adelaide, Australia, Global Observatory of Healthy & Sustainable Cities, 2022, https://rmit.figshare.com/articles/report/Adelaide_Australia_Healthy_and_Sustainable_City_Indicators_Report_Comparisons_with_25_cities_internationally/19614009

[xiii] ibid

[xiv] SA Health, 2021. South Australian Population Health Survey 2021 Annual Report – Children. Available at https://www.wellbeingsa.sa.gov.au/assets/downloads/SAPHS/SAPHS-2021-AnnualChildren-Report.pdf.

[xv] Department of Health. 2019. Australia's Physical Activity and Sedentary Behaviour Guidelines and the Australian 24-Hour Movement Guidelines. Available at Physical activity and exercise guidelines for all Australians | Australian Government Department of Health

[xvi] SA Health, 2021. South Australian Population Health Survey 2021 Annual Report – Children. Available at https://www.wellbeingsa.sa.gov.au/assets/downloads/SAPHS/SAPHS-2021-Annual-ChildrenReport.pdf

[xvii] Car and Road Safety, Kidsafe, https://kidsafe.com.au/car-road-safety/

[xviii] SAPOL data: https://data.sa.gov.au/data/dataset/road-crash-data
[xix] Walk Score: https://www.walkscore.com/AU-SA/Adelaide/Adelaide
[xx] Walkability, Australian Urban Observatory, https://auo.org.au/portal/metadata/walkability/
[xxi] Streets for Life campaign calls for 30 km/h urban streets to ensure safe, healthy, green and liveable cities, WHO, 17 May 2021, https://www.who.int/news/item/17-05-2021-streets-for-life-campaign-calls-for-30-km-h-urban-streets-to-ensure-safe-healthy-green-and-liveable-cities
[xxii] The Things That Matter 4: Views of 8-12 year olds on life, school and community, CCYP, July 2023, https://www.ccyp.com.au/wp-content/uploads/2023/07/The-Things-That-Matter-4.pdf
[xxiii] Off to Work We Go... Preparing South Australian school students for their work futures, CCYP, June 2020, https://www.ccyp.com.au/wp-content/uploads/2022/03/Off-to-Work-We-Go-preparing-South-Australian-school-students-for-their-work-futures.pdf

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Engaging for Reform
Community Alliance South Australia

13 November 2023

infrastructure@sa.gov.au

RE: South Australia's 20 Year State Infrastructure Strategic Plan Discussion Paper

Dear Sir/Madam

Community Alliance SA (CASA) is grateful for the opportunity to respond to the State's 20 Year Infrastructure Strategic Plan and looks forward to receiving a report in due course as to 'What We Have Heard' and actions to be taken.

Background

According to the Chair, South Australia has a small population and market size "so our growth must be in national and international exports and import replacement" (discussion paper p.5). However, currently we are a net importer of milk and many other goods such as dried fruit, but this has not always been the case. Our S.A. Riverland once produced fresh and dried fruit in abundance for the local and export market, yet these home industries and processors have not been supported by government. For instance, Mount Barker was once the heart of a thriving dairy industry (with an annual 'Cream Bowl' Festival) but when major supermarkets made milk available to consumers for $1/litre the return to the producer was unsustainable. The Adelaide Hills and Murray River towns like Jervois lost a lucrative dairy industry which had supported not only dairy farmers but also those who serviced that industry – smallgoods factories, livestock carriers, stock agents, veterinarians, agriculture contractors and advisers.

This scenario has been replicated many times and exacerbated by urban sprawl across many agrarian communities. Previous actions and policies are at odds with the notion that we "need to diversify our economy, expanding on the strength of our agriculture and resource exports and moving up the value chain to deliver more complex products" (Shepherd, A.F. Chair p.5). It is hoped that the discussion paper will generate ideas that lead to actions which rectify the decline of economic diversification in some areas of South Australia.

Australia gained wealth as we "rode on the sheep's back" producing fine merino wool with flourishing and internationally renowned woollen goods manufacturers (Onkaparinga Woollen Mills in S.A) As the Chair of Infrastructure SA said we need to - "deliver more complex products" – and this we did, extremely well. Then our manufacturing went off shore and there was little meaningful attempt by government to retain it, the pursuit of cheaper labour eventually resulting in inferior goods at rising costs and South Australia self-sufficient in very little.

With regard to the mandate to "deliver more complex products" why not extrapolate the export of raw materials - from wool to iron ore, bauxite to uranium, coal to cotton and so on to processing these materials here? While Australia does produce aluminium and exports most of it to Japan, this is an exception. Most of our natural resources (coal, iron ore, timber) are exported overseas rather than made into higher end value products here. Even

our sheep and beef are loaded on to multi-deck ocean cargo ships and transported in dark, below deck holds in constant cold draughts to maintain air quality in 'hell-holds' where a percentage of livestock is expected to die as an acceptable loss in the scheme of things. Why is our export meat not processed here as humanely as possible (more value adding) for export? Little has changed in 30 years and the advice of the Chair of Infrastructure SA is being ignored with regard to live export.

The Discussion Paper states that liveable and well-planned places attract skilled people to work there. Rather it is existing employment which attracts skilled people, as clearly illustrated by virtue of Australia's numerous 'Gold Rushes' since settlement and our mining, forestry and fishing industries. New and previously unknown jobs in 'green energy' need government advocacy and while California was a world leader in solar and wind (as indeed is S.A.) we should avoid the path taken by California in creating vast acreages of monocultures (vines, almonds, pistachios) that inhibit biodiversity, increase pesticide and herbicide use and require bees to be imported for pollination. In considering priorities for infrastructure, it is essential to consider how to retain and improve resilience to major bushfire and flooding events, climate change and ways to avoid or respond to unforeseen disruptions (Objectives 4 and 5).

Communities which rely on the SE Freeway or Wellington Road to commute to and from home to employment, are deeply concerned to learn that major growth is planned now for Murray Bridge, Callington (for potential employment lands), Goolwa and Victor Harbor since these main arterial roads are already congested at peak times and become virtual 'car parks' when even a minor vehicle accident occurs. There appears to be no plan to avoid placing even more traffic on the SE Freeway, already at capacity at peak times, and this appears a major oversight – given Objectives 1 to 6 (3.2 p. 11).

With regard to 4, "The economic context" the comparison with global and interstate economies is somewhat confusing because Australia could, if we chose, be self-sufficient by restoring and supporting our manufacturing industries. The importance of this was felt strongly during the height of the Covid 19 pandemic. It is arguable that South Australia's economy, and genuine welfare, has improved not despite its smaller population growth rate, but *because* of it (Assoc. Prof. Philip Lawn, 'South Australia: Progressing in recent years and out-performing the Rest of Australia; A Genuine Progress Indicator Study of South Australia 1986-2016').

The economic impact of rapid (Government initiated by Ministerial DPA) population growth on the rural town of Mount Barker is clearly evidenced in loss of 1300ha of prime farmland and the impact of 'domino' land subdivisions well outside of the former town boundary. Loss of jobs in agriculture and horticulture and all their supporting services have not been replaced with any other form of employment or industry. Not only has this resulted in less economic activity in the area at a time when council rates are ever higher to help fund much needed infrastructure, but people are struggling with finding themselves in a new peri-urban commuter 'burb rather than the rural town with which they were familiar.

The following pages included commentary and responses to the questions posed in the Discussion Paper.

Section 4: Our productivity challenge - Consultation Question 1: What opportunities should we consider to improve South Australia's economic growth?

Take the advice of the Chairperson of Infrastructure SA – diversify our economy, expand on the strength of our agriculture and resource exports and move up the value chain to deliver more complex products" - in other words support a return to manufacturing in S.A. and bring S.A. up to travel standards with other States by supporting passenger rail.

5. Enabling Infrastructure

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

Government will "play a key role in planning and co-ordinating infrastructure" yet that is not the learned experience of Mount Barker which has been left to hastily plan and fund required infrastructure in the wake of Ministerial rezoning of 1300ha which was opposed by both council and community (545 submissions). Targeted development must not occur where there is not adequate supporting infrastructure and rail connection would enhance freight delivery and commuting to employment when it exists outside the local area. The SE Freeway is at capacity at peak times and in event of even a minor accident and this is a very significant constraint to the road freight sector.

5.2 Water Supply

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

There is no viable plan here – merely advice that S.A. Water is leading the "Resilient Water Futures" project to identify the direction for long term planning. This must include large scale recycling and reuse of wastewater because dams and reservoirs are 1950s technology and create more environmental problems than overall benefits. This vague reference to water needs is inadequate in an infrastructure strategy for population growth and water experts need to be consulted (especially about the already over-allocated Murray Darling Basin) before creating imported population growth above current high birth rates.

5.3 Energy transmission

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

We are told that gas is needed to bridge the gap but new connections and any new pipelines for provision of gas will only result in future stranded assets and alternatives should be used.

5.4 Digital connectivity

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

Cost is an issue, particularly where this has to be borne solely by the user. Greater education and employment opportunities are the benefits to increased adoption of digital technologies. ABC Landline 12 November showed how Upton Industries in Cowrowa, NSW produces 800-metre-long watering systems for farms which can be managed remotely from anywhere in the world via a mobile app. This is the kind of technology we should be investing in, to make vast areas of our unused country habitable and viable for people to live and work.

5.5 Resource exports

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

This section places emphasis on more local food production while expanding value-add products and our manufacturing and processing of goods for export, but implies that "more workers, new skills, greater expertise needs to be imported rather than educated and trained here.

6. Liveable and well-planned places

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

Bringing back a solid manufacturing industry base to foster employment opportunities and build capacity while strengthening communities (e.g. SA formerly had steel, ship building, copper, wool, cotton) and there are new 'green' technologies which should be supported now. While labour costs are higher than some 'emerging' nations (China is hardly in that category now) the end product is of higher quality, locally available and will boost exports and S.A.'s reputation as a reliable provider of quality food, fibre and steel (for example).

Question 7: How can S.A. better coordinate infrastructure investment to support a growing population?

In a word – RAIL! Both levels of government must invest in greater use of rail in South Australia. Anyone visiting Melbourne or Sydney can see the benefits of this low pollution, fast and cost-efficient transport service. In the eastern states they are now building double level tunnels for rail and motor vehicles. SA is far behind in this infrastructure solution.

6.2 Affordable housing

In recent decades the S.A. government has fallen short of its responsibility to provide public/social housing, allowing existing housing to be sold off and it has fallen to the private sector to provide this form of housing with very mixed results. Rents are far too high for those of lower socio-economic status, whether short or long term and truly affordable housing is hard to find. Much of the 'affordable housing' is cheaply but poorly constructed and insulated, with much higher living costs for those least able to afford them. There needs to be well designed higher – but not high – density living in strategic areas which facilitates a sense of community through safe, green walkable places and appealing services. Bowden's former Clipsal site is a good example – however, it is not affordable for our crucial workers, such as nurses. Affordable housing must incorporate those things which make all housing attractive. Meaningful green spaces, and room for mature trees.

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

Government needs to make good its promise of spending $232.7 million on public housing and follow the best private industry examples of social housing where attractive homes are spread across the community rather than creating 'public housing' areas which become whole suburbs or 'ghettos' of social dysfunction and poverty. Make affordable housing truly affordable by ensuring it is well insulated, low energy and truly sustainable so that living costs in these dwellings are lower, not higher than comparable housing.

6.3 Public Transport

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

Rail! In the original 30 Year Plan (2009) public transport was to be boosted by rail and TODs (transport orientated development) and motor vehicles reduced with incentives to use public transport. What became of this excellent imperative? We strongly support the measures need to be taken to develop greater public transport infrastructure.

6.4 Health and Well Being

Box 6, P27, again uses GDP as a measure of well-being but GDP only measures consumption (expenditure) not welfare. Ensuring that hospitals, particularly those in growth regions, are adequate, well equipped, well-staffed with trained doctors and medical staff so that patients do not have to travel outside of the local area for oncology, dialysis or podiatry services. This adds to health costs and clogs transport systems.

Government needs to ensure residents can afford to go to a doctor ($60-$100 a visit is not affordable and a disincentive to maintaining good health). Many doctors and nurses travel long distances to work long shifts (and for training) so accommodation available near such major employment must be a priority. Why is there a shortage of Australian grown and trained medical professionals? Education pathways and incentives need to be considered. More support for Allied Health Services, both in training teams and ensuring their long-term retention.

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

Ensuring and creating incentives to attract Australian grown and trained students to the medical professions and providing more support for Allied Health Services. The 'caring at home' model for mental health patients is a failure and this needs to be recognised and means/buildings found for appropriate treatment and support by trained professionals. The current SA model is placing both patient and public at risk. Hospitals (including the RAH) have entire Wards occupied by mental health care patients which is unacceptable and creates risk. Such cases require professional help and should be in a specialised care centre.
6.5 - It is stated here that South Australia's educational attainment levels lag behind other States. Education needs to be more affordable with incentives across all ranges of skills required.

Question 11: Now can infrastructure support improved education and skills outcomes for SA?

Many university students do not have access to rail and must rely on bus or private vehicle for transport. This creates a real disincentive for higher education and rail must be a priority. Many parents take their children to primary and high school. In the Netherlands, and many other European cities, the children cycle, walk or take public transport to schools. We must change our thinking with this and start by educating students at primary school about the importance and the benefits of taking public transport, walking or cycling.

Cultural, tourism and recreation infrastructure

Our tourism industry has some obvious flaws, where 'tourism' and 'entertainment' has been made a higher priority than the health and wellbeing of flora and fauna and indeed our

citizens. Just two examples: (1) 'Cleland Conservation Park' a mainly koala attraction a short drive up the SE Freeway, where on any day of the week travellers are exposed to the sight of dead or injured native animals on the roadside (often koalas) due to the lack of any protective fencing. All other capital cities which have koalas in the hinterland of the city have provided fencing to keep them off major roads and there are overpass 'bridges' for them to move about over main highways. This is very revealing of our State Government's level of care for its fauna, i.e. zero!

(2) Government via TourismSA has supported and applauded shark cage diving with 'Great White' Sharks at Neptune Is. In Great White territory off our South Coast with unforeseen consequences that commercial fishermen for some time have been reporting a change in shark behaviour and sharks following boats. More recently increased shark attacks and fatalities from attacks (including last week) as sharks in that area learn to associate humans and boats with food. (Note that the sharks are attracted by the various operators with meat and blood 'burleying' to provide entertainment and a thrill experience for tourists who pay from $1,000 (in boat) to $3,000 (in cage) for the experience. Surely this benefits only the operators (and the thrill seekers) but creates an on-going risk for those who live, swim and surf on the South Coast. Also noteworthy that Great White Sharks are known to travel vast distances over the course of a year.

Question 12: How would we sustainably grow these sectors to realise greater benefits for visitors and residents?

Better protecting Hills and Mount Lofty Ranges landscapes from housing development which appears to be on-going despite claimed 'protection by John Rau', encouraging agrarian enterprise in the Adelaide Hills which works with nature and protects our flora and fauna.

7. P32 Accessible and inclusive infrastructure. This section is full of queries, suggestions and needs but light on answers.

Question 13: How could we think differently about infrastructure investment to support a more inclusive society?

Rail and all public transport could be accessed by all.

Question 14: What are the opportunities for infrastructure investment to accelerate 'closing the gap' targets?

Rail and good social housing.

8. A decarbonised, sustainable economy. The GGE targets have a very recent baseline which is misleading and will not engender real emission reductions. The fastest growing area of energy use is air-conditioning and unless all buildings are constructed more sustainably air conditioning will be in use 24/7 and will increase in tandem with population growth, as will motor vehicle use.

Question 15: What infrastructure investment will support industries to transition to a global net zero future?

Investment in green energy will encourage transition but will be outweighed by population growth, increased motor vehicle uses and high energy, unsustainable buildings. S.A. is a world leader in renewable energy, and it is disappointing to read that gas will remain in the mix. No new gas pipelines or installations should be supported by the government as clearly this will only result in stranded assets in the long term.

Question 16: How do we maintain an affordable, reliable and secure energy system through the energy transition?
Support 'green energy' and 'blue carbon' initiatives and take action to reduce powers costs to householders while educating the public to use energy wisely and plan to use less energy and water in everyday living. Fig. 7, P.39 does not include electric rail and the age of our road freight fleet makes a sound case for rail.

Question 17: What are the most significant challenges in decarbonising transport and how do we address them?
We need better public transport (electric) and electric trains and trams. This needs to start now!

Question 18: What action is needed to achieve a circular economy in S.A.?
Adopt a 'steady state' economic system rather than rely on population growth which will be disastrous (climate and environmental impacts) in the long term.

8.5 Infrastructure delivery
Embodied energy in concrete, steel and aluminum together comprises 23% of global emissions and increases with population growth and rising living standards in developing nations.

Question 19: What measures can be taken to enable the infrastructure industry to decarbonise?
Slow rather than encourage population growth and make changes to the Planning Code (to require trees, green canopy and shrubs to be retained and protected in all housing developments) and change the Building Code to require more energy efficient buildings and truly sustainable development. It is counter to government's stated emission reduction goals to do otherwise.

9. P.42 Improved Resilience
Question 20: How do we better account for the impacts of climate change in our infrastructure to support improved resilience?
Recent examples of resilience are to be found in those few homeowners along the River Murray (both permanent and shack owners) who built according to the Building Code revised 1969/70 after the major River Murray flood events in the 1950s. This meant no permanent furniture at ground level, removable walls to permit through flow of water in event of flood and wire fencing rather than solid construction for fencing. These people removed items stored at ground level, permitted water to flow through and suffered minimal damage to their properties. Those who did not comply with the Code were neither resilient nor wise and added hugely to the overall cost, some receiving more than one payout.

The fact that some people are building back high rise 'McMansions' with their insurance money and not in accord with the Code should be a compliance issue at the very least and inspections made, and no approval given if non-complying. Compliance with Codes and regulations/policies that build in resilience for communities should be the rule, not the exception.

Mount Barker lost much of its resilience, and the opportunity to be self-sufficient in local food production and agricultural employment well into the future when State Government (at the request of a developer consortium) rezoned 1300ha of prime farm-land against the wishes of both local Council and its communities. Building resilience and community capacity will be even more important in the future in the face of climate change and more extreme events.

9.2 P44 Critical Infrastructure

Question 21: What are the critical resilience systems that S.A. needs to address?

Food and water security is paramount, arguably the driest State in the driest continent in the world with very little reliable rainfall, arable land and most of that either lost to housing or at threat of encroaching development. South Australia has been proven to be tracking above other States in genuine welfare because of its lower population growth (Assoc. Prof. Philip Lawn 'South Australia: Progressing in recent years and out-performing the Rest Of Australia, A Genuine Progress Indicator Study of South Australia 1986-2016').

The loss of the Adelaide Plains to housing development is one of the greatest tragedies in our brief history, yet as I write vegetable growers and tomato growers are being moved out of Virginia to Mallala.

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

Fig. 12 P. 46 illustrates this well, yet the State Planning Code continues to destroy trees, green spaces and the character of our city, towns and suburbs. Adelaide Parklands are excellent example of incremental loss at the hands of government. Where is their protection going into the future?

10. A stronger infrastructure industry

Far too much emphasis and support has been given to the building construction industry in South Australia at the expense of agriculture (which contributes $14.1Billion to our economy) and tourism ($9.9Billion) which are higher earners for the State and indeed provide and foster the very landscape which attracts interstate and international visitors.

Question 23: How can Government and industry work together to support the supply of skilled labour needed to deliver a transparent flow ('pipeline') of infrastructure?

All other States (and indeed nations) have mega RAIL projects in the infrastructure pipeline, except South Australia. Why? Rail, improved public transport and better education programs to deliver a home-grown skilled labour workforce would be cheaper and of much greater benefit to South Australia in the long run.

P. 50 Question 24: How can we maximise productivity benefits of digitising our infrastructure?

Much of the 'Smart Cities' spiel brought no real benefit to the ratepayers. 'Smart meters' for most come at considerable cost and the unforeseen consequences have been farmers and other landowners having difficulty getting their meters read. Digitising everything may bring speedy solutions but has also opened the door to more frequent hacking and cyber theft.

P.51 Question 25: How can Government continue to encourage collaboration and innovation in procurement?

'Standardising and streamlining' hopefully will not have the unforeseen negative consequences it has had with the new State Planning Code which appears to benefit only the development sector, not residents, communities or the environment.

10.4 Funding and financial solutions

Question 26: What are the funding and financial options government should consider in future to ensure its infrastructure remains affordable and sustainable?

At the current time this is a very difficult question to answer, since builders and construction companies themselves say they "don't know who is going to fold next" and supply chains have been disrupted both during and since the Covid pandemic and skilled workers (not already employed) are hard to find. One of the biggest housing construction companies only this year was saved from the receivers by family members digging deep to bail out the company.

These are extraordinary and very worrying times and given these circumstances it would seem highly impractical and irresponsible of State government to cost shift imported population growth on to local government councils. The Greater Adelaide Regional Plan (GARP) states that population growth targets will be set for particular Councils which will have the dubious honour of working out where that growth will go.

From the Mount Barker experience we know that no funding comes with the growth and any council with inadequate infrastructure will be forced into intergenerational debt to provide it, especially if they have the welfare of these future communities at heart. In Mount Barker despite council buying land (at inflated prices) and setting it aside for future schools and playing fields, one unforeseen consequence is that there are now six private schools and just one new classroom in one public school. One can only wonder how children in the 'affordable housing' will fare. Twelve years on from rezoning, there is still no plan for a new public school (primary or secondary).

This is not good planning or the way to deliver timely and adequate infrastructure.

Thank-you for the opportunity to respond to the questions.

Yours Sincerely

[redacted]

Dianne van Eck
President
Community Alliance SA (CASA)

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

13 November 2023

Sent via: infrastructure@sa.gov.au

The Conservation Council SA (CCSA) welcomes the opportunity to provide a submission in response to the *South Australia's 20-Year State Infrastructure Strategy – Discussion Paper*

The Conservation Council SA is an independent, non-profit, and strictly non-party political organisation representing approximately 60 of South Australia's environment and conservation organisations and their 90,000 members.

1. Economic Growth vs Economic Wellbeing

Whenever possible, CCSA would like to see prioritisation of those opportunities that best enhance and protect the natural environment in addition to sustaining the economy. The natural environment is one of our greatest assets and economic drivers, so is social and community capital. Not only is biodiversity protection important, simply as a matter of principle, but we all benefit from it in terms of both mental and physical health. It also drives significant amounts of overseas visitation. We need to recognise the inherent value of this natural infrastructure and keep this front of mind when planning infrastructure.

We would like to see a formal focus on developing the wellbeing economy, not just *growing* the economy. Economic activity alone does not bring individual and community wellbeing.

A Wellbeing Economy[1] is an economy designed to serve people and planet, not the other way around. In a Wellbeing Economy, the rules, norms and incentives are set up to deliver quality of life and flourishing for all people, in harmony with our environment, by default.

Equally, we reject the notion that encouraging population growth is the key to economic success.

[1] https://weall.org/

2. Growth Scenario Confusion

It is surprising and disappointing that two SA Government led consultation processes (the 30 year Greater Adelaide Regional Plan via the State Planning Commission and the 20 year State Infrastructure Strategy via Infrastructure SA), conducted during the exact same time period, and both forecasting state priorities over the coming decades, have two such different population growth scenarios.

Expectations of population growth are major drivers of land release choice – both location and size - and infrastructure choices.

We support the more measured scenario considered by Infrastructure SA, rather than the high growth scenario underpinning the Greater Adelaide Regional Plan.

The consequence of an overly optimistic high growth strategy is that far more land further out from the city core is released for housing and development than is actually required. Developers skip over development opportunities in infill and outer suburbs to embrace the cheaper land now prematurely released on the urban fringe leaving holes throughout the urban form that would have normally been developed first under a lower population growth target. This artificially stretches out the urban form and exacerbates the challenge of providing public transport and other critical infrastructure.

Poorly planned population growth, and economic development models that rely on population growth to stimulate demand, negatively influence urban form and risk the carrying capacity of the natural environment.

3. Climate Change as Primary Driver

We strongly welcome the focus on climate change related resilience issues in the Discussion Paper.

While climate change adaptation, mitigation and resilience, are increasingly being incorporated into government and business planning, the vision and outcomes in the main betray an extension of a Business As Usual (BAU) approach, rather than acknowledging the radical and fundamental reshaping that will occur as climate change deepens.

Climate change is not just one factor of many, it will be the single biggest driver of South Australia's economy, urban form and infrastructure choices over the coming decades. Decisions about where people live, where their food and water comes from, and what energy and transport they use will depend on how quickly the climate changes.

Climate induced emergencies, such as flooding and fires, will make many parts of our state unsafe to live for significant periods. Sea level rise will cause inundation in many urban and regional areas and, along with increased storm events and energetic water movement, strip the Adelaide coast and many regional towns of sand dunes and beach cover.

Extreme heat events are forecast to occur more frequently and at higher temperatures.

All these disaster events will drive people movement to cooler and safer areas and will require major changes to infrastructure to ensure safety and reliability.

We need a mature conversation about managed retreat away from places at most risk, and we need to start planning for major people movement to safer areas. This Discussion Paper has a responsibility to outline potential scenarios and forecast what a long term managed retreat program would/could look like.

Equally, it needs to prioritise infrastructure, design and planning choices that will keep citizens safer and cooler. In particular, the critical role of urban greening needs to be emphasised far more strongly. Urban tree canopy and extensive ground, wall and roof greening are arguably the most important infrastructure for our cities for cooling our streets and suburbs.

While planting and creating new greening is important, retaining our exiting mature trees is even more so. When we fail to value existing canopy and vegetation, we actually make Adelaide, the hottest mainland capital, less liveable. Evidence shows that Australia is heating up 35% more quickly than the global average[2]. Not only does liveability decrease as temperatures rise, but retention of existing trees and establishment of new trees become increasingly difficult. We can no longer rely on being able to plant in winter and see them survive a summer; there's also no guarantee that they will thrive and produce canopy.

4. The Critical Role of Transport

The availability of private transport and the routes taken for freight movement are significant drivers for urban development and factors in people's capacity – indeed willingness - to embrace active transport. Whilst living locally is of critical importance, areas mooted for new growth are not well served by public transport and if this critical infrastructure is not in place when people start to move in, they will simply continue to prefer the car as their primary mode of transport. Cycling or walking to one's destination should not require acts of bravery. A key selling point of any greenfield development should be the ability to live without a car.

Increased use of public transport – with dedicated lanes so that this flows better than private cars – as well as location of well-designed active transport corridors separated from main roads (eg: one street over), with well provisioned secure storage to enable parking of bikes at train stations and bus interchanges will be an essential part of enabling people to live locally.

It is essential that development of housing, employment and freight work closely together. There are great opportunities for the Greater Adelaide Freight Route to emerge north of the city, close to rail yards for modal shifts so we must ensure that future projects such as this are also borne in mind. Smart design to get as much heavy freight as possible out of our suburbs means people are better able to use active transport, a key plank of our decarbonisation strategy. Reliance on the private car entrenches disadvantage.

[2] https://www.afr.com/policy/energy-and-climate/australian-warming-outpacing-global-average-by-35pc-iea-20220610-p5aswf#:~:text=Australia's%20temperatures%20are%20rising%20more,of%20fallout%20on%20energy%20systems.

Additionally, the use of land further from the centre of Adelaide for continued housing provision ensures that density never reaches the critical mass required for the infrastructure and services that make it possible to live locally and to do so without reliance on a private car.

As much as possible, the provision of transport infrastructure must come before housing and development, as retrofitting transport afterwards is far more costly, and much more difficult.

Under-investment in public and active transport is undermining Adelaide's liveability and sustainability. It is untenable therefore to accept a Regional Plan that directs urban growth without a corresponding and well-integrated commitment to and planning for multi-modal transport.

We cannot assume that simply replacing conventional cars with electric cars will solve our problems. We need to ensure that we do transport differently, not simply the same way but in a differently powered car. The first essential step is to remove heavy freight from our suburban roads.

Transport infrastructure opportunities include:

1. All neighbourhoods in major settlements connected by high-quality public transport and active transport to reduce car dominance and enhance sustainable mobility.

2. All retail/activity centres established with electric vehicle charging stations. This is also supportive of the objectives of integrated, multi-function centres and compact form.

3. All neighbourhoods incorporate local open space, shopping and other facilities within walking distance, with walking spaces enhanced by greening.

4. Cycling infrastructure such as separated lanes and separated bike paths to encourage all citizens to view cycling as a safe form of movement.

5. The Importance of Biodiversity & Green Infrastructure

We strongly support the welcome focus in this Paper on blue and green infrastructure.

There is a wealth of evidence that the presence of biodiversity is critical to human health and that the benefits increase with the richness of the biodiversity. This is most easily achieved in the urban environment with retention of existing canopy and additions of a range of species, including trees, shrubs and groundcovers, along with natural urban waterways. The UK mandates for bio-diversity positive development[3] whilst the Australian Institute of Landscape Architects (AILA) has produced a position statement on Biodiversity Positive Design.[4] In it, they make the point that, at a national level, half of our endangered species are within areas slated for housing development. This represents a significant threat to our environmental health. Biodiversity Positive design recognises that it is not enough simply to green our cities – we must actively design for increased biodiversity.

[3] https://www.gov.uk/government/news/new-developments-to-deliver-for-people-and-nature).
[4] chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.aila.org.au/common/Uploaded%20files/_AILA/Resource%20library/AILA%20Biodiversity%20Positive%20Position%20Statement.pdf

6. Health & Wellbeing

The quality of, and equitable access to, infrastructure – particularly transport infrastructure - is a major determinant of individual and population health.

Whilst we support the build-up of housing and other development along established transport corridors, if these corridors remain dominated by vehicles powered by internal combustion engines, the health impacts of this are concerning, with evidence showing a correlation between living on or in the vicinity of major road transport corridors and:

- Middle age onset of asthma
- Increased risk of heart attack
- As many as 11% of dementia cases in those who live along these corridors
- Increased instances of childhood asthma

Equally, a progressive shift to cleaner forms of transport and the removal of diesel-powered trucks from roads will deliver a number of complementary health benefits, including;

- The shift of bitumen to higher productive forms of land use.
- Greater uptake of active transport, due to safer roads
- Greater access to movement for all citizens via public transport, and
- Improved air quality through the reduction in particulates.

There is a significant body of evidence showing that green infrastructure, tree canopy and biodiversity (not necessarily the same thing) are of critical importance to human health, both physical and mental.

Canopy within 1.6 km of home sees us 30% less likely to develop mental health conditions such as anxiety and depression and 31% less likely to develop physical health in the poor-fair range.

7. Housing Infill, Affordability & Liveability

The ability to ensure adequate, affordable and liveable infill housing in Adelaide's already vast and sprawling urban form is a key challenge for our state.

Poorly designed infill provokes community anger and dissuades people from embracing this option. Mandating higher quality and more energy, water and transport efficient development is therefore essential to changing community and political appetite.

Equally important is the focus on creating green and beautiful urban spaces that attract people through better quality of life.

We also need to provide much greater diversity of housing stock. As the highly regarded architect Naomi Stead has written:

In the past developers have often been distrustful of architects – the people they have tended to trust are real estate agents. This has led the whole development pipeline to be predicated on what has sold before, in a malign chicken-and-egg logic whereby different housing

offerings haven't been tried, so there's no evidence they will sell, so they won't be tried because there's no evidence they will sell. Lenders, too, are wary of loaning money on an untested design idea. The system has been bogged in inertia, braced against innovation. If you always do what you always did then you'll always get what you always got, and what we got in the past was often strikingly bad[5].

Homes (and the land they sit on) are one of our most valuable resources. There is a need to contain the continual spread of the Greater Adelaide Region, with the aim of maximising both the retention of productive farming land *and* conservation areas. The role of public transport infrastructure provision is essential to shaping Adelaide's form, and the popularity of regional centres.

Also essential is the better use of existing building stock. Where multi-storey buildings in the CBD and on the city fringe could be repurposed for housing (and meet the requirements of the Code), they should be. This values the land on which they sit, provides skills-based work opportunities and also values the embedded carbon in the materials used in their construction. Vibrant communities are resilient communities and a mixture of land uses across areas is an essential component of this.

8. Energy

South Australia has an enormous opportunity to ensure a more equitable distribution of energy services by leveraging our global leading transition to renewable energy.

The most important next step is to integrate standing energy with transport; the best opportunity for this is via the full electrification of households and businesses (to the full extent possible) and supporting the uptake of electric vehicles that can then be charged by household and business solar.

If electric vehicles are integrated well into our grid, allowing the absorption of solar at times of excess, or the release of electricity from EV battery storage back into the grid during times of need, we will be able to increase the reliability and resilience of our energy infrastructure.

To this end, we recommend:

- Ban and phase out of reticulated methane gas services, particularly in greenfield developments.
- Integrate battery energy storage systems to best effect within regions - Victoria has recently changed planning provisions to accommodate community batteries.

[5] https://www.thesaturdaypaper.com.au/culture/architecture/2023/09/02/nightingale-village?utm_medium=email&utm_campaign=The#hrd

Thank you again for the opportunity to provide a submission to the *South Australia's 20-Year State Infrastructure Strategy – Discussion Paper*. The Conservation Council SA welcomes the opportunity for ongoing engagement in the development of this Strategy.

If you require further information, please contact the office at [redacted], or contact me at [redacted]

Yours sincerely,

[redacted]

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SUBMISSION TO

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

10 November 2023

Submission authorised by

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COTA SA welcomes the opportunity to provide a submission to *South Australia's 20-Year State Infrastructure Strategy discussion paper*.

COTA SA is an older people's movement run by, for and with older people. We represent the rights, interests and futures of around 700,000 (39%) older South Australians. We engage widely with older South Australians across the state and the lived experiences of the diverse community of older South Australians shape and inform COTA SA's policy and advocacy work, including through our Policy Council, Regional Advisory Groups, LGBTI+ Rainbow Hub and Climate Change Group.

COTA SA cares deeply about ageing well and is committed to ensuring older South Australians have the opportunity, capacity and ability to navigate the changes of ageing in their place of choice. *South Australia's 20-Year State Infrastructure Strategy* is an opportunity to deliberately plan to support South Australians to age well, now and into the future. As the oldest state by demographic on mainland Australia, South Australia is uniquely placed to lead the way.

Planning for Ageing Well

In the many models of ageing well, the most common elements that support and empower navigating change are **health** (including physical and mental wellbeing), **security** (including housing and financial security), **purpose** (including volunteering, working and self-actualisation) and **connection** (including having a sense of belonging and social connection).

COTA SA strongly advocates for an infrastructure strategy and planning system that lays the foundations for communities that are age-friendly, cohesive, inclusive, resilient, adaptable and accessible. Strategic design and planning that allows people to age in their home and in their community, leads to positive health and wellbeing, and minimises cost and disruption to the individual, their community and ultimately, the public health system.

In response to *South Australia's 20-Year State Infrastructure Strategy* discussion paper, we recommend:

- Strategic Objective 2 specifically identifies our ageing population and is changed to *support a growing **and an ageing** population*.
- Proactive action to close the digital divide through structured and ongoing support, addressing prohibitive costs and building infrastructure that provides reliable digital connectivity to support people to use it.
- Strategic planning of communities that allow people to age in their home and in their community.
- Strategic planning of diverse housing options that meet the diverse needs of the older population, now and into the future, whilst not precluding an older person from being able to choose where or the type of dwelling they live in.
- The incorporation of social housing into every government-led and Renewal SA residential development.
- Consideration is given to how the confidence of travellers can increase the patronage of public transport in addition to well-planned infrastructure.
- Infrastructure and digital connectivity can support a more efficient and productive health system through the enabling of virtual health care and hospital avoidance hubs.

COTA SA has a track record of success connecting with and delivering programs with and for older South Australians. We can bring value as a for-purpose partner to achieve the best outcomes for older people, and can play an active role to ensure our strategies meet ageing well outcomes. We welcome the opportunity to collaborate with the government to shape the infrastructure strategy and subsequent plans.

Issues

While ageing cuts across every aspect of planning, on reviewing the discussion paper, we have focused our submission on the areas of greatest interest to ageing well.

Megatrends

Each of the five megatrends (p8) have an impact on older South Australians and COTA SA draws particular attention to *shifting population, workforce and skills base*; *push towards an inclusive society and economy*; and *climate change mitigation and adaptation,* as issues that will be most impactful to ageing well.

Another trend, which relates to the megatrend *push towards an inclusive society and economy* is the increasing rate of isolation and loneliness. This affects population groups of all ages and older Australians present a high risk group for social isolation due to a number of life stage factors which are associated with ageing: living alone, no longer having a partner/spouse, chronic illness, mobility issues, loss of friends and family, physical isolation, transport challenges and digital illiteracy. Results of the 2021 HILDA survey[1] showed that just under 1 in 5 women and just over 1 in 6 men aged 55+ "often felt very lonely". Loneliness can increase the risk of severe health conditions, including stroke and heart disease, and can increase the chance of early death by 26%. This places significant strain on our public health system and our care systems.

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

We strongly recommend that this objective specifically identifies our ageing population and is changed to "*support a growing **and an ageing** population"*.

The *discussion paper* presents data on our ageing population (p8), yet it is not identified in Objective 2. This population shift is significant. Our society has worked hard to achieve longer and healthier lives — both a medical and a social triumph. Despite this, older South Australians continue to face very real and significant challenges, including inadequate services and infrastructure to grow older in regional South Australia, cost of living pressures, social and digital exclusion, unaffordable and inaccessible healthcare, housing stress and homelessness and diminishing employment opportunities. If future plans and strategies do not explicitly address our ageing population, there is a real risk that communities will not be suitably designed to allow and optimise access to social supports, services, spaces and opportunities that enable people to age well and age in their communities.

[1] https://www.aihw.gov.au/reports/australias-welfare/australias-welfare-2023-data-insights/contents/social-isolation-loneliness-and-wellbeing

What are the barriers to increased adoption of digital technology to improve productivity? (Consultation question 5).

We consider that one of the biggest barriers is a lack of support and poor design for end-users. People aged 55 years and over have less digital ability than the national average, with those aged 65-74 and 75+ scoring significantly lower than the national average when it comes to digital inclusion[2]. South Australia is one of the least digitally included states and some of our oldest demographic regions significantly lag behind. For these regional areas, access to technology and devices and having the ability to use them is fundamental to digital inclusion.

Being on the wrong side of the digital divide impacts quality of life, causing mounting isolation and a sense of being on the outside. It takes away connections with community at a time when more older people than ever live alone with fewer opportunities for social contact as part of daily routines, and it presents a barrier to get information, access services and participate in social engagement opportunities.

We need proactive action to close the digital divide – for older people and for others. Non-online systems must be maintained, and structured support is required on an ongoing basis to help people learn and then stay up to date. The prohibitive costs and unreliable internet connections that undermine equitable access must also be addressed. Infrastructure must provide reliable digital connectivity to support people to use it. This is particularly important in regional areas where digital isolation compounds geographic isolation.

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

COTA SA notes that the *Greater Adelaide Regional Plan*, which we are pleased to see referenced in the *South Australia's 20-Year State Infrastructure Strategy Discussion Paper,* considers infill development an important consideration in how the greater Adelaide region should accommodate a growing population. Indeed, there is evidence that shows that established areas with medium-density housing is linked to higher liveability[3].

There are numerous examples of creative approaches to medium-density housing which could be considered. For example:

- the Bowden development provides medium-density accommodation as part of a well-planned development[4].
- Nightingale Housing[5] builds smaller cooperative-style medium-density developments. These are mainly in Victoria but is commencing in South Australia. Its underlying focus

[2] The ADII - Australian Digital Inclusion Index
[3] Place Score housing survey: Data shows density key to community vibe | The Advertiser (adelaidenow.com.au)
[4] https://renewalsa.sa.gov.au/projects/bowden/
[5] https://www.nightingalehousing.org/?gclid=EAIaIQobChMIjfWG8oec_wIVVTdyCh2--QRzEAAYASAAEgIv3vD_BwE)

is, “building apartments that are socially, financially and environmentally sustainable….homes should be built for people, not profit”.

Given that there may be a shortage of parcels of land which can be developed for medium-density housing in some locations, a further suggestion is to explore the possibility of redeveloping suburban and regional shopping centres. Most are either one or two storey complexes, often with large expanses of asphalt for car parking and frequently located close to bus routes. If the sites are redeveloped fully to a medium density (say, five storeys), the development could include extensive solar cells and green roofs, eliminate the heat effect of the asphalt, address housing shortages and lack of variety in housing options, address transport needs, and incorporate design features which foster community connection.

What can be done to support sufficient, fit-for-purpose housing to improve housing affordability (Consultation question 8).

Secure housing is fundamental to the health and wellbeing of older South Australians, which is why home and community is one of three strategic priorities in South Australia’s Plan for Ageing Well 2020-2025[6] a plan which should not sit in isolation to other state government plans and strategies.

A variety of factors mean that secure and affordable housing is rapidly moving out of reach for an increasing number of older South Australians. Older women are particularly at risk because of a lifetime of lower wages, lower superannuation, and asset losses in separations. Older LGBTI+ people advise that access to housing as they age puts them at particular risk of homelessness.

COTA SA has contributed to the relevant insights and recommendations included in the Housing Security for Older Women Taskforce and its report commissioned by the Minister for Human Services.

Insecure housing is compounded by ageism, long periods of underemployment prior to age pension eligibility and poor health. Indeed, a recent study found evidence to suggest that, “challenging housing circumstances negatively affect health through faster biological ageing[7].” The study further found that the reversible nature of biological ageing means that there is significant potential for housing policy to improve health outcomes.

The majority of older people want to age in place and stay in their own homes as they age. Enabling this includes housing that is affordable, adaptable, accessible and close to amenities. It is important this does not preclude older people making the choice of the type of housing they

[6] South+Australia's+Plan+for+Ageing+Well+2020-2025_WEB.pdf (sahealth.sa.gov.au)
[7] Are housing circumstances associated with faster epigenetic ageing? | Journal of Epidemiology & Community Health (bmj.com)

can live in. Like older people themselves who are diverse in their lifestyle preferences, incomes, identity, cultural background and relationships, there is not one-size-fits-all model when it comes to our housing needs as we age. Older people want to access a diverse range of housing options including private rental, owner-occupied properties, retirement village living, residential parks, lifestyle villages, social housing and residential aged care. It is crucial that older people can choose the type of housing that is right for their needs. This includes not placing an expectation on older people that they down-size at a particular point in their lives. The system must enable a variety of housing options suitable for all ages and abilities.

Housing design must ensure that all future housing meets livability standards; particularly relating to age-related mobility and accessibility requirements, and energy efficiency standards. The National Construction Code is a key mechanism to ensure these standards are being met at a minimum, and future housing must at least meet if not far exceed these standards.

The thermal efficiency of existing dwellings must also be improved, particularly in social housing and private rental properties. Addressing thermal efficiency will have positive impacts on peoples' health, cost of living and the environment. For example, in jurisdictions such as the United Kingdom, proposals are being put forward to improve the quality of existing houses[8] to make them more comfortable in extreme weather.

Our key recommendation for master-planned developments and urban infill which relate to affordable housing is that every government-led / Renewal SA residential development must include a proportion of social housing. There are a number of government-led / Renewal SA residential developments underway currently which do not provide for any social housing. This is a missed opportunity. It is well recognised that the demand for social housing far outweighs the supply. This can be addressed in two ways: grow the public and community housing sector (social housing) and replace or renovate houses that are no longer safe or fit for purpose. SACOSS argues that around 1,000 new social housing dwellings must be built each year to rebuild the stock of social housing. Anything less will merely cover population growth[9]. Planned consideration must be given to increasing affordable and social housing in sufficient numbers to address housing stress and put downward pressure on the private rental market. Social housing cannot be considered in isolation from the broader planning approach and the relevant legislation must be amended to guarantee this.

[8] https://demos.co.uk/research/home-improvement-a-triple-dividend-part-one-boosting-the-british-economy/

[9] SA's housing needs under spotlight at national cabinet | SACOSS

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

Access to adequate public and community transport in both the metropolitan area and in regional South Australia is fundamental to ageing well. It enables older people to be active in their communities and to maintain purposeful and independent lives that are connected to family, friends, employment, services and interests.

Quality, accessible and reliable public transport is more likely to be valued by older people who do not drive due to age-related changes, or who are on low and fixed incomes and unable to afford private transport. Making public transport free for Seniors Card holders in 2022 resulted in a 40% increase in usage over the following year, showing that increasing access to public transport results in more older South Australians able to participate in volunteering roles, to commute to their place of employment, to undertake caring roles and to partake in social, economic and recreational activities. These connections are fundamental to ageing well and planning for public transport infrastructure is important. Further, it gives older people an alternative to driving and thereby contributes to South Australia's carbon emissions reduction goal.

Even with free public transport, some older people do not feel confident to use public transport because of the digitisation of timetables, ticketing and information, fewer bus stops and no printed timetables at stations. COTA SA's *Seniors on Board* program found that the confidence of older travellers is enhanced by community education that helps to navigate travel planning and use. Funding this type of program offers a rich opportunity to build patronage of public transport by older people.

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

Older Australians are significant and growing users of acute health services. In the four years leading up to 2016-17, the average number of people aged 65-74 who were discharged from or died in hospital increased by 6% per year[10]. In South Australia in 2020–21, 57% of public hospital discharges and 64% of patient days were for people aged 55 and over[11]. A first admission to hospital results in a higher risk of avoidable rehospitalisation[12] particularly in older people.

Admissions and readmissions to hospital can be stressful for older people and their families, and places strain on an already stressed tertiary health system. There are instances where

[10] https://www.aihw.gov.au/reports/hospitals/ahs-2016-17-admitted-patientcare/summary

[11] Admitted patients - Australian Institute of Health and Welfare (aihw.gov.au

[12] Harvey, Getal (2021) An integrated knowledge translation approach to address avoidable rehospitalisations and unplanned admissions for older people in South Australia: implementation and evaluation program, Implementation Science Communications, 3:36 References

readmissions could be avoided through improved clinical management delivered outside of the hospital system[13]. The SA Virtual Care Service and hospital avoidance hubs, initiatives that were significantly invested in through the 2023/24 state budget, are important services that provide high quality and safe care outside of the hospital system.

COTA SA believes that an infrastructure strategy that supports an expansion of in-home virtual healthcare services and hospital avoidance hubs, that reduce unnecessary hospital admissions including emergency department presentations, and unplanned hospital readmissions will support a more efficient and productive health system. The infrastructure strategy must support these emerging healthcare solutions, including through digital connectivity, particularly in regional areas and planning for physical buildings that are located centrally and are easy to access.

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

The role that infrastructure planning plays, through housing, health and cultural facilities, and transport and digital connectivity infrastructure is significant in enabling older people to have accessible options for living and moving about their local areas so that they can remain active community members for as long as possible.

It is important that we invest in infrastructure that builds communities that are age-friendly, cohesive, inclusive, resilient, and accessible. Our infrastructure strategy must design and build an ecosystem that supports an ageing population and supports older people to age well in their place of choice. Such an ecosystem includes public and community transport and active travel, housing (affordable, adaptable, close to amenities), digital accessibility, climate adaptation, green spaces, accessible and safe communities that allow older people to stay active, cool and warm refuges to cope with extreme weather events, health and aged care services and community connection.

Climate resilient adaptation

Older South Australians have a deep commitment to reduce the severity and impact of climate change for today's community and for future generations. The adverse effect of climate change on the health of the community is evident in the rising cost of energy, heat and cold-related ill health and extreme weather events. The impacts of climate change are disproportionately felt by those on low and fixed incomes and vulnerable community members, including a substantial proportion of older people who are renters, as they will have the least capacity to mitigate climate change and adapt to extreme weather conditions.

[13] The Business Case for People Powered Health, Nesta, UK, April 2013

We note the references to climate change throughout the *discussion paper* and there is a clear statement of intent to invest in infrastructure with mitigation and adaptation to climate change in mind.

COTA SA believes that the future impact of climate change on South Australia will highlight the importance of community and social cohesion. Provision for community-building activities and projects such as community gardens, cool/warm refuges in days of extreme heat or cold (such as being explored currently by the City of Campbelltown), community batteries for solar electricity, and community virtual power plants we expect will be the sorts of activities that South Australians will search out to help them through the extremes of weather.

Tree canopy and green spaces are also important, not only for their cooling effects, but to provide environments that enable active travel and connection to nature.

Safer streets and spaces

Feeling safe in your own home and community is important for wellbeing and is especially important to consider how this is enabled through infrastructure planning, ensuring protective services and technology are planned for and built and digital connectivity exists to enable this technology. Safe streets and spaces are particularly important for communities that disproportionately experience discrimination, including LGBTI+ communities and survivors of domestic violence, including a growing cohort of older women living alone.

For further information and discussion

COTA SA looks forward to participating in the engagement on the 20 year State Infrastructure Strategy. We would be pleased to meet with Infrastructure SA to discuss our submission. Please contact Miranda Starke in the first instance.

Acknowledgement of Country

COTA SA acknowledges and respects Aboriginal people as the traditional custodians of the land of South Australia. We honour Aboriginal peoples' continuing connection to Country and recognise that their sovereignty was never ceded. We pay our respects to First Nations Elders past, present and emerging and extend that respect to all Aboriginal people.

COUNTRY ARTS SA

THE ART OF INSPIRING COMMUNITIES

South Australia's 20-Year State Infrastructure Strategy

Country Arts SA Submission

Country Arts SA's vision is for artists and communities of regional South Australia to thrive through engagement with the arts and be recognised as valued contributors to the nation's cultural voice. Country Arts SA aims to transform the way the arts are made and engaged with in regional South Australia.

In regional South Australia, Country Arts SA works with regional local governments and volunteer presenter groups to present performances and exhibitions in spaces, galleries and town halls across the state.

Country Arts SA also manages four performing arts centres:

- Middleback Arts Centre, Whyalla, Barngarla Country;
- Northern Festival Centre, Port Pirie, Nukunu Country;
- Chaffey Theatre, Renmark, Erawirung Country; and
- Sir Robert Helpmann Theatre, Mount Gambier, Boandik Country.

Opportunities to experience, participate in and benefit from the arts should be available to all South Australians. The arts are a leading contributor to the strength of our regional communities. They shape our culture, identity, and economy; contribute to employment, tourism and education; and support good health, wellbeing and community cohesion.

In order to achieve this, arts infrastructure across regional South Australia needs to be fit for purpose. This encompasses:

- four regional performing arts centres that Country Arts SA owns and manages,
- community owned spaces, galleries and town halls for visual and performing arts across regional towns and
- strong reliable digital infrastructure connecting communities to each other, across the country and the world.

Following is our contribution to the Objectives in the Discussion Paper.

2. Liveable and well-planned spaces

6.6 Cultural, tourism and recreational facilities

- Country Arts SA manages four regional performing arts centres Middleback Arts Centre, Whyalla; Northern Festival Centre, Port Pirie; Chaffey Theatre, Renmark; and Sir Robert Helpmann Theatre, Mount Gambier that service regions of up to 50,000 people. In 2022/23 each centre attracted between 23,277 and 29,227 people to events and activities across the year.
- Having a planned and cost-effective approach to the ongoing renewal of the centres, will ensure they provide arts, cinema and entertainment choices to local audiences and families, meet the needs of regional artists, commercial promoters, community hirers and other users, comply with current building standards, ensure the safety of patrons and staff and maximise arts experiences for all.
- These performing arts centres are pivotal places in their communities that contribute to modern expectations for contemporary lifestyles and that offer opportunities for young people and families to engage in a range of activities as part of their daily lives.

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www.countryarts.org.au

Far North & West
Middleback Arts Centre
Barngarla Country

Mid North & Yorke
Northern Festival Centre
Nukunu Country

Riverland & Murraylands
Chaffey Theatre
Erawirung Country

Limestone Coast
Sir Robert Helpmann Theatre
Boandik Country

Statewide programs
Arts & Cultural Development
First Nations Arts and Culture
Grant Funding
Performing Arts
Visual Arts

ABN 63908129329

- Having local offerings for entertainment across the day and night, together with a program of activities for residents provides healthy options for mind and body and wellbeing.
- Programs run at the centres also provide local employment for front of house staff and back of house technicians, including the opportunity for a variety of educational experiences and skills developments.
- Touring shows also provide a year-round diet of experiences for school students that broadens their imagination, supports creative thinking, and provides the opportunity to examine their world.
- Additionally, they are the focus for cultural, arts and conference events that attract visitors from across the state, nationally and internationally.
- Master Plans for each centre have been developed with local First Nations representatives, regional artists, user groups and hirers, audiences, local governments and other stakeholders. Attached is a brief overview of the Master Plans for each centre.
- The master plans incorporate flexible spaces for communities to gather to celebrate and tell their stories, for artists to build their craft, make art and share new work, and will include black box spaces, galleries, digital spaces, civic spaces and outdoor spaces for art, expression and play.
- A rolling program of co-investment between local, state and federal Governments, with support from business and philanthropy will transform these four aging regional arts centres and see each centre redeveloped within the next 10 to 20 years starting with the Middleback Arts Centre, Whyalla.
- An annual Capital Expenditure budget of $5million is urgently required to address the critical building issues and commence a program of rejuvenating the regional performing arts centres.
- A seeding fund program for capital grants to Local Government owned galleries, halls and other arts infrastructure will encourage all regional communities to have access to fit for purpose arts facilities.
- A Regional Arts Plan will acknowledge and respond to the uniqueness of our regions, the opportunities and challenges they each face and the potential to provide visitors with more arts and cultural offerings to experience while travelling through regional South Australia.

3. Accessible and inclusive infrastructure

7.2 Regional and remote areas

- Digital connectivity: Investment in broadband and digital technology in regional areas will provide access to global arts opportunities and for regionally created work to be exported around the world.
- Investment in new matched capital, programming and partnership funding programs to regional Local Councils would increase local employment, participation in arts, cultural and creative endeavours and address the inequity of opportunity due to the distance and isolation experienced by most regional and culturally diverse communities.

7.3 Closing the gap

- The rejuvenated performing arts centres will reflect local First Nations culture, support professional artists to advance their careers and make new work, support new First Nations led and delivered programs that provide opportunities for families to have fun exploring art and culture and enable local audiences and visitors to experience inspiring performing, visual and digital arts in fit for purpose contemporary settings.
- Country Arts SA can be supported to offer greater employment and skills programs that provide direct opportunities for more First Nations people living regionally to build careers in the arts and by working at the four regional performing arts centres.
- New investment in Country Arts SA programs to support the development of new work by regional First Nations artists and communities that share stories through art to be shared locally, across the state, nationally and internationally.

FINAL THOUGHTS

Every day at Country Arts SA we witness the power of the arts to transform lives, and as such we believe all South Australians deserve a life rich in arts and culture.

Country Arts SA exists to address the imbalance of opportunity regional South Australians have to access the arts, we create opportunities for artists at every level to flourish and produce great art and provide regional South Australians the best possible arts experiences.

In 2022-23 we achieved the following:

- 1,977 activities (performances, exhibitions, events) delivered
- 659,000 people engaged
- 2,064 artists and art workers employed
- 7 new works produced and 27 new works presented
- 11.1% First Nations employment achieved

Whilst we are an integral part of the overall arts and cultural ecology in South Australia, partnering with Adelaide based arts companies and artists, our focus remains on regional South Australia. It should be noted however that practically all the regional investment priorities we have outlined will have direct and indirect benefits for South Australian artists, arts companies and audiences.

COUNTRY ARTS SA

THE ART OF INSPIRING COMMUNITIES

REFURBISHMENT AND REJUVENATION OF ARTS CENTRES IN REGIONAL SOUTH AUSTRALIA

Rationale

Country Arts SA manages four regional Arts Centres on behalf of the South Australian Government:

Centre	Location	Built in
Sir Robert Helpmann Theatre	Mount Gambier	1982
Northern Festival Centre	Port Pirie	1982
Chaffey Theatre	Renmark	1984
Middleback Theatre	Whyalla	1985

Each of these buildings is at a stage of its lifecycle that typically sees rapidly increasing costs associated with maintenance. At this stage, original built infrastructure like toilets, air-conditioning, lighting and sound systems have reached their functional end of life. They require upgrading both to maintain safety and compliance standards and to meet contemporary audience expectations.

In the four-decade period since their construction, these vitally important community facilities have not enjoyed any significant redevelopments, refurbishments or major upgrades.

To revitalise and upgrade these ageing assets, meet safety, compliance and DDA standards and satisfy community needs and audience expectations, Country Arts SA has engaged with local First Nations representatives, regional artists, user groups and hirers, audiences, local governments and other stakeholders in the preparation of Master Plans for each of its regional Arts Centres.

These Plans incorporate upgrades to existing proscenium arch theatres and foyers with new facilities to make and share art, including black box/flexible spaces, community creative making places, gallery spaces, digital/screen hubs and music recording studios.

The rejuvenated Arts Centres will reflect local First Nations culture, support professional artists to advance their careers and make new work, provide opportunities for families to have fun exploring art and culture and enable local audiences and visitors to experience inspiring performing, visual and digital arts in fit for purpose contemporary settings.

Country Arts SA intends to work with Infrastructure SA to develop an overarching Business Case and separate Economic Impact Studies for each location.

Cost of Works

Revitalisation of the four regional Arts Centres requires investment of **$200m** to deliver a program of refurbishment works over five years, with contributions from Federal, State and Local Governments, together with philanthropic and sponsorship sources.

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Far North & West
Middleback Arts Centre

Mid North & Yorke
Northern Festival Centre

Riverland & Murraylands
Chaffey Theatre

Limestone Coast
Sir Robert Helpmann Theatre

Hopgood Theatre

STATEWIDE PROGRAMS
Arts & Cultural Development
Visual Arts
Performing Arts
Grant Funding

ABN 63908129329

Program and Order of Works

Country Arts SA proposes a 5-year program of forward works to implement the Master Plans across all Arts Centres, commencing with planning studies and design work, followed by a 4-year construction period. This is reflected in Option 1 below.

The proposed order of priority set out below delivers capital works to enable business continuity and minimise disruption.

Now	Finalise business plans and economic impact studies
Year One	Design, documentation, tender and award construction
Years Two to Five	Construction of works for each Arts Centre

The priority and community need of each location has been carefully considered and the order of the following works can align with the State's priorities:

1. Middleback Arts Centre

New entry, amphitheatre and courtyard, black box theatre, art gallery, community arts space, administration offices and refurbishment of existing theatre, cinema, amenities and car park.

2. Northern Festival Centre

New function centre, digital precinct, makers space, café, amphitheatre and black box theatre and refurbishment of existing theatre, administration and car park.

3. Sir Robert Helpmann Theatre

New music recording suite, creative makers space, black box theatre, administration and entry and refurbishment of existing foyer, theatre and backstage areas.

4. Chaffey Theatre

New black box theatre and digital precinct, flexible community space and refurbishment of foyer and amenities, existing theatre, administration and backstage areas.

Grounded

Community Land Trust Advocacy

Submission to the Community Consultation for the

Greater Adelaide Regional Plan (GARP) 2023

Planning and Land Use Services, Government of South Australia

Prepared by Elle Vallance & Emma Belcher
on behalf of Grounded Community Land Trusts Advocacy
grounded.org.au


Grounded
Bringing community led housing to fruition

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Executive Summary

Grounded Community Land Trust Advocacy (Grounded) warmly welcomes the opportunity to provide a submission to the GARP 2023. South Australia has a well deserved reputation as an innovative and progressive state. We encourage the GARP to continue that tradition and to fully leverage the opportunities presented in the development of the plan to maximise the benefits for current and future generations of South Australians. This is an opportunity to create a more socially equitable and cohesive community and to minimise the impacts of locational disadvantage. It is vital our communities become greener and more resilient in adapting to climate change.

Building a strong, smart, clean, regenerative economy will ensure South Australia is well placed to face future global uncertainties and for government revenue to be able to fund essential infrastructure. Underpinning all of this, is the need for a greater range of appropriate housing in the most suitable locations. Secure housing provides the stable foundation for people to build their lives, grow their families and build strong and resilient communities.

Grounded believes that along with effective policy levers at both the state and federal level, that community led housing provides the best approach to balancing competing interests and long term positive outcomes. We suggest that GARP adds intergenerational impacts into their decision making and outcomes measurements. Too many interventions benefit only the initial subsidy recipient rather than contributing to long term, community benefit. It is time to restore a better balance between the individual resident and the community, between local wages and housing costs. It is paramount that policy and planning decisions are made for the benefit of the whole community rather than those who are likely to profit most.

If Community Land Trusts (CLTs) were championed by a visionary government agenda and coupled with philanthropy, impact investment and tailored mortgage instruments for residents, CLTs and community led housing projects could become the preferred vehicle by which the progressive aspirations of the GARP are materialised in South Australia.

Key Recommendations

1. Prioritise community-led housing approaches to ensure housing meets local priorities and supports long term amenity and benefits
2. Support the establishment of a community led, affordable housing ecosystem
3. Provide funding to a CLT establishment fund to seed a statewide rollout
4. Develop appropriate financial instruments for future residents to obtain CLT mortgages
5. Focus on perpetually affordable housing, not just first resident or time limited schemes
6. Include long term intergenerational outcomes (affordability / climate / cohesion / equitability) as part of key outcome considerations
7. Redirect individualised housing subsidies into the establishment of a perpetually affordable housing ecosystem
8. Limit greenfield urban sprawl to preserve arable land, and restrict the expansion of satellite city growth to existing boundaries
9. Prioritise brownfield urban renewal and infill to achieve high amenity ‘Living Locally’ modern micro villages
10. Give NFP housing organisations priority access to Renewal SA land-banked land, before offering it to the open market
11. Use government levers to reduce private developer land banking
12. During economic downturns, governments should prepare for a land buying spree to rebuild the public land bank

About Grounded Community Land Trust Advocacy

About Grounded

Grounded Community Land Trust Advocacy is a not-for-profit registered charity established to advocate, incubate and accelerate the development of Community Land Trusts in Australia. Four members of our national Board are South Australian residents.

Our Advocacy

We are living in a society where two million property investors have control of both the housing market and the politics surrounding it. This has caused a desperate situation where many young people can't afford to leave home until well into adulthood; where solo mothers and their children are living in cars; and where retirees are finding long-term refuge in caravan parks.

Meanwhile, the impacts of climate change and environmental breakdown ravage more and more communities across the country. Australians are growing increasingly aware of the importance of building and sustaining strong and resilient communities that prioritise fairness, equity, and responsible land stewardship.

We want to ensure that a diverse mix of housing models is possible in Australia. We urgently need a citizen-led response to the hollowing out of a core human right – a place to call home.

Community Land Trusts offer a much-needed alternative to the broken buy/rent duopoly through the delivery of an affordable, equitable and sustainable model that prioritises people and the planet.

Indigenous Acknowledgement

Grounded acknowledges and pays our respects to all 500 First Nations throughout this land and honour the stewardship demonstrated over 60,000+ years. We acknowledge that sovereignty was never ceded.

Community Land Trusts

What is a Community Land Trust?

Community Land Trusts (CLTs) are a for-purpose housing model focused on delivering housing that meets key community needs and provides the most cost effective affordable housing.

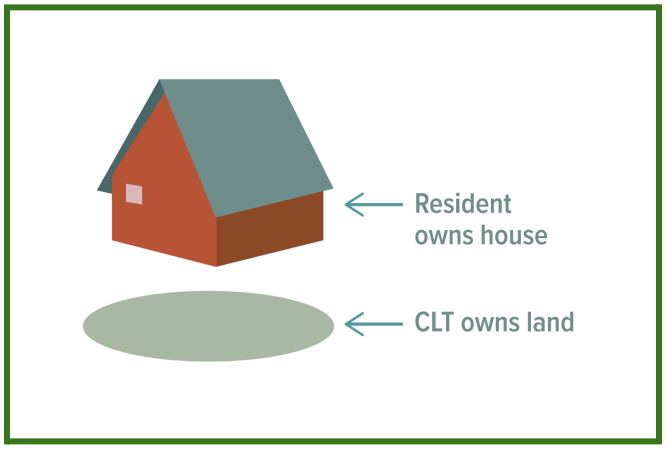

Image: Grounded

The CLT establishes a Trust to own the land and steward the land in perpetuity. The dwellings, sitting atop the land are developed by and owned by the residents themselves. This can be through a partnership with a Community Housing Organisation, a rental housing cooperative, an owner occupier housing cooperative, or as stand-alone private dwellings. A CLT may also elect to include community facilities, commercial buildings or farming land in its asset portfolio, dependent upon the needs and aspirations of the community it serves.

The resident pays an ongoing land rent to the CLT for the ongoing use of the land on a 99 year lease. The resident only needs to borrow for the value of the house. By separating the land and dwelling, the upfront cost to the resident is significantly reduced. At the same time, the resident prospers from modest wealth generation benefits of home ownership, stable housing tenure and the motivation to deeply embed oneself in the social, cultural and economic life of the local community.

This requires some nuance from government in separating the land from improvements in property titling. This form of innovation should be welcome in the state where Torrens Title was developed.

The nature of the CLT model sees the development cost shared between funds raised by the Trust (often via government, philanthropy and impact investors) and the resident (via mortgage). This **delivers a scalable return for government investment** that operates in the knowledge that any future property sale has affordability locked in place. This **affordability lock** is enshrined

within a triple check formula: a monthly land lease, a resale formula (with an agreed split in gains between Trust and seller) and a legally enforceable covenant that limits prices to 30% of the median income earner in the region. One government subsidy can assist a lifetime of affordable housing.

Current government run shared equity programs rely on selling to the open market to recoup the 20-40% equity lent to the home buyer. The new buyer is required to enter at a higher price, potentially requiring even higher government subsidy; third and fourth generation buyers enter at even higher market prices.

CLTs will assist those missing moderate income earners now priced out of the open market by reducing the deposit gap. By only having to borrow for the improvements (i.e. dwelling), a CLT resident may only require a deposit of $50,000 instead of a $150,000 deposit. This will help to reduce local rental pressure. Missing moderate income earners, who once could afford their own homes with a $50,000 deposit, are now able to enjoy security of tenure.

A CLT embeds perpetual affordability, environmental sustainability and land stewardship into its core purpose. By separating the land and dwelling, the cost to the resident is significantly reduced, whilst still providing the benefits of home ownership. The resident only needs to borrow for the value of the house.

CLTs assist to stabilise house prices for future residents as the increase in property values is more closely aligned with increases in median wages. This avoids land price inflation inclusive of speculative drivers. Housing stock therefore remains affordable and relevant to workers on local wages.

CLTs provide competitive returns on investment in terms of public investment, affordability and social cohesion. Demand-side subsidies such as the First Home Owners Grant (FHOG) put upward inflationary pressures on house prices, exacerbating housing unaffordability over the long term. By contrast, the UK experience has shown that initial subsidies provided by the government to establish a CLT ensures that the taxpayer funded subsidy is retained within the CLT structure and the affordability benefits remain available for future generations of residents.

Similarly, with less spent on land, CLT residents have more discretionary budget for development of climate change attuned housing. This could include a fire bunker in bushfire prone regions, or hurricane proof housing.[1]

[1] Applegate, A. CLTS are Building Disaster-Resilient Neighborhoods, 2022

The UK CLT Network has helped facilitate the growth of CLTs from just a handful at the time of the GFC to nearly 600 CLTs currently.[2] Similarly impressive growth is happening in the USA, spurred on by major donations from super philanthropist Mackenzie Scott. [3] [4]

In Australia, there are numerous groups diligently working to establish CLTs in their regions. With a few minor changes to housing policy at state and federal level, we could see the establishment and accelerated growth of the CLT sector replicating the outcomes achieved in the UK and USA.

South Australia has a well deserved reputation as a progressive state, leading Australia in social and environmental innovation and the crafting of solutions to complex and pervasive problems. Lower land and housing costs reduce the cost of living pressures for residents and tenant businesses. This thereby frees up time to tend to a home, business or family, nurture the land it sits on, and contribute to community in meaningful ways.

Image: Grounded

[2] UK CLT Network, Policy & Vision, 2023
[3] Cohen, J. Mackenzie Scott Gives $10m affordable homeownership in Seattle, 2023
[4] Menderson, J. Historic Contribution, 2023

Impacts of Community Land Trusts

The nature of the CLT model sees the development cost shared between funds raised by the Trust (often via government and philanthropy) and the resident (via mortgage). This delivers a scalable return for government investment that operates in the knowledge that any future property sale has an affordability lock in place.

CLTs and community led housing projects can also provide a much more effective way to incorporate place-based factors, such as heritage considerations or preservation of high value natural assets. Connections that are deeply embedded within the fabric of the local community can inspire generous contributions from philanthropists, impact investors and enhanced relationships between communities, local councils and local MPs. This compares to government run shared equity programs that typically struggle to tap into a passionate vein within the community.

CLTs offer the government and the Australian public the most cost-effective affordable housing model available. CLTs provide competitive returns on investment in terms of public investment, long term affordability, and greater social cohesion. Unlike demand-side subsidies such as the First Home Owners Grant (FHOG), **a single once-off government subsidy to initiate a CLT is retained within the CLT structure over time. The benefits can perpetually 'pay it forward' to multiple generations.**

Research from the UK & USA indicates that CLTs:

- Deliver value for money: CLTs and community-led homes that receive public investment of land or capital have been shown to deliver $1.8 of benefit for every $1 invested, rising to $2.70 when health, wellbeing and income distribution benefits are factored in. This increases to $3.10 over 30 years. **CLTs deliver a significant 3:1 return on investment in the UK when health, wellbeing and income distribution benefits are factored in over 30 years.**[5]
- Have been built to high environmental standards: With less spent on land costs, residents have greater budgetary scope for carbon emissions reduction and climate change preparedness. The UK experience has demonstrated that CLTs reduce CO2 emissions by 15-50%. Annual household energy costs were reduced by $260 – $1300 when measured against a typical UK house.[6]
- Are more resilient to downturns in the housing market: the U.S foreclosure rate for CLT homeowners was one-eighth the national average in 2010 during the Global Financial Crisis (GFC).[7] Similarly, during the COVID-19 crisis, homeowners with market-based loans were over 8 times more likely to face delinquency and foreclosure than CLT homeowners.

[5] Colquhoun, C. Housing by the Community, For the Community, 2022
[6] Applegate, A. CLTS are Building Disaster-Resilient Neighborhoods, 2022
[7] Thaden & Rosenberg, Outperforming the Market - Delinquency & Foreclosure in Community Land Trusts, 2010

- Reduce planning risk by countering NIMBYism: CLTs can often gain local support for new development where private developers fail.

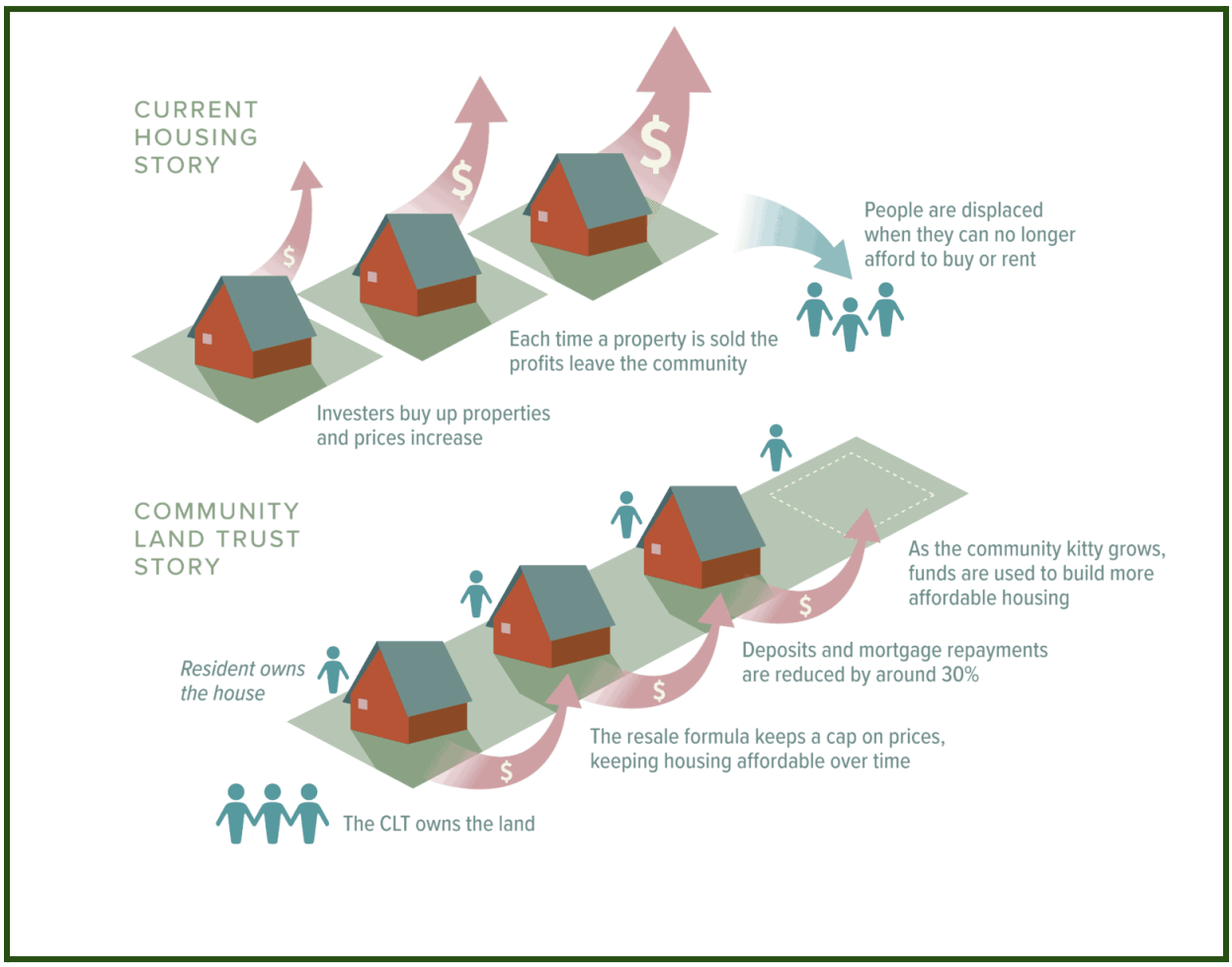

Image: Grounded

Part 1. How should Adelaide grow?

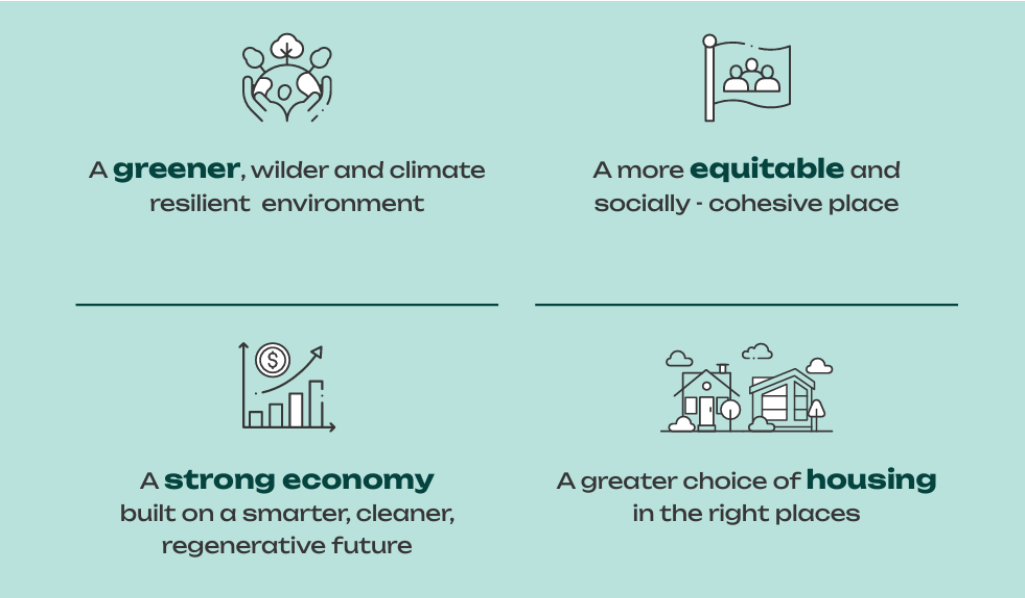

Image: GARP 2023

Current and future generations

Grounded commends the GARP's key focus areas upon housing availability & affordability, liveability, the climate crisis, ecological sustainability, food & water security, social inequality and indigenous reconciliation.

Not mentioned in the GARP is a tangible strategy for achieving long term intergenerational affordability of housing that enables a more equitable and socially cohesive place.

There needs to be a specific focus on improving outcomes for marginalised groups to ensure that housing development approaches do not inadvertently create additional intersectional disadvantages. Strategies to minimise negative impacts could include **actuarial accounting** to consider implications across a wider range of factors as well as the inclusion of **opportunity costs** and the **risk of non-action** in planning and feasibility decision making.

Currently the Australian housing market has transitioned from one where the sanctity of the family home was the basis of the property owning democracy to a scenario where now only those who own property can access the subsidies and privileges that land ownership delivers.

Whereas previously the private rental market was seen as a stepping stone between leaving the family home and entering home ownership as a young adult, the prevalence of lifelong renters is increasing. The market is not responding adequately to the need for long term, secure rentals and affordable home ownership alternatives.

Image: The Simpsons

The current situation for many can be summed up with this quote from a recent regional housing needs survey:

> *"The bank says I can't afford $850 a fortnight for a mortgage so I pay $1200 a fortnight in rent instead."*[8]

Housing affordability is already out of reach for the current generation of young people and the growing number of older solo households. The mainstream housing market cannot and will not respond to renter's and low to moderate income earners housing needs without adequate reforms. As long as it is more profitable and less restrictive to rent a property via AirBNB than as a long term rental, the market will choose the former. As long as governments continue to rely on FHOG type subsidies, the market will continue to inflate prices. New interventions are needed and community led housing solutions such as CLTs need to be prioritised.

Grounded encourages the GARP to adopt a 'seven generations'[9] approach to visioning the liveability of our cities well beyond the concerns of the next 30 years. The GARP should be planning for the housing needs,, environmental sustainability and liveability of our cities that will be experienced by our grandchildren's grandchildren.

[8] Housing Matters Action Group, 'Housing needs mapping survey', Anon quote, 2022
[9] https://en.wikipedia.org/wiki/Seven_generation_sustainability

Community led housing responds to local context

Community led housing (CLH) is an umbrella term for housing models that involve residents and communities having central roles in the development and ongoing management of housing.[10] Typically CLH focuses on affordability relative to local wages and wider social benefits such as social cohesion. CLH initiatives can respond effectively to local housing needs and often as part of their grassroots development tend to minimise NIMBY objections.

Image: Grounded

While CLH is able to respond effectively to localised housing needs, the criticisms from government and developers is that there can be a lack of scalability and/or replicability and an imbalance between the emphasis on community wellbeing and financial viability of potential projects. For this reason, we believe that CLTs provide the most suitable framework for community led housing because of the balance it provides in terms of a robust financial and legal structure while retaining the ability to adapt to local context and community priorities.[11]

The most effective housing outcomes for renters and those aspiring to home ownership will come as a result of effective collaboration between government, for purpose housing organisations and community led initiatives.

Community led housing can help to minimise the negative impacts of all types of development. Infill development can be obstructed by NIMBYism with existing residents unwilling to accept change and increased density. Brownfield developments, if left to the private market, are likely to deliver housing with the highest returns for developers, high end apartments for professionals and/or properties destined for short term holiday letting. These housing products are not conducive to the establishment of inclusive, equitable communities.

[10] What is community-led housing? - World Habitat (world-habitat.org)
[11] Crabtree et al Articulating value in cooperative housing International and methodological review

Similarly, greenfield developments run the risk of market manipulation through drip fed land supply strategies, urban sprawl, sleeper neighbourhoods and locational disadvantage. However, community led greenfield developments have an opportunity to mitigate many of these risks.

The Aldinga Arts Eco Village provides a worthy example. This village currently has 181 houses and has incorporated 'living locally' via shared community spaces, productive food gardens, environmental stewardship and collaborative decision making processes. The village is also located close to schools, services and major roads.[12]

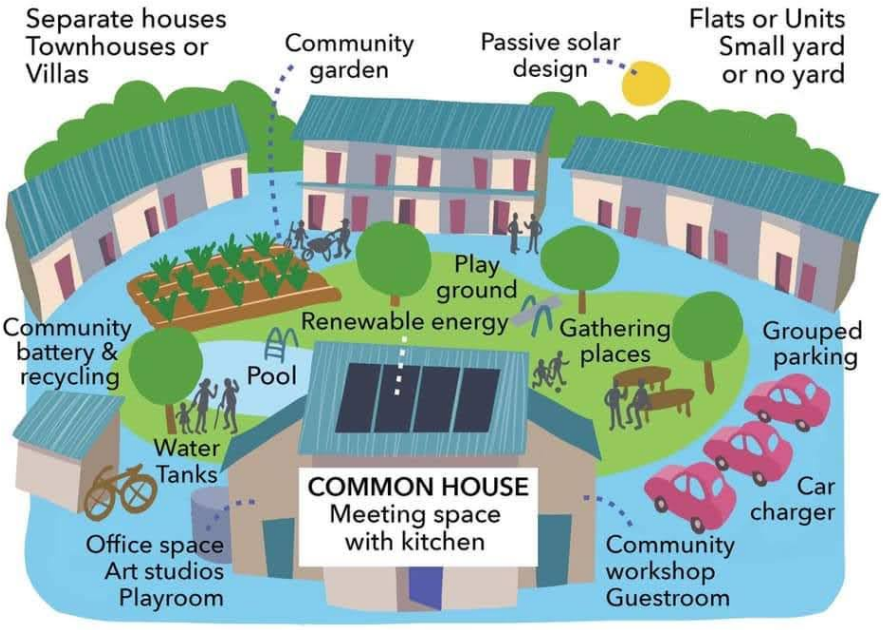

Image: Cohousing Australia

Involving community in the planning, managing and ongoing use of infrastructure can lead to better long term outcomes and usability.

The solution to traffic congestion is *not* wider roads or multi-million dollar freeways and tunnels that bisect communities. The answer is to restrict urban sprawl and the associated public transport deserts that force families into car dependency. More cost efficient (in terms of overall capital outlay) and better social and environmental outcomes can be derived from **high quality eco-friendly medium density urban infill**, particularly modern micro villages.

Combining state leadership with localised community activation could have significant benefit in terms of mitigating biodiversity loss and heat island risks. The commendable native vegetation guideline for roadside management for country areas and Green Adelaide's Urban Greening Strategy for metropolitan Adelaide, acknowledge that more urgent action is needed to restore

[12] https://aldingaartsecovillage.com

urban biodiversity. 75,000 trees are being lost each year from Adelaide's tree canopy. This is a critical biodiversity risk and heat island effect risk that puts costly strain on our health care system. There must be more stringent controls on loss of tree cover, much tougher penalties for wrong-doers and much more funding to LGAs to reinstate Adelaide's shade including support for community activation initiatives.

Housing SA has announced plans to increase development of 400+ new homes as per A Better Housing Future and the 1,000 Affordable Homes Initiative. Instead of landscaping the front gardens of new homes with introduced species, the contracted property developer could be required to landscape with indigenous plants recommended by Bringing Back the Butterflies. Simple community engagement strategies could be implemented to regenerate lost habitat for threatened species on publicly owned land, such as land managed by DTI and the Education Department, without any compromise to overall land usage.

The 'Missing Moderates'

Grounded is concerned the recent announcement of A Better Housing Future falls into similar tropes to troubled government interventions in other states. The removal of stamp duty discounts will result in less government revenue, with the savings used to bid prices higher The $650,000 threshold will have to be increased in two years. The FHB Grant will add to demand side pressures, requiring even greater FHB grants in the future.

With the housing crisis affecting young people, over 55's, solo parents and many families bearing the dual responsibilities of having to care for both their young children and their ageing parents, we have concern that this cascading of housing pressures is preventing this middle income cohort from gaining access to home ownership. These are solid citizens who earn too much to access subsidised housing options but are blocked from the security of home ownership due to the deposit gap and rising cost of living pressures.

The disappearance of affordable rental supply has created a deep fearfulness within the moderate income earning cohort. This is a cohort that had not experienced housing insecurity previously. Many are fearful that they are just one eviction notice away from homelessness.

CLTs are the ideal intervention to enable moderate income earners to achieve home ownership. CLTs help to stabilise local housing markets and ensure that essential workers have access to home ownership in suitable locations. Over time, **CLTs reduce the demand for social housing, homelessness services and affordable rentals**, ultimately reducing the cost burden on government**.**

Insights from other innovative building models

The Nightingale Housing model, the Assemble Futures model, the Property Collectives model, and the Sun Villages model have each demonstrated a triple bottom line approach to innovatively address the housing crisis. Each is to be highly commended for their environmental sustainability credentials and willingness to place Human Centred Design at the centre of the innovation process. Nightingale and Assemble, in particular, have demonstrated that not-for-profit architect-led housing innovation can deliver outstanding results at scale.

However, the impacts of the financial component of these models do not go far enough to achieve long term affordability over successive generations. Highly credentialed eco-friendly homes within a modern micro village are highly sought after. The gentrification of the housing stock pushes up the median price for homes in the surrounding area, shutting out home ownership for essential worker cohorts.

Each of these models have been in existence for approximately a decade and longitudinal data is not yet available about long term affordability. Regrettably, the absence of effective resale covenants[13] for subsequent generations of buyers means that aspiring third, fourth and fifth generation buyers will have to be very affluent to be able to buy-in to such sort after eco-credentialed precincts.

As each of these innovative models mature and evolve, Grounded hopes that future projects will incorporate a CLT as the trustee of the land, whereby only the dwellings atop the land are bought and sold. In addition to the benefits of the modern micro village and eco-cred, a CLT would ensure:

1. The land component is permanently taken out of the calculation of the capital appreciation equation, thereby quelling inflationary house price pressures for the CLT dwellings and dwellings in the surrounding areas not covered by the CLT and,
2. A resale price calculation formula by means of a legally binding covenant is placed on the dwellings, permanently pegging the resale price of the dwellings to wages growth, thereby ensuring long term affordability for essential workers.

[13] Nightingale has a covenant restricting resale to 15% of the median *detached home* in the locale. This will be much higher than an apartment due to the higher proportional site value.

Establishing a CLT ecosystem in South Australia

With a ten year rollout plan, CLTs could follow a similar trajectory to the UK CLT housing experience. The UK Cohousing Network and Community Land Trust Network recently launched the 'Community Led Housing Growth Lab', a CLT and CLH accelerator to help the community led housing sector address the challenge of scale-up.[14]

In 2010, there were around 600 CLT homes in the UK, today that number is 1,711 with an additional 5,413 in the pipeline. BAccording to the latest research, there is potential for another 278,000 to be built.[15]

Image: UK Community Land Trusts Network

Grounded is collaborating with counterparts in the UK and USA to replicate the organisational structures and incubation processes to achieve similar transformative success in Australia.

Initially, the plan is to start with a small number of duplicatable pilot projects that will identify and work through any planning, legal and financial barriers. In years 3 - 5, with a model that is building in confidence, in conjunction with the rollout of a national CLT Start Up Fund with Housing Australia and a panel of impact investors and CLT specific financial instruments will enable the sector to grow to help fill the current gap between private rental and home ownership.

[14] UK Cohousing, Unveiled: the Community Led Housing Growth Lab 2023
[15] Bowker, C. Community land trusts are the next social housing revolution: 'It's about empowering people', The Big Issue UK, 15th Oct. 2023

Trends and drivers

For too long, housing and infrastructure (and politics) has been dominated by voices representing those that are likely to profit most from any decisions. The most effective way to plan and adapt is to ensure that land use plans and decisions are considered from a much wider perspective and include potential impact on future generations.

Key considerations for land use planning should include:

- Reconciliation with First Nations
- Recognition that land ownership enjoys monopoly power
- Intersectional disadvantage
- Gender lens
- Locational disadvantage
- Climate change, including impact of extreme heat
- Increased risks of natural hazard and emergency events
- Food production and biodiversity collapse
- Building resilience to external shocks - e.g. supply chain impacts exposed during COVID
- Transport - reducing reliance on fossil fuels and building in active transport infrastructure
- Health & wellbeing

Better use of government subsidies

Grounded calls for individualised subsidies, such as the state and federal First Home Owner Grants and the state based Stamp Duty Relief for Eligible First Home Buyers **to be redirected into the establishment of a financially sustainable CLT housing sector.** This has the potential to save money in the medium term and deliver genuinely affordable housing for generations to come.

Rather than the ever increasing need for government subsidies for individuals to enter into home private ownership, **the provision of government funding to CLTs quells broader house prices as the CLT sector matures.** As demonstrated by Swedish public housings growth, an initial post war investment has enabled the ongoing delivery of homes that meet community needs.[16] Sweden's innovative Sveriges Allmannytta provides 30% of rental housing where security of tenure is guaranteed.[17] Such a rollout could facilitate a more targeted approach to improve rates of home ownership among the 25 - 45 age group and help older single women avoid the perils of homelessness and housing insecurity.

Grounded calls upon the GARP to **proactively enable the development of a community led housing ecosystem strategy** for achieving long term intergenerational affordability of housing and a more equitable and socially cohesive place.

[16] Sveriges Allmannytta, Public Housing in Sweden
[17] ibid

Delivering greater choice across housing types and locations

With major developers often acting in concert to ensure higher prices, we need genuine competition in the housing market.[18] Government also needs to intervene in the housing market where the market cannot and will not respond to housing needs. This includes supporting approaches that foster emergent housing models, alleviate the demand for social housing, and find the delicate balance between housing and food production on arable land.

Fostering new ecosystems

To ensure that GARP contributes to building a strong, smart, cleaner, regenerative economy, Grounded recommends greater support should be provided to emergent market ecosystems, including the affordable housing, impact investment and social enterprise ecosystems. This must be undertaken in the same innovative manner that the tech ecosystem was given a major boost through the creation of the enormously successful Lot 14 precinct.

Grounded recommends that the **South Australian government and Housing Australia create a funding pathway for CLT pilot projects.** We need Housing Australia and entities such as HomeStart Finance to facilitate the creation of a mortgage instrument that can be used by residents to buy into a community led CLT project. The funding pathways will start small, but with a perpetually affordable focus there is no reason it could not grow over decades to a similar size of Sweden's.

Importantly, any widening of the affordable housing mandate should ensure that any future sales have **an affordability lock**. This means that the CLT places a legal covenant on the sales price such that prices could not increase faster than the median wage growth for the area.

The paucity of remaining public land should be channelled towards housing organisations that have **for-purpose housing as their primary aim**. Government should refrain from succumbing to pressure from private for-profit property developers, as was seen in previous land releases, most notably Mount Barker. [19]

The pressures caused by continual vertical-fiscal imbalance means that local councils in particular are under pressure to sell their scarce remaining public sites. Instead of selling these sites, councils and governments of any jurisdiction should consider a CLT leasehold system. Associated land rents could be returned to the public coffers whilst assisting the debt profile of a CLH project. If the financial pressure is too great on government, such sites should be first offered for sale to for-purpose development such as CLH or CHO's under a vendor finance agreement.

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[18] Power Housing Prospectus & Capacity Report
[19] InDaily 'Learn from Mount Barker': Govt warned on new Greater Adelaide plan.

During economic downturns, governments should not only prepare for a land buying spree to **rebuild the public land bank**, but also act to ensure that foreign investment is limited from arbitrage activities.

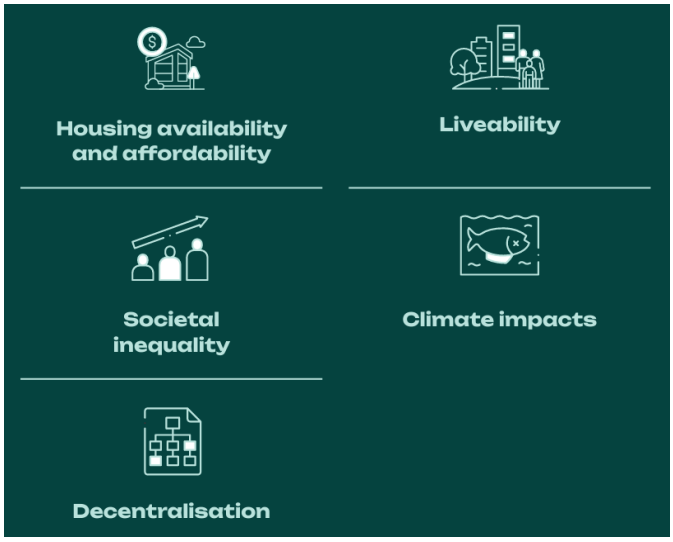

Image: GARP 2023

Impact calculators / Actuarial accounting

Changing how we measure and value impact has the potential to provide better insights and guide future investments. The siloed nature of budgets across government departments fails to capture the true picture. The University of Melbourne School of Design has published a 28 page Affordable Housing Calculator Manual.

The newly announced Social Infrastructure and Green Measures for Affordable Housing (SIGMAH) calculator developed by the Centre for Urban Transitions at Swinburne University will provide valuable insights into opportunity cost modelling. In time, these calculators will provide an understanding of **how much less public expenditure a government will incur** from areas such as health, policing, and community services when homes are made available to those who need them. The calculator will also provide monetary estimates of greenhouse gas and environmental benefits from provision of green spaces, dwelling designs and access to transport options and measures the dollar value of lower CO2 estimates due to the energy performance of new dwellings.'[20]

Housing must be seen as an investment in social infrastructure that underpins broader economic prosperity, not the reverse.

[20] Australian Property Journal Social housing will deliver $16.2bn cost-of-living relief

Alleviating demand for social housing

The current emphasis on key worker housing for health, education and policing employees reflects a recognition that without suitable housing there are flow-on impacts for government's ability to deliver essential services. This equally applies to other employment sectors, particularly low to moderate income earners such as aged care, child care, welfare and disability services, transport, retail and hospitality. These missing moderate workers are on a knife edge in the current housing market. If they are renters, they may be one rent increase away from unaffordability and / or homelessness. If they are forced to move, they may not be able to find another rental to remain in the area, with flow on effects for their school age children, community connections, employment and further education. If they are not already in the home ownership market, the likelihood of being able to save enough deposit has all but disappeared.

Image: Older Women's Co-Housing London

There are many stories of unexpected homelessness; people who 'never thought homelessness would happen to them'. The classic example in recent media coverage is a woman in her 50s who through divorce, illness or unemployment has suddenly found herself homeless - unable to compete in either the private rental or home ownership markets.[21] **This 'slide' into homelessness will continue to create growing demand for social housing unless alternative stabilising housing models are developed that can fill the gaps.** Once a person becomes homeless their needs of ongoing and complex escalates sharpley. The trauma impacts of homelessness linger for many months well beyond the point when the person has secured stable housing again.

There are calls for a return to the post WWII government led housing builds. The example of Housing Trust SA building whole neighbourhoods of worker housing to support the car manufacturing industry is a powerful example. The Housing Trust SA development of worker housing meant that the rental returns produced an economically viable and stable housing model. It ensured that industry had a supply of stable housed workers, well located housing was

[21] Hamilton-Smith, L. Experts say Solving the Housing Crisis Could Take Decades, 2023

available near employment opportunities and that the housing costs were relevant to local wages.[22]

While there is merit in these suggestions, it is more relevant to consider how government can achieve the desired impacts that these approaches were able to deliver; namely financially viable, well-located housing for specific cohorts that supported economic development relevant to local wages, in a way that is reflective of the current political and economic environment.

Supporting small scale food producers

A greater balance between the preference for regional hobby farms over affordable farming should be investigated with the potential for local councils to allow Rural Exception Sites, as per in the UK.[23] **Affordable dwelling pods of 3-4 homes** on farming cooperatives should be encouraged to ensure farm based labour has a long term commitment to the land. Permaculture principles allow small scale farming to be more productive.

With greater off-grid capacity provided by solar, water and septics now possible, the strains on local council resources have reduced. This could enable greater food security with affordable farm pods helping to reinvigorate the demographic potential of regions. Such planning permissions could be limited to a few kilometres from an arterial road.

[22] Jacobin [The Government Can Build Quality Housing for Everyone]

[23] UK government, Housing Needs of Different Groups, 2021

Part 2. Where should Adelaide grow?

Curb greenfield development

The Land Supply Report For Greater Adelaide suggests that greater Adelaide land mass area will increase by approximately 20% in 20 years. If this rate of land consumption continues, by 2085 greater Adelaide would have consumed land well beyond Two Wells and Roseworthy. Added pressure around Mount Barker, Murray Bridge, Victor Harbour and Goolwa would see devastating amounts of valuable arable land permanently lost to housing development.
Greenfield growth on the edges of established urban areas, ie urban sprawl, brings with it numerous disadvantages to residents, the broader community and substantial long term costs to taxpayers, including:

- Exacerbation of the drivers of Climate Change. The Interconnected Disaster Risks report 2023 finds that the world is fast approaching risk tipping points on multiple fronts.
  Biodiversity loss
- Unsustainable growth pattern in terms of 'seven generations thinking'
- Loss of arable land and subsequent threats to food security
- The risk of natural disasters are greater on the urban fringe
- Very high cost of infrastructure provision
- High ongoing costs of services provision due to absence of economies of scale
- Inflationary pressures that new land subdivisions place upon the housing market
- Ongoing car dependency
- Low walkability index and low Active Transport potential
- Higher transport costs => higher overall costs of living, disproportionately impacting low income families
- Exacerbates economic disadvantages experienced by women who have caregiving responsibilities caring for children &/or elderly family members, particularly in 'child care deserts'
- Increased health care costs due to worsening loneliness is exacerbated within typically atomised households of greenfield developments
- Monetisation of excessive commute times entrenches disadvantage, and reduces family wellbeing
- Distance from employment opportunities, extended family, and community services exacerbates socioeconomic disadvantage and isolation
- Destruction of indigenous heritage sites, impairing the process of Reconciliation. Notably, the recent discovery of indigenous human remains at the Riverlea greenfield development
- Difficulty in attracting professional services (eg GPs, dentists, etc) to outer urban fringes
- Low population density is unviable for taxis / rideshare
- Negative impact on tourism desirability vs compact neighbourhoods which are highly attractive to tourists

The broader costs of greenfield development is enormous. Greenfield growth areas are not in proximity to jobs, services, existing transport or walking distance of community facilities, nor do they reduce the need for car travel. [24]'Around 60 percent of Mount Barker council's population commutes to the city every day, said Voortman, who argued this strengthens the case for a greater focus on infill.[25] This is contrary to the GARP's aspirational emphasis of Living Locally.

Notably, Melbourne's most liveable suburbs aren't in the CBD or the outer fringe. 'The best-performing local government areas tended to be older with mature trees and local strip shops and services, while the worst-performing were outer suburban areas with rapidly growing greenfield developments and often lagging infrastructure.' These are suburbs where the planning was performed by government, rather than profit driven developers in 'master-planned communities'.

Grounded cannot support the creation of greenfield developments on the urban fringe that perpetuate the issues we are already experiencing in the current housing system. The mass produced, developer led greenfield developments are increasing our vulnerability in relation to affordability, climate change, biodiversity loss, food production, isolation, community stratification and locational disadvantage.

While there may be many lifestyle benefits of 'a country life' in a greenfield development, the drawbacks outweigh the benefits. Young families and first home buyers are often forced to the outer fringes for lack of other affordable choices, where there is a false economy in living a large distance from employment opportunities.

Similarly, when applying a gender lens, greenfield developments have a disproportionately adverse effect upon women who have concurrent work commitments and caregiving responsibilities. Greenfield developments are often childcare deserts, preventing women returning to the workforce in a capacity of their choosing.[26] Further, often there are few high paying roles available locally. Invariably, women have little choice but to take on roles that are part time, low paid, and may have limited career advancement opportunities. These factors exacerbate the stubborn national gender pay gap and gender retirement savings gap. Greenfield developments have real world consequences, exacerbating pervasive financial and housing vulnerabilities faced by increasing numbers of women.

The GARP should curb greenfield development and **provide extensive oversight of Minimum Viable Supply Rates** (see below). Greenfield development should be limited and seen as a last resort only.

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[24] Infrastructure Victoria Strategic Engagement Report 2023
[25] InDaily Learn from Mount Barker': Govt warned on new Greater Adelaide plan
[26] Western Sydney University The Future of Work and Childcare

Quality infill development

Growth should be prioritised around quality urban infill development and a focus on medium and higher density TOD. There should be ambitious requirements for any brownfield development to leverage maximum opportunity for long term affordability and amenity housing outcomes that transition to living locally and proactively working to adapt to the changing climate.

Image: Bowden, Renewal SA

Redevelopment of Housing SA properties that are no longer fit for purpose should be prioritised. These sites should be fast tracked to achieve greater density of social and affordable housing along TODs. Importantly, a CLT model can ensure that the public site remains entirely focused on affordable outcomes, rather than a subset of a market orientated development.

Any infrastructure hub (e.g. train station) that creates new land titles (i.e. the removal of a level crossing) should incorporate CLTs as a perpetually affordable housing outcome that maximises ROI for the government.

Any 'priority development zones', as recently floated in NSW, need to **include significant proportions of for-purpose housing that have an affordability lock in place**. Developers should be required to abide by certain supply outcomes to qualify for the project, i.e. complete project selloff in 12 years, not 25 - 30 and that housing remains affordable for future generations not just the initial residents.

Grounded commends the recent work by Cohousing Australia to the 2023 Tasmanian Housing Strategy highlighting how cohousing and community led housing could act as a key mechanism for the GARP to achieve high quality urban infill and the key objectives of Living Locally.

Land banking

Aside from the social and environmental drawbacks of greenfield development, government must also be realistic about market manipulation in greenfield developments. Most concerning is that the market power of developers is largely unchecked. Private land banking must be deterred.

Continued focus on faster planning approval times acts to distract from the scarcity engineering. Market conditions are the most important supply determinant.[27] If prices are rising, supply will increase. If not, supply will stagnate. This is the fundamental contradiction at the heart of the trickle down supply argument. Without recognising this, best practice housing policy suffers. Policy continues to rely too heavily on market forces that are tilted to favour economic rents over affordability.

Oversight must be provided to ensure a Minimum Viable Supply Rate is maintained by developers - delivering an average 5% supply of total lots p.a over three years. An escalating land tax should be applied on land banks that aren't meeting the 5% supply rate.[28]

[27] Rowley, S., Leishman, C., Olatunji, O., Zuo, J. and Crowe, A. (2022) Understanding how policy settings affect developer decisions, 2022

[28]Fitzgerald K, Staged Releases - Peering Behind the Land Supply Curtain, Prosper Australia, 2022

Conclusion

As we face increasing challenges and uncertainty with climate change, the need to prioritise community wellbeing and our capacity to adapt also increases. We encourage GARP to be bold and innovative. We encourage GARP to position community and future generations ahead of those lobbying for short term commercial gain.

We believe that investing in housing models that provide perpetual affordability and long term community benefit should be prioritised. The commitment that the South Australian government has demonstrated to supporting the establishment of various ecosystems such as the Tonsley Innovation Precinct, the Bowden redevelopment and tech focused Lot 14, should be expanded to include community led housing and CLTs. This would position South Australia as a leader in pioneering new pathways forward.

Rather than repeat the points we've already made, we will conclude with some questions for further consideration:

- Will the government make better use of the levers available to it to limit private land banking and profiteering?
- What infrastructure is needed to foster a thriving ecosystem for impact investment?
- How could community led housing initiatives create a self sustainable affordable housing ecosystem that can continue to adapt to community needs and emergent challenges?
- Who is missing from decision making tables and how can they be better included?
- What will be the intersectional implications for vulnerable groups?
- What will our grandchildren's grandchildren think of our decisions and the legacy we are leaving them?

Grounded calls for a visionary government agenda to champion CLTs. Coupled with philanthropy, impact investment and tailored mortgage instruments for residents, CLTs and community led housing projects could become the preferred vehicle by which the progressive aspirations of the GARP are materialised in South Australia.

Grounded

Community Land Trust Advocacy

A pathway to housing affordability

Kidical Mass Adelaide

Safer streets for families who ride bikes.

South Australia's 20-Year State Infrastructure Strategy Submission - 9 November 2023

Kidical Mass Adelaide is a grassroots movement advocating for safer streets for families who ride bikes. Our campaign asks include:

1. Enable and activate bike riding joy.
2. Create comfortable, convenient and connected bike riding routes.
3. Support children's wellbeing and health through bike riding (and walking and wheeling) to school.

Kidical Mass Adelaide calls on Infrastructure SA, through the development of South Australia's 20-Year State Infrastructure Strategy, to give much greater consideration to the benefits of active transport and the need for a comprehensive and coordinated approach to building safer streets for families who ride bikes.

The discussion paper for South Australia's 20-Year State Infrastructure Strategy makes minimal reference to the benefits of active transport, with no discussion questions posed as to how improve the conditions for walking and cycling in South Australia. As such this submission does not directly relate to the questions posed in the discussion paper.

We support the observations briefly raised in the discussion paper regarding the benefits of a strategically planned public and active transport network. Such a network would enable:

- Reduced carbon emissions related to transport.
- Efficient and affordable transport.
- Equitable access to transport, particularly for people who experience disadvantage.
- Improved community connections and social engagement.
- Sustainability for future growth.

A long history of under-investment in infrastructure that facilitates the well-connected, safe and efficient movement of people has resulted in systemic car dependence within Adelaide. This is highlighted in your discussion paper, where it is shown that only two percent of Adelaide metropolitan commuters were observed to use active transport in 2021.

The 2023-24 State Budget provides $9.9 billion for roads and public transport, inclusive of $5.3 billion towards completion of the North-South Corridor. The vast majority of this expenditure reflects a focus on road infrastructure, with limited new funding allocated for projects to advance pedestrian and cyclist amenity and safety. Further, it should be recognised that major road building projects cut through communities and reduce efficient connections for bike riding.

Kidical Mass Adelaide

Safer streets for families who ride bikes.

South Australia's 20-Year State Infrastructure Strategy Submission continued...

Infrastructure planning that places people at the centre can be a key enabler for a modal shift away from private vehicle dependence. This is particularly important for children, for whom riding a bicycle may represent their primary means of mobility and independence.

Kidical Mass Adelaide therefore recommends a coordinated and strategic approach across all levels of government to provide oversight and vision for active transport infrastructure planning and development.

From a strategic perspective, we seek the creation of a planned network of streets and dedicated cycling infrastructure across the metropolitan area, to build safe and efficient connections for people riding bicycles. The existing approach, which is inadequately funded, coordinated and implemented across both state and local government, has been insufficient to address this need.

At a local level this may include bicycle greenways with traffic calming, and infrastructure such as separated bicycle lanes, bicycle-friendly road crossings and underpasses, and easily navigable routes with wayfinding markers for people riding bicycles.

Traffic congestion is a pain point for many families. The average weekly commuting time in Australia has increased considerably. According to the 2019 Household, Income and Labour Dynamics in Australia (HILDA) survey, workers averaged 3.7 hours of commuting time per week in 2002, but this had increased to 4.5 hours by 2017. Cycling and the integration of cycling infrastructure with public transport has the stacked benefits of increasing physical and mental health, reducing transport cost, reducing carbon emissions and reducing time spend in cars commuting.

Kidical Mass Adelaide further supports the 30 Please campaign to reduce the default residential speed limit to 30km/h. There is a less than 10 percent risk that a person struck at 30km/h will be killed, compared to 90 percent at an impact speed of 30km/h. This can be supported by a built environment with streetscape improvements, which support the transition to safer vehicle speeds. The evidence suggests slower speeds do not negatively impact commuting time, rather, traffic congestion does.

Given that this strategy seeks to provide a vision for the next two decades of infrastructure planning, this represents a pivotal moment to refocus our efforts at building connected and liveable neighbourhoods, and a sustainable future.

For more on the Kidical Mass Adelaide movement search @kidicalmassadl on Instagram and Facebook.
Submitted via - https://yoursay.sa.gov.au/state-infrastructure-strategy-url

Image: Getty

Submission to

Infrastructure SA 20-year State Infrastructure Strategy

November 2023

Motor | Home | Travel

RAA

RAA at a glance

South Australia's largest **member-owned** organisation

Advocating for South Australians for **120 years**

810k+ current members (60% of SA adults)

630k+ South Australian homes and cars insured

1,200+ staff employed across SA

344k+ roadside rescues per year

60,000+ uses of the MyRAA app fuel feature per month

14,000+ solar panels installed per year

40,000+ Holidays booked per year

33,000+ school students educated on road safety each year

9,500+ child restraints fitted or checked each year

$874k+ per year invested in community grants and sponsorships

Foreword

RAA is pleased to make a submission to Infrastructure SA's 20-year State Infrastructure Strategy Discussion Paper.

As the state's largest member organisation representing over 805,000 South Australians and reaching into more than 70 per cent of households, we exist to make life easier for our members and the community.

For 120 years, RAA has been advocating on behalf of our members to help South Australians stay safe on our roads and travel around our great state. Today, our core business cuts across motor, home, travel, and energy, which puts RAA in a unique position to engage with Infrastructure SA on the development of the 20-Year Strategy.

RAA supports a bigger, better South Australia that is safe, sustainable, and liveable.

We believe strong population growth will spur economic activity and create more opportunities for young people. However, as our state grows to two million people over the next decade, we also need to maintain its unique liveability.

Population growth will only enhance liveability when the infrastructure is developed in parallel. Housing developments, both greenfield and urban infill, must be supported with upgrades to road networks, schools, health facilities, public transport, and energy infrastructure, with clear lines of responsibility and transparency for action. In this submission, we recommend a series of transport projects to ease congestion in areas that have experienced recent population growth and are expected to grow in the future.

The increase of natural disasters in recent years has highlighted the need to invest in disaster mitigation measures and more consciously consider the relationship between land use planning and extreme weather risk. As South Australia's leading personal lines insurer, RAA is committed to working with industry and governments to reduce the risk of natural disasters. Reducing this risk will improve insurance affordability and avoid future financial costs to homeowners, businesses, governments, and communities.

The transition to electric vehicles will help decarbonise personal transport and change the way we charge our vehicles and power our homes. The convergence of the home and car presents enormous opportunities, and the 20-Year Strategy needs to be considerate of the additional energy demand and need for smart home infrastructure to support this transition.

Ultimately, we encourage Infrastructure SA to be ambitious in pursuing improvements to public and active transport infrastructure. South Australia is consistently behind other jurisdictions when it comes to uptake of these transport modes, leading to greater car dependency - and the research tells us that this is due, in part, to lacking infrastructure.

The 20-Year Strategy also has an important role in reducing road trauma. The previous Strategy rightly called for greater investment in road maintenance to address the considerable backlog of works needed. To date, the backlog has not been addressed and this puts road users at an increased risk of casualty and fatality crash incidents. We encourage Infrastructure SA to maintain and elevate this important priority, to maximise the life of our assets and to support safe travel by all road users.

On behalf of our members, we thank Infrastructure SA for the opportunity to provide a submission to the Discussion Paper.

Emily Perry

General Manager,
RAA Community and Corporate Affairs

Image: Getty

5: Enabling infrastructure

5.1: Freight and supply networks

Response to question: What infrastructure constraints are preventing a more efficient, accessible, and productive freight sector?

Road maintennance

Maintaining the condition of our existing infrastructure is critical to supporting an efficient, accessible, and productive freight sector, as well as ensuring safety of all road users.

In 2020, Infrastructure SA's '20-Year State Infrastructure Strategy' noted that 75% of South Australia's roads were in poor condition because of sustained underinvestment and estimated the road maintenance backlog to be around $780 million.

Following this report, various federal programs and economic stimulus measures initiated in response to COVID-19 increased the level of investment in road maintenance and safety upgrades. RAA welcomed these much-needed investments; however, it is clear more investment is required to reduce the backlog of maintenance and improve the safety of the network.

The 2022 Annual Report of the Auditor-General, published last June, detailed that the approximate order of magnitude cost over four years of eliminating the backlog was estimated at a total of around $1.96 billion. This figure does not include local council roads.

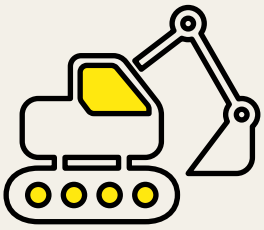
The damage to roads resulting from Murray River flooding will further add to the state's road maintenance task. The South Australian State Emergency Service estimates almost 1,200 kilometres of road may have been impacted by flood waters.

RAA believes the Government needs to commit at least $750 million over four years to help get on top of the road maintenance backlog and improve safety before the problem gets even worse.

In addition, to improve the transparency of road maintenance spending, the Government should commit to publishing actual spending on road maintenance each year.

Recommendation 1

The Strategy identifies road maintenance as a high priority and outlines measures required to reduce the growing backlog.



$1.96bn

estimated cost of the road maintenance backlog

5: Enabling infrastructure (continued)

National highway duplication

RAA believes a long-term commitment to fully duplicate the Augusta, Dukes, and Sturt Highway by 2050, along with an upgraded hills freight bypass, is critical to supporting economic growth, enhancing freight productivity, and reducing road deaths.

RAA believes State and Federal Governments should allocate at least $200 million each year towards these duplication projects, with high priority sections being Port Pirie to Crystal Brook along the Augusta Highway, Tailem Bend to the Mallee Highway for the Dukes Highway, and Berri to Renmark and Greenock to Truro for the Sturt Highway.

The current duplication work on the Port Wakefield and Augusta Highways, together with the duplicated Joy Baluch Bridge, has been well received and highlights the importance of completing corridor duplication to provide significant improvements to safety, productivity, and network resilience.

The need for duplicating these highways is clear.

Augusta Highway

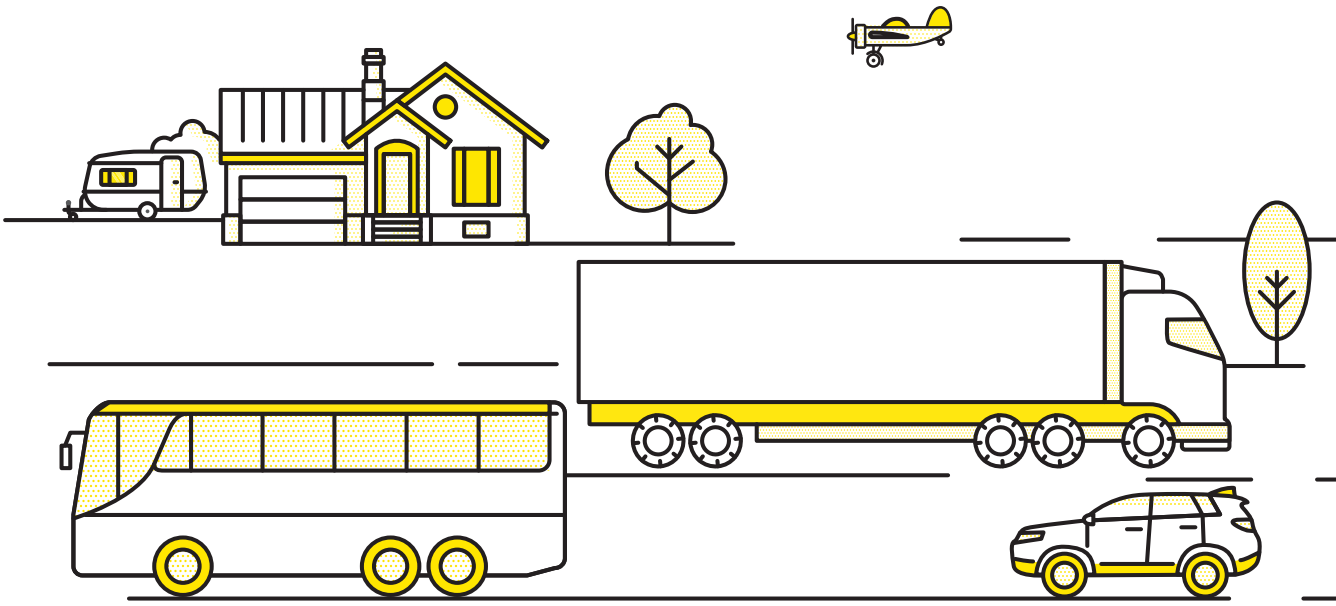
Augusta Highway is the principal route to the north and west of the state for freight, agriculture, and tourism, carrying an average of more than 4,000 vehicles per day, about 30% of which is commercial traffic including road trains and b-triples.

A fully duplicated Augusta Highway will lead to opportunities to facilitate the safe operation of higher productivity vehicles (HPV) up to PBS level 4A south of Port Augusta, significantly boosting productivity across the Eyre Peninsula and Far North regions of the state.

A fully duplicated highway will also deliver significant road safety benefits. Between 2018 and 2022 there were 28 fatalities, 41 serious injuries and 94 minor injuries on this highway, with six fatalities occurring because of head-on crashes. In fact, fatalities on Augusta Highway accounted for more than 6% of lives lost on all South Australian Roads. In addition, 15% of casualty crashes on the highway tragically resulted in at least one fatality – far higher than average for regional SA where 6% of casualty crashes resulted in fatality.

Sturt Highway

Freight use is already very high along the whole corridor, with daily traffic volumes as high as 7,300 vehicles per day in Nuriootpa, which includes 2,000 heavy vehicles and 8,800 vehicles per day between Berri and Renmark, including 1,500 heavy vehicles. The section between Nuriootpa and Blanchetown via Truro sees the highest freight use, with heavy vehicles making up 26-37% of all traffic, including about 800 b-doubles and road trains every day.



5: Enabling infrastructure (continued)

Duplication between Greenock and Allendale along with the Truro bypass in particular will facilitate the introduction of higher productivity vehicles on the greater Adelaide freight bypass and thereby work to reduce growth in heavy vehicle traffic on the South Eastern Freeway.

Duplication of this route will also reduce lives lost and serious injuries. Between 2018 and 2022, 100 casualty crashes occurred on the Sturt Highway between Nuriootpa and the Victorian border. These crashes resulted in 15 fatalities, 45 serious injuries and a further 103 minor injuries. In the first six months of this year, five lives have been lost due to crashes on the Sturt Highway.

Dukes Highway

The Dukes Highway is the major road freight and tourist route between Adelaide and Melbourne, carrying up to 2,000 commercial vehicles each day, with more than half of these being B-double units or larger, meaning up to 45% of the traffic on this corridor is commercial vehicles.

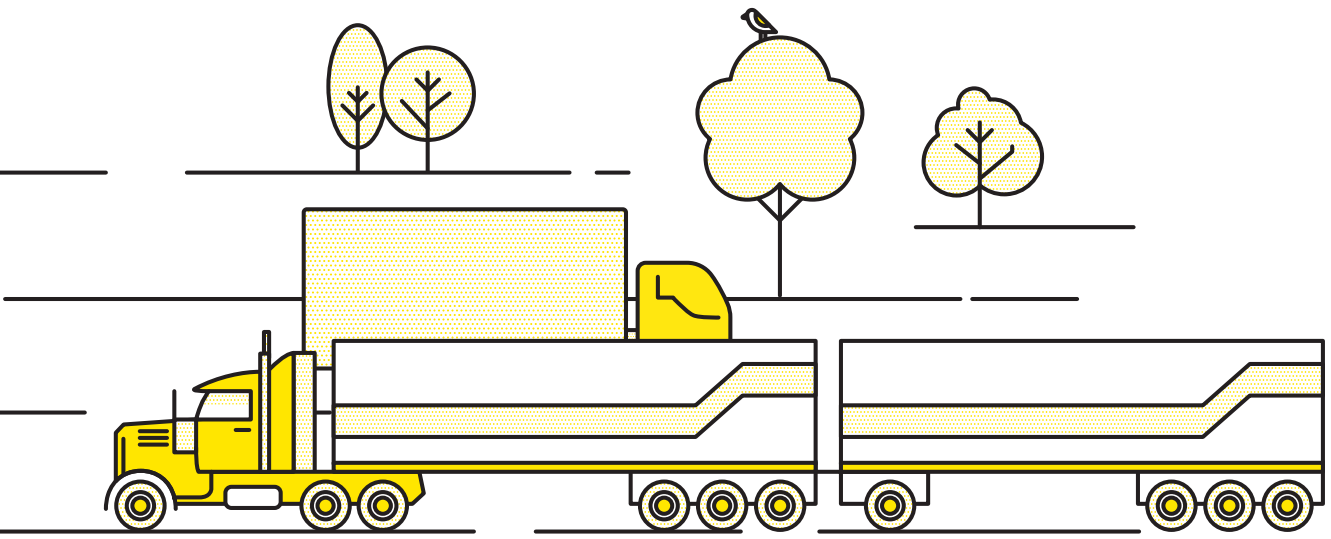
The Western Highway which adjoins the Dukes Highway at the Victorian border is being progressively duplicated by the Victorian Government to meet growing demand and improve safety. With the road freight task on this corridor increasing due to consumer driven demand and the relative efficiency of road transport, the duplication of this corridor should extend beyond the border into South Australia.

The current single lane route does not provide any physical separation between opposing traffic, resulting in an unacceptably high number of head on crashes. The implementation of the wide median treatment in 2012/2013 together with the installation of roadside barrier protection has resulted in a substantial reduction in the number of run off road crashes but not head-on crashes.

However, in the 5-year period from 2018-2022 there were still 53 casualty crashes and 7 lives lost. Duplicating this 190km freight and tourist corridor to provide two continuous lanes of travel in each direction together with physical separation and protection between opposing traffic flow would address the unacceptably high number of fatal and serious injury crashes.

Recommendation 2

The Strategy develops a plan to duplicate the Augusta, Dukes, and Sturt Highway by 2050, along with an upgraded hills freight bypass.



6: Liveable and well-planned places

6.1: Coordinated planning

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

Population growth will only add to the liveability of our state when the infrastructure is developed in parallel. Housing developments, both greenfield and urban infill, must be supported with timely upgrades to road networks, schools, health facilities, public transport, and energy infrastructure, with clear lines of responsibility and transparency for action.

In the past, infrastructure has not always kept pace with population growth and housing developments, with areas like Mount Barker being well-documented. There are also flow on issues with the 'middle infrastructure', where developments create congestion on roads several kilometres away.

In early 2023, RAA surveyed members to understand their views on population growth. While many opposed population growth, the main issue was that infrastructure was not keeping pace. If we peel back the layers, very few people have an issue with an increasing birth rate or attracting people to move to SA. Their concern arises if that growth compromises their quality of life – whether that be through more congested roads, greater demand for services, and more competition for jobs.

RAA is hopeful the establishment of the Housing Infrastructure Planning and Development Unit will help ensure the right infrastructure is in place to support future growth. Without this coordinated effort, and if infrastructure doesn't keep pace with growth, there will be significant implications for safety, productivity and liveability.

The current and future infrastructure projects that RAA believe are critical to support population growth are outlined below.

Marion Road / Cross road tram crossing

RAA has long supported a grade separation of the tram crossing at Marion Road and Cross Road. RAA welcomed a joint Commonwealth/State funding commitment of $400 million at the last Federal and state elections. This is a critical project to support population growth in the area and must proceed before major works commence on the North South Corridor.

The tram crossing on Marion Road between Anzac Highway and Cross Road is a notoriously congested bottleneck. The proximity of these intersections, coupled with the frequent activation of the tram level crossings on Marion Road and Cross Road results in frequent delays particularly during the morning and afternoon peak periods.

Approximately 75,000 vehicles per day use the intersection with Marion Road and Anzac Highway, whilst 54,000 use the intersection with Marion Road and Cross Road and more than 51,000 cross the tram level crossings on Marion Road or Cross Road. All these roads are part of the metropolitan arterial road network.

In March 2022, RAA investigations showed 7am-9am weekday traffic on Marion Road was halted by a red light about 30 per cent of the time due to trams or bikes — that's 36 minutes in the two-hour peak period. It's even worse in the afternoons, when the trams and the pedestrian crossing see traffic facing a red light for 38 minutes between the 4pm-6pm bustle.

Even with the progressive upgrade of the North South Corridor, RAA expects traffic volumes on these sections of Marion Road and Anzac Highway to remain similar. It is likely that during construction there may be some temporary increases in traffic volume as people seek out an alternative route.

6: Liveable and well-planned places (continued)

Additionally, the project will enhance access for cyclist and pedestrians. The Mike Turtur Bikeway, which follows the tram corridor and is extensively used by cyclists and pedestrians, currently requires users to cross both Marion Road and Cross Road at grade using signalised facilities.

In addition to the Marion Road and Cross Road tram crossing, the Government should also prioritise removing the tram crossing at Morphett Road. This intersection is already highly congested and will only get worse with planned infill developments in the area.

East-West Links in the northern suburbs

At the 2022 election, RAA called for $500 million to address congestion in Adelaide's northern suburbs, including Curtis Road, Waterloo Corner Road, Kings Road and Elder Smith Road, following increases in housing developments in the area. The Dry Creek development makes these upgrades even more critical.

Through the 2022-23 State Budget, funding was allocated to complete a traffic study for Curtis Road and Dalkeith Road. RAA believes the Government should allocate funding, through forward estimates if appropriate, to implement the solution that provides the greatest benefit to road users in the area. Further traffic studies need to be undertaken to inform and prioritise future investment on Kings Road, Elder Smith Road and Waterloo Corner Road.

Adelaide Hills and Mount Barker

To support population growth in the Adelaide Hills and Mount Barker, RAA recommends improvements to public transport, extending the third lane on the South Eastern Freeway to Verdun and installing a third safety ramp at the bottom of the freeway descent.

The population in Mount Barker District Council is projected to increase 47% from 38,500 in 2021 to 56,700 in 2036. This population growth will place additional pressure on the South Eastern Freeway between Stirling and Mount Barker, where continued growth in traffic volumes will further compromise travel speeds, increase congestion and increase the risk of associated crashes.

Public transport & associated infrastructure

A survey of Adelaide Hills residents during the preparation of RAA's 2020 Adelaide Hills Regional Road Assessment report highlighted that 68% of respondents were concerned about the lack of alternative options to driving in the region. Whilst there was support for a passenger rail service, it was dependent on cost, frequency and whether it offered a saving in travel time compared with driving. None of the rail options proposed to date appear to address all these issues to the point where such a service would be viable.

Therefore, the focus in the short to medium term is to improve the reliability and quality of the existing bus services.

RAA supports implementation of a revised public transport system between Adelaide and Mount Barker, which may include a bus rapid transit (BRT) system as recommended by Regional Development Australia Adelaide Hills Fleurieu and Kangaroo Island in their 2021 People Transport Solutions for the Adelaide Hills report.[1]

RAA believes investigations to improve public transport between the city and Adelaide Hills must include a corridor management plan for Glen Osmond Road.

RAA considers bus movement through the three intersections with Cross Road, Fullarton Road and Greenhill Road to be critical in delivering effective and efficient bus services between Adelaide and the Adelaide Hills.

Third lane to Verdun

A third traffic lane between Stirling and Verdun coupled with an upgraded Verdun interchange, would provide additional efficiencies and capacity along the South Eastern Freeway, including for public transport. Current

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1. People-Transport-Solutions-for-the-Adelaide-Hills_Sept-2021.pdf (lga.sa.gov.au)

6: Liveable and well-planned places (continued)

traffic volumes are already at levels that compromise vehicle speeds during peak conditions, with continued growth in traffic volumes expected to further compromise speeds, increase congestion and increase the risk of associated crashes.

Additional safety ramp

RAA supports measures being taken to upgrade the existing Adelaide Hills Freight Bypass, acknowledging this route will not be practicable for all freight journeys and vehicle types. There will hence be a continued need for heavy vehicles to use the South Eastern Freeway, particularly traffic that originates in, or is travelling to, the Adelaide Hills region.

Installation of a third safety ramp will provide an additional opportunity for heavy vehicle drivers to leave the road to avoid a collision prior to the intersection with Portrush Road.

Recommendation 3

The Strategy prioritises the following projects to support population growth and road safety:

- Grade separation of tram crossing at Marion Road/Cross Road
- Upgrades to east/west links in the northern suburbs
- Extend the third lane on the South Eastern Freeway to Verdun
- Improve public transport options between Adelaide Hills and metropolitan Adelaide
- Build a third arrester bed at the end of the South-Eastern Freeway.

Near misses involving heavy vehicles at the bottom of the South Eastern Freeway descent are still reported, and there is currently nowhere for a heavy vehicle to go should it lose control beyond the second safety ramp. RAA has suggested some potential safety ramp locations between the existing lower ramp and Portrush Road as part of our 2020 Highway Assessment: South Eastern Freeway.

Longer term transport projects to ease congestion and improve safety

Through the Greater Adelaide Regional Plan (GARP) Discussion Paper, the South Australian Government flagged its intention to accommodate an additional 300,000 homes in the next 30 years[2]. The Infrastructure Strategy should be considerate of the impact population growth will have on the road network.

North-western spine

The Greater Adelaide Regional Plan Discussion Paper notes the potential for additional housing along the southern end of the Port Wakefield Highway. Safety along the Port Wakefield Highway is of concern, and improvements to roadside barriers and intersections are highly important, given the current 110km/h speed limit. RAA is particularly concerned about safety for vehicles turning right from Port Wakefield Highway, Mallala Road, or Brooks Road.

The recently signalised intersection at Angle Vale Road/ Riverlea Boulevard is the only such intersection between Port Augusta and departing the North-South corridor near the city. This is an important intersection to support the Riverlea development and should be grade separated to improve safety and promote the free flow of traffic, akin to a freeway interchange. The key point here is that major developments like Riverlea should have such infrastructure built as part of early works, with Government committing funding and seeks reimbursement from developers overtime.

Depending on the proposed development in Two Wells, primary access to town (Mallala Road or Brooks Road) should be upgraded, and potentially grade separated also (depending on projected population).

2. Greater Adelaide Regional Plan Discussion Paper | YourSAy

6: Liveable and well-planned places (continued)

Urban development in Virginia is also increasing traffic at the Old Port Wakefield Road intersection, and investigation into safety treatments at this location should also be undertaken.

RAA supports extending the Gawler rail line to Roseworthy along the existing disused rail corridor, noting the future possibility of extending this further north to Freeling. Opportunities also exist to extend the Gawler rail line to Concordia (along the former Barossa rail line alignment) as part of the SA Government land release and plan to build 10,000 new homes in this area.

North-eastern spine (Kudla to Evanston Gardens)

Importantly, these areas are adjacent the Gawler Line and are therefore already well connected to Adelaide by public transport. Continued investment in the North-South Corridor also means this area is now a 35-minute drive (approximately) from Adelaide. As development accelerates, access to these train stations is important.

Eastern spine from Callington to Murray Bridge

Major growth in the Callington/Murray Bridge area (combined with Mt Barker/Nairne and Strathalbyn) will put added pressure on the South Eastern Freeway without providing significant opportunities for local employment and other amenities.

This would provide more justification for an Adelaide – Murray Bridge rail line via Mt Barker and Callington. However, travel times for a train trip from Murray Bridge to Adelaide via Mt Barker and associated stations through Blackwood, Belair and Mitcham would be unlikely to compete with on-road options (bus/private vehicle).

RAA have previously recommended Murray Bridge as a possible trial area for on-demand bus transport to improve local accessibility

Southern spine and opportunities around Victor Harbor and Goolwa

Road upgrades are needed, including to Main South Road between the Southern Expressway and Victor Harbor Road (we note that a planning study is currently underway).

The Government should also be looking to duplicate Victor Harbor Road between McLaren Vale and Mount Compass (a corridor study has been recently undertaken, with RAA providing input in 2021).

Additional upgrades to the Victor Harbor Road and Goolwa Road corridors will be needed to improve safety and efficiency/capacity between Victor Harbor/Goolwa and Mount Compass.

Alexandrina Road between Goolwa and Strathalbyn, and Port Elliot Road between Victor Harbor and Goolwa may also require upgrades with significant population increases around Goolwa.

RAA have previously recommended Victor Harbor-Goolwa as a possible trial area for on-demand bus transport to improve local accessibility and the need for an appropriate public transport solution is increased with a growing population.

Recommendation 4

The Strategy identifies transport projects to ease road congestion and improve safety along the north-western, north-eastern and southern spines of Greater Adelaide to support future population growth.

6: Liveable and well-planned places (continued)

6.3: Public transport

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

RAA strongly supports increased investment in public transport in South Australia. An attractive and convenient public transport system can reduce carbon emissions and road congestion by encouraging people to be less reliant on private car use. It can also service the mobility needs of those unable to drive themselves, including children, older people, people with disability, people in financial hardship, and visitors such as tourists.

Unfortunately, use and satisfaction of public transport in South Australia is consistently poor compared to other mainland states. A 2021 Productivity Commission report on Public Transport Pricing found that South Australia has the lowest proportion of work trips that involve more than one mode of public transport, with 5.5% of trips, compared to 21.2% of trips in Perth (highest). According to Department for Infrastructure and Transport data, boardings are yet to recover to pre-COVID19 levels: Boardings for April to June 2023 were 15.9 million, compared to 19.4 million in April to June 2019 – a fall of 18%.[3]

Furthermore, the recent "Benchmarking Adelaide" report produced by the Committee for Adelaide benchmarked Greater Adelaide against 19 international peer cities. It found that Adelaide has a less efficient public transport system than most peer cities, given long journey times and multiple public transport transfers. Average public transport commute times in Adelaide was 43 minutes - the longest among peer cities - and recorded the largest increase in public transport transfers in the last two years.[4]

Furthermore, planning for public transport in new developments has not been done well in the recent past - adding to car dependency. For example, residents at Mount Barker that travel into Adelaide have few public transport options resulting in increased reliance on the South Eastern Freeway as the primary way to travel between Mount Barker and Adelaide.

This example highlights that public transport infrastructure planning has trailed housing construction and this issue must be addressed in the future. Public transport should be a consideration at the beginning of the investigation and planning stage of any future housing developments. This is particularly important for rail, where it is essential to quarantine land for a rail corridor from the outset.

RAA supported the Government's decision to preserve land for a future rail extension to Aldinga and supports preserving a corridor to extend the Gawler rail line to Roseworthy and further north to Freeling. Opportunities should also be explored to provide rail connectivity to major land releases in Concordia and Dry Creek, with each land release expected to provide 10,000 new homes.

As South Australia grows, it is clear that we must improve our public transport to remain a globally attractive place to live.

In 2022, RAA engaged the Legislative Council Select Committee on Public and Active Transport, making a submission and presentation at Parliament House. RAA's believes the Government should conduct a holistic review of the Adelaide Metro network to identify:

- Improvements to Adelaide Metro network bus routes to better service business and education hubs and areas of interest outside of Adelaide CBD.

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3. Adelaide Metro Bus, Train and Tram Complaints per 100k boardings - Adelaide Metro Bus, Train, Tram Complaints Per 100k Boardings - data.sa.gov.au
4. CFA-Benchmarking-Report_FINAL-DIGITAL_compressed-1.pdf (committeeforadelaide.org.au), page 51

6: Liveable and well-planned places (continued)

- Adelaide Hills to Greater Adelaide bus service improvements including priority for Glen Osmond Road to enhance service efficiency and reliability.
- Improvements to bus scheduling and stop locations, aimed at increasing service frequency and speed of travel, while maintaining adequate service coverage with consideration for vulnerable users.
- Ways to improve public confidence in the cleanliness and security on board public transport and at stops and stations.
- Identify strategic locations to install indented bus stops, priority bus lanes and traffic signals and new Park 'n' Ride facilities.
- Investigate reasons for low train patronage compared to other states and develop next steps to deliver service improvements of the train network, including optimising bus and tram services to better connect to trains and investigating options to increase service frequency of trains.

This recommendation was informed by research conducted by RAA which included survey responses from 1,320 South Australians, with many responses commenting on a lack of service options for their main destinations.

RAA has welcomed the Government's recent investment in public transport, such as the introduction of Tap n Pay technology on trams and buses. RAA has long called for the Government to embrace technology to improve service provision and customer experience and drive patronage growth.

In addition to Tap n Pay, RAA believes the State Government should implement a digital ticketing system that allows users to purchase and validate PT tickets within journey planning platforms. This is a low-cost way to improve customer experience and relieve a crucial pain point for infrequent users and tourists – finding and purchasing a physical Metro Card.

Recommendation 5

SA Government conduct a holistic review of Adelaide's public transport network to optimise coverage and increase service frequency.

Active transport

Complementing a more ambitious public transport investment plan should be a dedicated cycling infrastructure fund backed with an annual $10 million investment to support greater uptake of cycling, walking and micro-mobility, such as e-scooters.

RAA has long called for greater commitment from SA Government in developing the state's cycling and walking infrastructure. The recent "Benchmarking Adelaide" report produced by the Committee for Adelaide found: *"Adelaide ranks last among peers for the quality of its bike network, and in the bottom 3rd among 170 American and European cities ... it also ranks last among peers for access to people, jobs and educational institutions and shopping areas through low-stress biking routes"*.[5]

The 20-year Strategy presents a real opportunity to implement an active transport strategy and action plan, backed by dedicated funding of at least $10m annually. We believe the following should be prioritised:

1. Off-road cycle, pedestrian, and shared use paths
2. Greater connectivity of on-road cycle paths
3. Physical barriers or separation between cyclists and motorists

RAA has now conducted two 'Risky Rides' surveys, with the most recent report published in March 2023. Our latest survey received 761 nominations from concerned cyclists and motorists that identified gaps in cycling infrastructure,

5. CFA-Benchmarking-Report_FINAL-DIGITAL_compressed-1.pdf (committeeforadelaide.org.au), page 51

6: Liveable and well-planned places (continued)

resulting in the following top priorities for cycling infrastructure investment:

- Provision of new shared paths adjacent to roadways in the Adelaide Park Lands has the potential to reduce reliance on arterial road corridors. Shared paths adjacent Greenhill Road and Main North Road were the most highly raised suggestions in the 2022 Risky Rides survey. Specifically, a safer cycling route is required along Greenhill Road, from Anzac Highway to Fullarton Road and RAA believes a new off-road shared use path is the best option.
- Within Adelaide, completion of the next stage of the Frome Street Bikeway between Rundle Street and North Terrace must be a high priority. Furthermore, a high number of nominations for east-west roads through the city indicates there is still high demand for the provision of an East-West Bikeway to provide safer movements and better connectivity between the east and west of Adelaide.
- Ultimate completion of the North-South Corridor will deliver a major change in movement in and around Adelaide. Improved cycling connectivity must be a key part in the design and delivery of the North-South Corridor. Whilst the current South Road surface road has minimal provision for cyclists and is not a popular cycling route, it provides high connectivity with other cycling routes, both on-road in the east-west direction between Adelaide and the coastline, and with popular cycle corridors such as the Marino Rocks Greenway, Mike Turtur Bikeway, Westside Bikeway and River Torrens Linear Park.
- Due to metropolitan Adelaide's grid-like structure, "diagonal" corridors that bisect the grid such as North East Road, Lower North East Road/Payneham Road, Port Road, Anzac Highway and Glen Osmond Road will always provide travel time and distance savings for cyclists commuting to and from the city when compared to alternative local-street bikeways. However, these corridors vary greatly in terms of the cycling infrastructure they provide. Therefore, any future planning needs to consider the primary function of these roads in Adelaide's road network, ensuring that cyclist infrastructure is a key consideration. Off-road bikeways adjacent these corridors vary significantly in infrastructure, and with further investment and robust planning, have the potential to provide competitive alternatives to on-road cycling in terms of total commute time.

Further, the availability of community and local transport options is important. A great example of this is the Keoride on-demand bus in Mount Barker, which provides an effective and highly-utilised first and last-mile connectivity to the Mount Barker interchange. A reliable and convenient public transport system makes it easier for residents to commute and access essential services within and beyond the neighbourhood.

Access to car parking is a regular concern raised by communities, especially in brownfields developments where urban infill occurs through property subdivisions. Many within these communities feel entitled to an on-street car park, whilst garage space is often utilised for storage or as an extension of the home to facilitate a home office, gym, or entertaining room. On-street parking demand should be a consideration for developments that lack adequate parking facilities, on-street parks should consider the requirements of typical vehicle buying preferences, for example Electric Vehicles are often wider than many Internal Combustion Engine vehicle models.

Recommendation 6

SA Government develop and fund the implementation of an active transport strategy and action plan to support greater uptake of cycling, walking and e-scooters.

8: A decarbonised, sustainable economy

8.2: Decarbonised energy system

Response to question: How do we maintain an affordable, reliable and secure energy system through the energy transition?

RAA supports the South Australian Government's ambition to transition our energy system and achieve the twin goals of reducing the state's greenhouse gas emissions by 50 per cent by 2030 and achieving net-zero emissions by 2050.

The 20-Year Strategy should explore opportunities to service a growing population using our existing energy infrastructure, to avoid additional investment where possible. With the transition away from fossil fuels to renewables, the uptake of rooftop solar (with generation capacity of around one gigawatt), increased uptake of electric vehicles, and associated demand for home charging, there is a growing need to enable price signalling to incentivise energy consumption outside of peak times.

Through greater uptake of time of use tariffs, there is potential to shift electricity demand to off-peak periods, therefore easing the need to build more poles, wires, substations, and other infrastructure to satisfy peak demand. Smart homes have the potential to reduce individual home energy bills by $150-$300 annually, with the added benefit of reducing household carbon emissions.

A key to shifting South Australians to these tariffs is encouraging greater uptake of smart meters among existing households. While new builds have a smart meter installed by default – there is a need for a 'critical mass' of smart meters to encourage energy retailers to develop innovative products – meaning that established homes need to be encouraged and incentivised to have a smart meter installed.

The installation of smart meters can be expensive for consumers where upgrades to switchboards are required. This a key barrier to smart meter adoption and has deterred many from pursuing solar panel installations. During the 2023 financial year, approximately 15% of RAA solar quotes that did not proceed cited switchboard upgrade costs as a key reason.

RAA understands the cost to install smart meters is generally passed on to consumers by retailers, with costs spread across their customer base. RAA believes if switchboard upgrades are required to install a smart meter, these costs should be considered part of the smart meter installation and should not burden individual households with upfront costs.

Recommendation 7

SA Government take action to create a smart home ecosystem in South Australia through:

- Increasing smart meter uptake in established homes by ensuring necessary switchboard upgrades are installed at no upfront cost to the household.
- Further investment and expansion of community-level energy programs such as incentives for rooftop solar PV and home batteries, expanding Virtual Power Plants and installing community batteries in new developments.

8: A decarbonised, sustainable economy (continued)

8.3: Transitioning transport

Response to question: What are the most significant challenges for decarbonising transport and how do we address them?

RAA believes EVs are the future here and around the world. RAA believes South Australia should lead the nation in the transition to EVs to capitalise on our abundant supply of renewable energy and reduce motoring costs.

RAA also recognises the role of hydrogen as an important fuel with great potential for decarbonising transport, particularly for heavy vehicles. South Australia is making a significant investment in hydrogen with the development of the Hydrogen Power Plant and RAA will continue support this initiative and monitor the role hydrogen can play in decarbonising transport.

Notwithstanding the immense opportunities of EV adoption, some challenges are emerging which are relevant to the 20-year infrastructure strategy.

Enabling infrastructure to support public charging

In 2022, RAA successfully won the contract to build, own and operate the state's first border-to-border EV charging network - a project we are delivering in partnership with the South Australian Government. Installation of the network is now well underway and will help solve a key barrier to electric vehicle uptake - range anxiety. Importantly, all of the 140 charging stations will be powered by renewable energy.

While this infrastructure is an important first step, ongoing investment is required to fill gaps in the network and to increase capacity at high demand locations.

One of the key lessons to date from RAA's experience in installing public charging infrastructure is that many parts of the network are not capable of hosting DC rapid and ultra-rapid EV chargers. Some regions, specifically the Limestone Coast and Yorke Peninsula, are particularly challenging. Others such as the Eyre Peninsula are relatively DC charger ready, although this can differ between towns and within sub-regions.

RAA has been advised that the network upgrades required to install DC chargers in some areas are simply not feasible. Network modifications carry very high costs and can take several years to implement. From the network service provider perspective there is no motivation to prioritise these upgrades over other competing priorities.

DC chargers are required to charge EV batteries in the least amount of time, addressing the main barriers to EV uptake – range anxiety and extended travel time. Ideally DC rapid and ultra-rapid chargers should be built in areas of greatest convenience for drivers; however, RAA believes that without intervention and scaling up, network capacity will limit where these chargers can be located. This will create gaps in the public charging network that will likely be seen as barrier to EV uptake.

Recommendation 8

The Strategy identifies necessary upgrades in the energy network to support Electric Vehicle fast charging infrastructure.

Home charging infrastructure and standards

While public charging availability is critical to supporting EV uptake, most EV charging will occur in the home, which will create additional demand for electricity in residential areas. Greenfield developments and urban infill must be considerate of the need to support home EV charging when determining the need for electricity infrastructure.

RAA believes that preparing new builds for smart EV charging should be a priority. This includes ensuring that buildings are Vehicle to Grid (V2G) and Vehicle to Home (V2H) ready to allow EV owners to export energy from their EV battery to power their home or to sell back to the grid.

In the near future, V2H and V2G technologies will provide flexible and dispatchable storage behind the meter. A September 2023 report by the Australian Energy Market Commission (AEMC) stated: *"The Commission expects substantial new investment in EVs will increasingly drive two-way and controllable power transfers between individual consumers and the broader power grid."*

This interaction with the grid creates a need to ensure appropriate industry standards for charging equipment and inverters. The Energy Security Board has recently consulted on this matter, resulting in strong stakeholder support for setting of minimum equipment standards for chargers at a national level, and a strong preference for use of international standards.

The AEMC is supportive of consistent national technical standards for Consumer Energy Resources (like EV batteries) and have recommended energy ministers lead the development of a national regulatory framework for technical standards.

RAA encourages the SA Government to continue working with the Australian Government, state/territory governments, industry groups, standards bodies, and equipment manufacturers to establish and expedite nationally consistent standards for Vehicle to Home and Vehicle to Grid bi-directional charging.

Battery recycling

Among RAA members, 49% identify battery recycling as a concern and barrier to owning an EV[6]. In the 2023 National Electric Vehicle Strategy (NEVS), the Australian Government highlighted its commitment to support a circular EV economy including mitigating environmental impacts of EV production. An outcome of the NEVS is for the government to undertake research to inform an EV battery recycling, reuse and stewardship initiative.

Some EV battery recycling already takes place, for example Hybrid Camry and Prius high voltage battery reconditioning: old batteries are dismantled, any weak or failed cells are replaced, and the unit is returned to service as part of a changeover program.

While this industry is still emerging, it is expected that old EV batteries could be repurposed as home batteries or used as power supplies in industry. SA Government may wish to investigate the potential for South Australia to invest and build an EV battery recycling facility.

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6. RAA Internal Research, August 2023

9: Improved resilience

9.1: Planned resilience

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

Recent extreme weather events, including bushfires, hailstorms, and floods, have highlighted the need to invest in disaster mitigation measures and more consciously consider the relationship between land use planning and extreme weather risk.

RAA is committed to working with industry and governments to reduce pressure on insurance premiums and avoid future financial costs to homeowners, businesses, governments, and communities.

RAA has welcomed recent disaster mitigation investments from the Federal Government, including the $1 billion Disaster Ready Fund, announced in October 2022. RAA believes this can go further and supports calls from the Insurance Council to move disaster resilience funding to a 10-year rolling program and for state and territory governments to match funding.

The benefits of investing in disaster mitigation measures are highlighted by research commissioned by the Insurance Council, which found that a five-year program of resilience measures costing approximately $2 billion could reduce costs to governments and households by more than $19 billion by 2050 - a nearly tenfold return on investment.[7]

Disaster resilience funding could be used for measures to reduce risk to homes, such as community level flood mitigation (such as along the Gawler River), flood levees and home retrofits. Funding could also be used for buy-back schemes for those living in extreme risk areas, as seen in other states. Such community reliance measures can further reduce flood risk to complement changes to planning and building codes.

In addition, making investments in road infrastructure so they are more resilient to floods would ensure this infrastructure can better support community and commercial transport needs in the event of a disaster. For example, additional investment in key roads on approach to ferries along the Murray River could ensure ferries stay open for longer.

RAA understands the Government is investigating infrastructure measures to reduce flood risk in the future, including improvements to levees and the road network. We strongly encourage the Government to continue investigating new measures to further reduce flood risk and seek Federal Government funding for these improvements.

Recommendation 9

SA Government to match Federal Government disaster mitigation funding to further reduce flood risk and complement changes to planning and design codes.

7. Insurance Council of Australia, "Building Australia's resilience", March 2023

10: A stronger infrastructure industry

10.4: funding and financing solutions

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

RAA has long called for a fairer, more transparent, and sustainable model for road funding. Currently, every litre of fuel purchased includes a tax of 48.8 cents to help fund transport infrastructure and road safety upgrades. In 2022-23, the Australian Government collected $14.0 billion in fuel excise from motorists.

With the growth in more fuel-efficient vehicles and new technologies the government is going to be confronted with declining fuel excise revenue in the future. This will result in some motorists paying a road user charge through fuel excise while other motorists will pay far less or pay nothing at all. Over time, this means that those that can only afford to drive older, less fuel-efficient cars are left paying fuel excise.

For more than a decade, several tax reviews and reports from the Productivity Commission, Infrastructure Australia, and transport advocates have highlighted the fuel excise dilemma and called for a fairer and more sustainable system.

In recent years, various state and territory government have introduced state-based road user charges on EVs. However, in October 2023, the High Court found that by majority s7(1) of the Zero and Low Emission Vehicle Distance-based Charge Act 2021 (Vic) ("the ZLEV Charge Act") is invalid on the basis that it imposes a duty of excise within the meaning of s90 of the Constitution. With this decision, States are not able to collect a road user charge.

With this decision, the Australian Government needs to work with states and territories to develop a nationally consistent approach. This should also provide an opportunity to address the inequity in the fuel excise system, where, because different vehicles consume different amounts of fuel to travel the same distance on the same road, motorists pay different amounts of tax.

RAA supports replacing fuel excise with a nationally consistent, distance-based charge on all light vehicles, regardless of the type of car they drive, to ensure there is a sustainable revenue model to fund transport infrastructure and maintain safe roads into the future.

This would ensure that:

- Transport infrastructure funding is not reliant on fuel excise revenue which is declining with the adoption of low emission and EVs.
- There is a fairer, equitable, and transparent funding system.
- The charge is not considered, or misunderstood, as a tax just on EVs.
- All motorists regardless of vehicle contribute towards the cost of building and maintaining a safe and efficient transport network.

The application of a distance-based charge should be introduced in way that does not disincentivise adoption of EVs, such as through a lower rate and/or incentives to compensate for the charge. All revenue from the charge should be directed exclusively to land transport and electric vehicle infrastructure.

Submission to Infrastructure SA 20-year State Infrastructure Strategy

November 2023

Motor | Home | Travel

RAA

Infrastructure South Australia
20 Year Infrastructure Plan

Submission
from

RAIL FUTURES INSTITUTE (INC)

A - 0059839B

Post Office Box 1257 CARLTON Victoria 3053

November 2023

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1. EXECUTIVE SUMMARY

Thank you for the opportunity to provide this submission in response to the Infrastructure SA 20 Year Infrastructure Discussion Paper.

The Rail Futures Institute (Inc) was registered on 25th August 2013, in compliance with the Associations Incorporation Reform Regulations 2012, Victoria as:

The Rail Futures Institute Inc No A0059839B, and registered by the Australian Charities and Not-for Profits Commission as a non - fund raising entity on 28 August 2013 – **ABN 77 808 559 618**

Further details of our members, executive management team and advocacy efforts over the last decade are contained in a pdf attachment – ***"What is the Rail Futures Institute?***

Our submission covers the following topics:

- Commentary on the current and projected future rail freight task in South Australia
- Future potential enhancements to the South Australian regional and Interstate rail networks
- Investment in South Australian and Interstate rail freight projects
- and concludes with four (4) specific recommendations relating to RAIL FREIGHT.

If further information or clarification is required, please contact us at:

e-mail: [redacted] Mobile: President (John Hearsch) [redacted]

2. SOUTH AUSTRALIAN FREIGHT ISSUES :

2.1 Rail Freight in South Australia – Current and Projected

The 20 Year SA Infrastructure Plan Discussion paper comments on the existing freight task including "the bulk of our freight movements occurring by road (>80%)" and that "The national freight task is forecast to grow by 26% to 2050, with road freight forecast to grow by 77% from 2020 volumes."

Table 1 below supports those values.

	Tonnes (000)					
	Road	Rail	Air	Sea	Total	Percentage
International	-	-	32	27,988	28,020	12%
Domestic	175,150	11,662	27	11,472	198,311	88%
Total	**175,150**	**11,662**	**59**	**39,460**	**226,331**	
Percentage	**77.39%**	**5.15%**	**0.03%**	**17.43%**		

Freight volumes by mode
Source: AECOM

Table 1

The freight task however should be considered in terms of tonne kilometres as this relates directly to transport cost, asset maintenance, safety and environmental impacts.

The Bureau of Infrastructure and Transport Research[1] has estimated that roads in SA carried **15.248 billion** net tonne kilometres in **2021** and will carry **20.197 billion** tonne kilometres by **2040**.

The Bureau of Infrastructure and Transport Research[2] also estimates the gross tonnes carried by each sector on the interstate railway network for Intermodal and Steel freight and other bulk freight.

The tonne kilometres for South Australia are estimated by multiplying those tonnages by the corridor distance and converting the tonnage from gross to net. This results in an estimate of around **10 billion** tonne kilometres in 2021.

Under the medium case, East–West non-bulk rail freight is projected to increase by 68 per cent over 2021 levels by 2050 or by 2.2% per annum.

[1]Table E5 - Australian interstate, intrastate and capital city road freight forecasts –2022 update, November 2022
[2] Trainline 10 - 10 May 2023

Table 2 – below summarises the results with a mode share estimate of 60% road and 40% rail.

SOUTH AUSTRALIA - ESTIMATED LAND FREIGHT TASK (Expressed as Freight Tonne Kilometres)					
	2021	2040	Increase over 2021	Modal Split	
				2021	2040
East - West Rail	10.0 billion	14.1 billion	41%	39%	41%
Road	15.7 billion	20.2 billion	29%	61%	59%
TOTAL TASK	25.7 billion	34.3 billion	33%	100%	100%

Table 2

This does not include additional rail freight from Liberty Steel at Whyalla and Arrium at Thevenard.

2.2 East - West Interstate Rail Network

The East West Interstate rail network is a key logistics network in both South Australia and nationally.

Ongoing investment in the network will be essential to ensure that resource costs per tonne kilometre are as low as practicable. There are however some specific issues requiring attention:

2.3 Train Lengths

Train lengths on the majority of the East - West rail network in South Australia are 1,800 metres, however the Australian Rail Track Corporation has applied a restricted category for trains longer than 1,500 metres on the Adelaide to Melbourne corridor.

It is understood that there are train length limitations at the Dynon Intermodal terminal (Melbourne) limiting the number of 1,800 metre trains that can be operated in the Melbourne – Adelaide corridor, however new intermodal developments in Melbourne[3] [4]should enable more longer trains to operate between Melbourne and Adelaide in the medium term.

In South Australia around nine of 15 key crossing loops between Mile End and Wolseley have been extended to 1800 metres or are new loops of 1800 metre length but there still appears to be six loops that are only 1550 metres in length[5].

Extension of these shorter crossing loops to allow unrestricted operation of 1,800 metre trains should be a priority.

2.4 Axle Loads

Axle loads are restricted by multiple factors including strength of bridges, sleeper type and rail weight.

Following the Federal Government's investment in re-railing key parts of the Australian Rail Track Corporations (ARTC) network, from Adelaide to Whyalla, Tarcoola and Broken Hill there are three sections

[3] The Age, 18 October, Proposed Little River Freight Terminal

[4] Premier of Victoria - Start of Major Works at Somerton Freight Terminal – July 2023

[5] Australian Rail Track Corporation Network Information Books

remaining that still have lighter weight rail which impose lower axle load limits and are understood to have higher rail breakage rates.

The line sections involved within South Australia still to be re-railed with heavier rail are:

- Adelaide to the Victorian Border
- 100 kilometres of the Tarcoola to Alice Springs railway (an obligation under the Alice Springs to Darwin Railway Concession Deed)
- Tarcoola to the Western Australian border

Re-railing not only results in achievement of higher rail axle loads and reliability but also offers further benefits in:

- Supporting Liberty Steel at Whyalla
- Releasing rail for potential re-use on other projects that may require rail including re-activation of the existing freight railway between Glenburnie (SA) and Heywood (Victoria) and between Tailem Bend and Pinnaroo (SA) which are discussed further below.

2.5 Cubic Freight Capacity

With the projected completion of the Inland Rail project in the early 2030's the ability to operate trains up to 6.5 metres in height (with double stack container clearance) will have been significantly improved but limited to operating on the Melbourne-Albury-Parkes corridor from/to terminals in Melbourne's North at Somerton and Beveridge. Therefore, double stacked trains will still be unable to operate between Melbourne and Adelaide. It is anticipated that, for this reason, some Melbourne-Perth trains will be re-routed to operate via Parkes and Broken Hill.

Figure 1 below, shows the remaining single stacked sections in blue after the completion of Inland Rail.

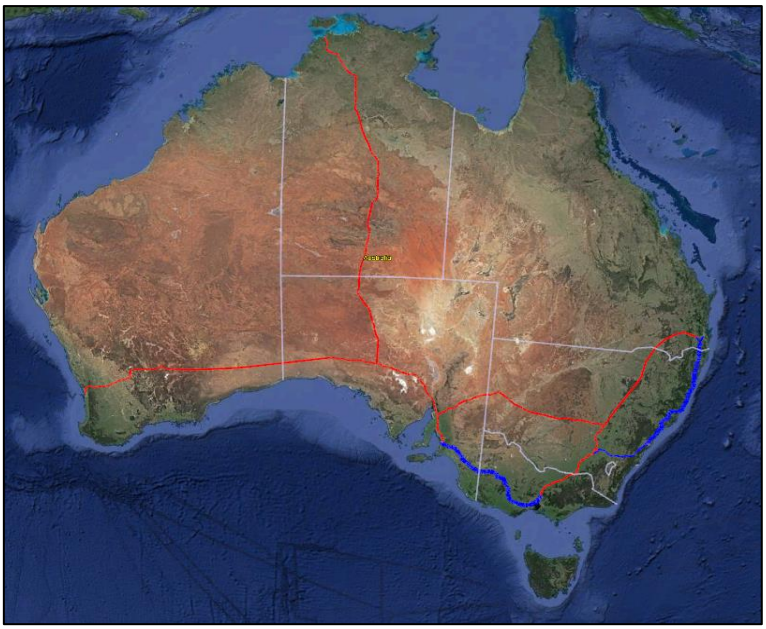

Figure 1

There are several challenges to achieving double stacking of container trains between Adelaide and Melbourne including tunnels in the Adelaide Hills and within the Melbourne Metropolitan Area.

The Victorian Government proposes to construct a new Outer Metropolitan Rail Corridor that would allow double stacked container trains to operate to/from the Adelaide and Sydney corridors with new Intermodal terminals at Little River and Truganina. This however is a longer term project and any double stacking operations which utilise these terminals may not be possible until the second half of the 20 year plan timescale (2034 to 2044).

2.6 Adelaide Intermodal Terminals

One of the significant costs of rail intermodal freight is the transfer of freight between trains, road transport and logistics facilities.

The CSIRO[6] estimates that to transfer a 40 foot container costs $80. In a round trip this occurs four times incurring a total cost around $320 in transporting each container.

The location of Intermodal terminals to their clients is key as the cost of road transport for the short distance can be relatively high, the optimal solution being integrated rail / road logistics facilities on site enabling rail to become much more competitive with long road haulage routes.

Significant investment is underway on automated logistics facilities such as Moorebank in Sydney and Somerton[7] in Melbourne with proposals for additional Intermodal terminals in Melbourne at Beveridge[8] and Little River[9] (by early 2030's) and Truganina[10] (longer term).

It is recommended that in conjunction with the Private sector, the Australian Rail Track Corporation, National Intermodal Corporation and State Government investigate the opportunity for the type and location of potential intermodal and integrated logistics facilities, in particular to ensuring relevant land use planning policies are in place and suitable road access and other supporting infrastructure are planned.

2.7 Potential Economic Benefits

The potential benefits of the combination of longer trains and double stacking add up significantly.

Using the **Australian Transport Assessment and Planning Guidelines** it is estimated that the potential savings in resource costs could be in the order of 30% for Intermodal trains operating between Melbourne and Adelaide.

Over 50 years at a growth rate of 2.2 % p.a. the resultant economic benefits (50 years at 7% discount rate) could be in the order of **$1 to $2 billion** dependent on assumptions around any mode shift.

2.8 Re-connecting Regional South Australia to the ARTC Network

There are railway lines in the South East and Southern Mallee regions of South Australia that currently do not operate any train services.

Figure 2 below shows the railway lines from Mount Gambier to Heywood in Victoria (Light Green) and from Tailem Bend to Murrayville in Victoria (Pink and Red).

[6] Inland Rail Supply Chain Mapping Project: Reference Case Modelling – Page 60
[7] Premier of Victoria - Start of Major Works at Somerton Freight Terminal – July 2023
[8] National Intermodal completes acquisition of land for the Beveridge intermodal precinct – June 2023
[9] The Age, 18 October, Proposed Little River Freight Terminal
[10] Herald Sun, October 5 2023, Untangling the Freeway Chaos, Outer Metropolitan Road and Rail Corridor

Figure 2

If works were undertaken to standardize and upgrade two of the highest priority railways in co-ordination with the Victorian Government facilitating similar works on their side of the border, this would enable the connection of those regions to the East - West and North - South Interstate rail networks.

Both proposals are likely to involve investment from the private sector, South Australian, Victorian and Federal Governments and consequently will require cross border negotiations.

The recent appointment of a Cross Border Commissioner by the South Australian Government should help in expediting such negotiations.

2.8.1 Glenburnie (South Australia) to Heywood (Victoria) and Glenburnie Intermodal Terminal

Following rail gauge standardization in 1995, the Mid and Lower South East region was left without an operational railway to access the East-West and North-South interstate rail networks. Recently three events have occurred which indicate that re-instating rail access has become more economically viable:

- In 2020 the CSIRO in a report commissioned by Regional Development Australia Limestone Coast[11] (using the CSIRO's TraNSIT dashboard) identified that an Intermodal terminal at Glenburnie and combined re-activation / standardization of the 81 kilometre rail line to Heywood in Victoria appeared to have the highest potential freight cost savings of multiple options considered, one of

[11] Rail corridor and freight analysis for the Limestone Coast and South West Victoria

which was alternatively re-activation and standardization of the dormant broad gauge rail line between Mount Gambier and Wolseley.

- The Green Triangle Forest Industries Hub[12] has identified significant opportunities to increase the value of wood products produced in the Green Triangle Region. The impact of this would be many more tonne kilometres of freight being generated in supplying value-adding end users in Australia than has been the case in the past with export of relatively low-value woodchips and logs from the Port of Portland to overseas buyers.
- The District Council of Grant (South Australia) is undertaking a review of land use planning policies across the council including a proposal to establish an industrial estate at the Glenburnie Saleyards, which could logically be complemented by an adjacent Rail / Road Intermodal terminal.

Shown below - location of the proposed Glenburnie Intermodal Terminal and in green rail line to be re-instated.

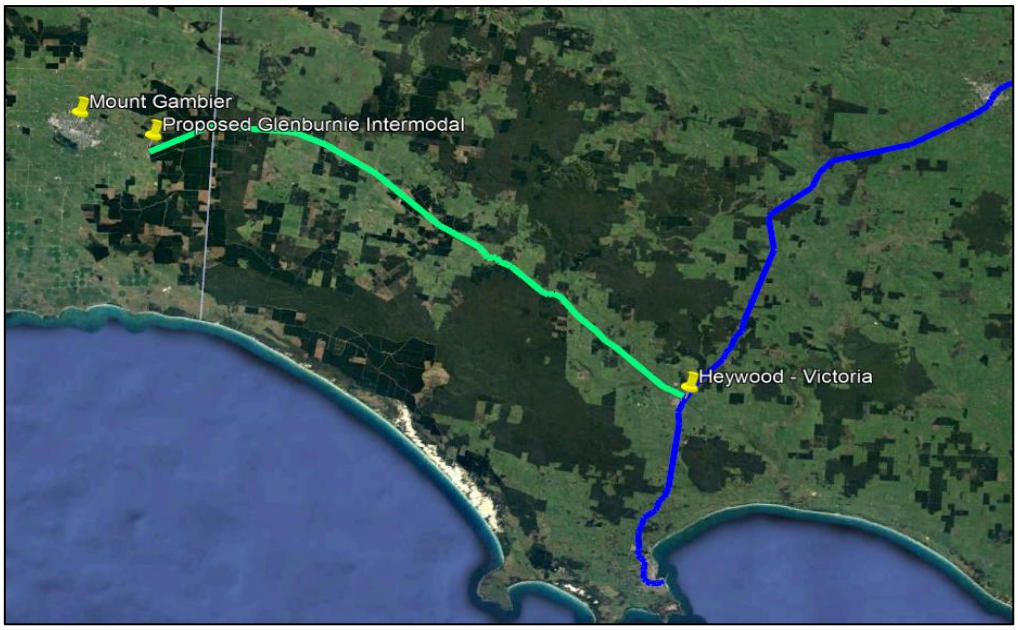

Figure 3

Use of rail will result in lower transport resource costs for industry, plus significant community benefits in terms of enhanced road safety, less road damage and maintenance issues. There are also significant environmental benefits through reduced GHG emissions, air pollution and noise nuisance in restoring rail freight services between Glenburnie and the ARTC network at Heywood (Victoria).

For the transport industry, reducing damage to trucks and addressing a critical shortage of qualified truck drivers are added advantages of transferring more freight from road to rail.

It is understood that there is strong cross-border support for this project from Regional Development Australia Limestone Coast, the City of Mount Gambier, District Council of Grant, Regional Development Australia Barwon South West, the Shire of Glenelg and Port of Portland Authority. There is still a need to refine the business case, determine industry's willingness for rail to be part of their logistics solution and to determine how such a project would be funded and delivered.

[12] Building the Nation: Growing the Green Triangle's Contribution to Australia's Future

A key step in this process would be to have the project listed on the Commonwealth Government's 20 Year Infrastructure Plan. This would be a catalyst for further consideration of the proposal by industry and the Federal, Victorian and South Australian governments.

2.8.2 Pinnaroo Line

Prior to 1995 the Tailem Bend and the Murray Basin in Victoria were connected by a broad gauge rail link through Lameroo and Pinnaroo to Ouyen in Victoria.

Historically, before 1995, grain was transported from Victoria to Adelaide for export along this railway line.

Following gauge standardization in 1995 the railways from Tailem Bend to Pinnaroo and to Loxton were also standardized with funding provided by the South Australian Government in the late 1990's but rail freight operations ceased on both lines in 2015.

In 2020 the railway line from Ouyen (Victoria) to Murrayville was converted to standard gauge and upgraded as part of the Victorian and Commonwealth Government's Murray Basin rail standardization project[13].

There however remains 20 kilometres of broad gauge track between the Grain Flow bulk grain receival site on the South Australian side of the border and Murrayville in Victoria, this requiring standardization to allow through train operations to resume between Ouyen (Victoria) and Tailem Bend (SA).

Combined with any necessary upgrading of the rail line between Tailem Bend and the Victorian Border by the rail asset owner Aurizon, this would then enable rail freight to flow between the East - West interstate rail line at Tailem Bend and the Victorian Mallee region.

Figure – 4 below shows the extent of the three railway elements.

- Tailem Bend to Pinnaroo – standard gauge but no train services currently (Pink)
- Pinnaroo to Murrayville – broad gauge, requires upgrading and standardization (Red)
- Murrayville to Ouyen – recently upgraded and converted to standard gauge (Blue)

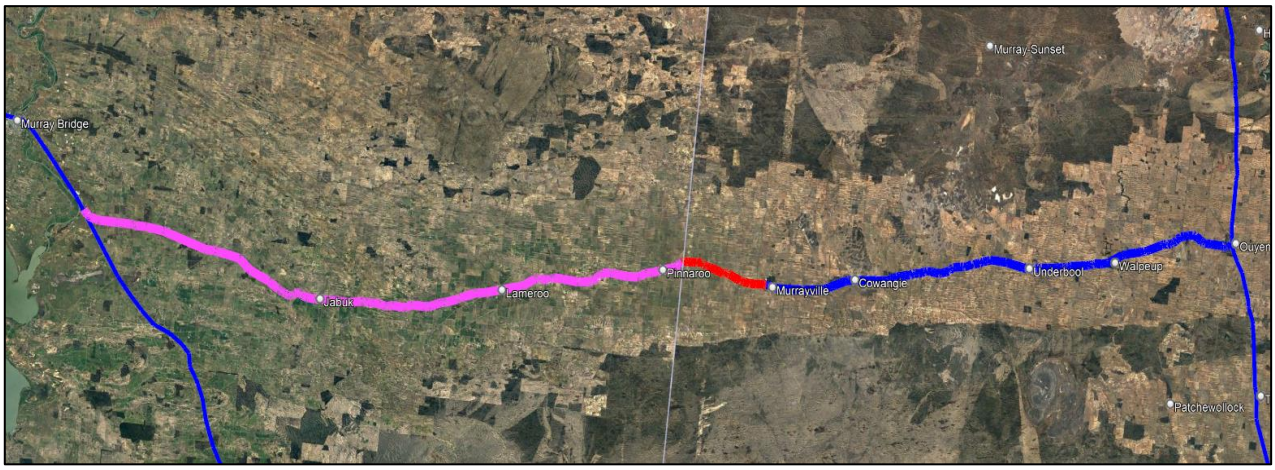

Figure 4 – below, shows the reduction in bulk freight transported since cessation of rail freight services in 2015[14].

[13] Premier of Victoria, Progressing with The Murray Basin Rail Project, July 2022
[14] Trainline 10

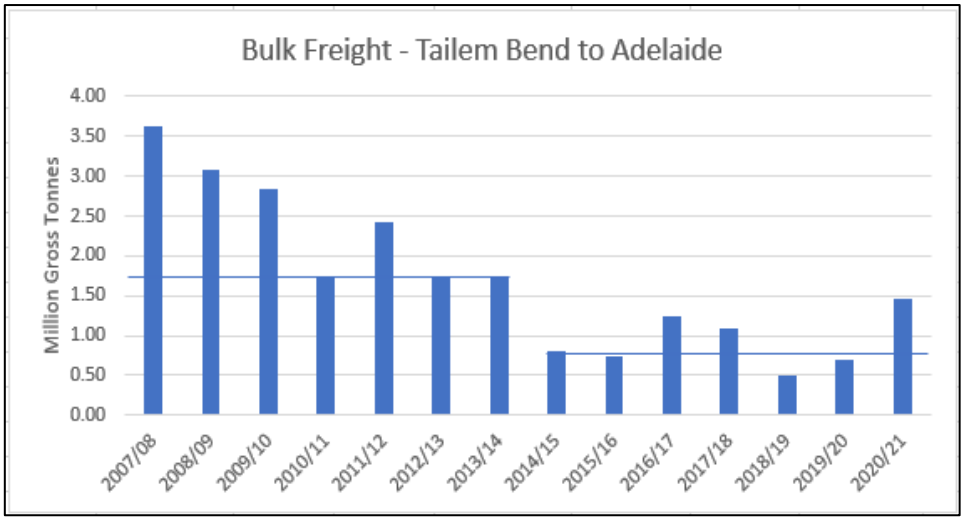

Figure 4

As there is now also the potential of other freight commodities to and from the Murray Basin this is a project recommended for more detailed investigation in conjunction with Victoria. There is still a need to determine the potential freight flows and how such a project would be funded and delivered.

A key step in this process would be to have the project listed on the Commonwealth Government's 20 Year Infrastructure Plan. This would be a catalyst for further consideration of the proposal by Industry and both South Australian and Victorian Governments.

2.8.3 Other Rail South Australian Regional Lines

Any assessments of the viability of re-activating the remaining non-operational broad gauge railways from Mount Gambier to Wolseley and Millicent, and between Tailem Bend and Loxton should not be undertaken until such time as the higher priority Glenburnie to Heywood and Tailem Bend to Murrayville projects have progressed.

The Rail Futures Institute (Inc) also supports resumption of rail freight train operations on the South Australian Eyre Peninsula (narrow gauge) and Leigh Creek (standard gauge) rail lines.

3. RECOMMENDATIONS:

3.1 That a table showing the estimated tonne kilometre land freight task in South Australia of 25.7 billion tonne kilometres in 2021 and increasing by 33% to 34.3 billion tonne kilometres by 2040 be included in the 20 Year SA Infrastructure Plan.

With modal shares remaining constant at Road 60%. Rail 40%.

(2021 - Road 15.7 billion tonne kms, Rail 10.0 billion tonne kms;

2040 - Road 20.2 billion tonne kms, Rail 14.1 billion tonne kms.)

3.2 That the Australian Rail Track Corporation (ARTC) continues to invest in upgrading of the rail infrastructure in the Melbourne – Adelaide corridor including replacement of

lightweight rail between Adelaide (SA) and Serviceton (Victoria) and extension of all crossing loops to allow un-restricted operation of 1800 metre long freight trains.

3.3 The Private sector, Australian Rail Track Corporation (ARTC), the National Intermodal Corporation, and South Australian Government plan and invest in high efficiency intermodal facilities connecting to both road and rail networks.

3.4 Restore and enhance freight access to the standard gauge Interstate and Victorian rail networks from South East South Australia (Glenburnie to Heywood, Victoria) and from Tailem Bend (SA) to Murrayville (Victoria).

What is the

Rail Futures Institute

RAIL FUTURES INSTITUTE INC.

Rail Futures Institute Inc

Was registered on 25th August 2013, in compliance with the Associations Incorporation Reform Regulations 2012, Victoria, as:

The Rail Futures Institute Inc No A0059839B, and registered by the Australian Charities and Not-for Profits Commission as a non - fund raising entity on 28 August 2013 – ABN 77 808 559 618

Our Committee and members include experienced rail professionals, urban planners, engineers and economists.

Objectives of the Rail Futures Institute

The purposes of the association are to —

1. Undertake public interest advocacy for the adoption of cost-effective passenger rail and Intermodal rail freight solutions.
2. Undertake research, publish and disseminate information concerning public transport and freight issues.
3. Advocate for triple bottom line solutions to transport issues
4. Conduct conferences, seminars and forums on transport issues
5. Co-operate with other organizations which share these same aims.

Rail Futures - Committee 2022 - 2023

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Our Objectives and Strategy

RFI is an entirely self-funded voluntary research and advocacy organisation. We undertake a wide range of activities designed to inform decision makers and all stakeholders on the urgent need to develop our existing rail assets and provide new assets for the benefit of present and future generations.

Our scope covers public passenger transport, commercial freight and their interaction with town and regional planning. We actively promote the economic, social, environmental and cultural benefits of using rail-based transport to move people and goods efficiently and in an environmentally sustainable manner. By anticipating future needs, we use targeted, non-partisan advocacy to recommend practical solutions for transport systems with the aim of reducing motor vehicle dependency and improving inter connectivity between people and places.

RFI seeks to influence public policy through publishing technical papers and brochures advocating practical rail-based transport applications linked with land use planning and population changes. This provides a broad context for our proposals which at this stage has involved rail transport in the State of Victoria.

Rail Futures Institute Inc - Publications include :

The Case for Melbourne Metro (December 2013)

Melbourne Metro vs. Melbourne Rail Link (August 2014)

Trams and Light Rail in Melbourne's Future (July 2015)

Future Proofing Melbourne: *Advocating a Plan for Melbourne that integrates metropolitan land use and transport strategy and ensures a sustainable, resilient, less car dependent city.* (June 2015)

Getting Freight Back on Track in Victoria (April 2016)

Introducing *INTERCITY*: How regional rail can re-balance population growth and create a 'State of Cities' in Victoria (September 2016)

AIRtrain – The Airport Train Melbourne Needs! (March 2017)

INTER – CITY **:** How regional Rail can re-balance population growth and create a "State of Cities" in Victoria – (July 2018)

The MELBOURNE RAIL PLAN 2020 - 2050 *– Public Transport for a City of 8 million people* – (September 2019)

RAIL as a CATALYST for Regional Growth - (January, 2022)

If you would like to join us in promoting good public policy through investing in rail for the future of Victoria , apply for Rail Futures Institute Inc membership through our website at www.railfutures.org.au

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13 November 2023

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

The South Australian Council of Social Service (SACOSS) welcomes the opportunity to comment on the State Infrastructure Strategy Discussion Paper.

SACOSS is the peak non-government representative body for health and community services in South Australia, a sector which includes around 1,000 organisations with a combined revenue of $4.6bn in 2021 per annum and employing some 50,000 South Australians.

SACOSS undertakes policy and advocacy work in areas that specifically affect disadvantaged and low-income households in South Australia. The provision, type and location of infrastructure is crucially important to these households as it facilitates not just the economic growth generally, but the opportunity to participate and benefit (or not) from that development.

In our submission to the 2023-24 State Budget, SACOSS called for bold interventionist approach to economic development. In that context, we are pleased to see the vision of the South Australian Economic Statement and the Infrastructure Strategy Discussion Paper in planning for strategic investment to promote development. We are also particularly pleased to see the Discussion Paper has a much broader agenda than the existing 2020 Infrastructure Plan, not least in including explicit consideration of the energy transition and decarbonised economy.

Attached to this letter is a table which provides briefs answers and link to SACOSS work relevant to the specific questions in the Discussion Paper. However, we also wish to make an overarching comment around the need to always include social planning as a core part of any infrastructure planning process. This is directly relevant to Consultation Question 7, but it applies more generally to a range of areas in the Discussion Paper.

By its size and nature, infrastructure has major social impacts – as recognised in the definition suggested in the Discussion Paper of infrastructure sustaining and enhancing "the

economy *and liveability* of South Australia". However, while there is some scope in the Objects and Principles of *Planning, Development and Infrastructure Act 2016*, for consideration of some social issues, and there is a desire in the Discussion Paper (Section 6.1) for coordination of planning, this often does not include planning for key social services and the community infrastructure that is required to support them. Further, the envisaged planning is at a general level and does not require assessment of the specific impacts of any particular project.

As an example, with significant development opportunities in the Upper Spencer Gulf including the potential Hydrogen Hub, there is a substantial planning effort from both the State government and relevant local councils. While this development and planning is welcome, most of the current plans focus narrowly on economic growth and the infrastructure and workforce required to enable that growth. There is consideration of population growth and housing needs, but not of the social implications of that growth and the health and community services needed to ensure that the growth makes a positive contribution to existing communities and that no one is left behind.

In our next State Budget submission (forthcoming), SACOSS will argue for additional resources for further planning in the Upper Spencer Gulf to consider and provide for a broad array of social impacts and services, including:

- The local economic impacts of booms and busts in the construction phases of the development plans;
- The impact of increased population on:
    - Demand for childcare, schools and the qualified staff in those professions
    - Demand for health services including GPs, community health services (including mental health supports) and hospital infrastructure;
    - Demand for other community services such as disability supports, homelessness services, gambling help and family supports;
- The impact of increased demand and inflationary pressures on current residents on low and fixed incomes, and the support services for those residents;
- Additional demand for social services likely to arise from an influx of people with limited connection to the area and fewer support networks.

While this planning is needed and should be done, it will still be retrofitting into existing plans and development. This relegates key social impacts to responses to infrastructure development rather than being a key part of the infrastructure planning and approval.

The social impacts of infrastructure development need to be included in the planning process from the start. Further, a social impact statement should be prepared for all significant infrastructure projects – both to facilitate better planning and to ensure that the infrastructure will have a positive impact on the local community.

Curiously, SACOSS raised this issue in its response to the 2010 State Infrastructure Plan Discussion Paper, and our experience with the social impacts of infrastructure since, confirm that increased consideration of social impacts is still required.

Accordingly, the primary recommendation of this submission is that:

- ***consideration of the social impacts of infrastructure development should be included in the planning process, and***
- ***a social impact statement should be prepared for all significant infrastructure projects.***

Beyond that, we refer you to the table following for responses to particular questions in the Discussion Paper.

If you require any further information about any issues raised in this submission, please contact our Senior Policy and Research Analyst, Dr Greg Ogle at [redacted] or on [redacted]

Thank you for your attention to this matter.

Yours,

[redacted]

Ross Womersley, CEO

Responses to Specific Consultation Questions

Topic	Question	SACOSS Response
Section 5.2 ***Question 3***	**Water Supply** How can we enable a sustainable and affordable water supply into the future?	Priority must given to ensuring all South Australians have access to affordable and sufficient drinking water, and SACOSS' Submission to the SA Water 2024-2028 Regulatory Business Proposal outlines key steps in making water more sustainable and affordable.
Section 5.3 ***Question 4***	**Energy Transition** How do we realise the opportunities and mitigate risks with transforming our transmission and distribution infrastructure for the future?	SACOSS made preliminary comment on AEMO's Integrated System Plan, but has put fuller proposals in a comprehensive submission on the government's Green Paper on the Energy Transition. (See Q16 below)
Section 5.4 ***Question 5***	**Digital Connectivity** What are the barriers to increased adoption of digital technology to improve productivity?	As the SACOSS Connectivity Costs, and the forthcoming Keys to the Digital World reports show, for many in the community, insufficient income and low levels of digital capability exist at levels which many "connected" policy makers struggle to see or even imagine. (See SACOSS interviews with three people struggling with digital inclusion). Infrastructure spending needs to be matched with capacity building and affordability measures to enable access and usage.
Section 6.1 ***Question 7***	**Coordinated Planning** How can South Australia better coordinate infrastructure investment to support a growing population?	As above, social impact assessment and community infrastructure that supports wellbeing should be part of all decisions on significant infrastructure investment.
Section 6.2 ***Question 8***	**Affordable Housing** What can be done to support sufficient, fit-for-purpose housing to improve housing affordability?	The SACOSS submission to the state parliament's Economic and Finance Committee Inquiry into housing availability outlines a range of proposals including on tax changes, financing models, energy standards and most relevantly significantly greater investment in public housing.

Section 6.4 ***Question 10***	Health and Wellbeing What investments would support a more efficient and productive health system that meets our growing and changing needs?	The SACOSS submission to the Legislative Council's Select Committee on Health Services (2022) highlights the need for: • Investment in public health, disease prevention and health promotion • Creation of healthier public environments for all children, particularly in relation to food marketing and the promotion of healthy diets; and • a health equity lens to be applied to all preventive health initiatives.
Section 8.2 ***Question 16***	**Decarbonised Energy System** How do we maintain an affordable, reliable and secure energy system through the energy transition?	SACOSS' Submission to the Green Paper on the Energy Transition contains 38 recommendations, including on electrification, the role of rooftop solar (and network implications), on natural gas and hydrogen, and on meeting transition costs through progressive means (e.g. government budgets) rather than adding to regressive energy bills.
Section 9.1 ***Question 20***	**Planned Resilience** How do we better account for the impacts of climate change in our infrastructure, to support improved resilience?	SACOSS' recent Submission to the SA Parliamentary Inquiry on the River Murray Flood Event 2022-23 includes recommendations regarding the maintenance of public and private levies.
Section 9.2 ***Question 21***	**Critical Infrastructure** What are the critical resilience issues that South Australia needs to address?	SACOSS in collaboration with Red Cross leads a Disaster Resilience Reduction funded project aiming to build resilience of the social and community sector in supporting people most at risk in emergencies. Reports of the project's work can and SACOSS work on climate change resilience can be found on our website.

SAFC
South Australian Freight Council

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Thank you for the opportunity to comment on Infrastructure SA's discussion paper on the 20-year state Infrastructure Strategy.

The South Australian Freight Council is the multi-modal advocacy body for SA. We provide a voice for freight and infrastructure issues across all modes – Sea, Air, Road, and Rail. Supported by the SA state government, our membership consists of providers, users, and facilitators of freight across all 4 modes.

SAFC remains a strong supporter of the work of Infrastructure SA and the critical importance of structured planning to ensure optimal outcomes are achieved in positioning SA for future economic and social success. The freight industry is a central contributor to this success, and we offer the following points for your consideration in addition to our verbal submission on the 30/10/23.

When considering the objectives embedded in the discussion paper it would seem obvious that the ability to move product from, to and through SA is central to many of these objectives. As the connections, technology and behaviour's change, infrastructure (and the regulatory space) must also provide the flexibility to adapt quickly. While freight is an important component of each of the objectives, for brevity we will refer to objectives 1,4 and 6.

Background

Identifying what the expected task will be is important and will help inform the sort of infrastructure required, noting that technological changes are happening with ephemeral rapidity and that the way that product is ordered and executed to consumers is matching this pace. Identifying global solutions to similar issues will assist in informing strategies and it will be important to ensure that this strategy remains flexible as technology and consumer demands change.

We expect that the freight task for SA will increase in volume, in number of movements and will evolve in line with technological advances. It is expected that SA will continue to export high value agricultural product, the demand for our resources will continue to grow as we support the transition to a greener economy and that SA will continue to facilitate the movement of

east-west freight via road and rail.

Objective 1 – Enabling Infrastructure unlocks higher productivity and economic growth to improve our living standards.

SAFC agrees that an effective infrastructure network is central for the economic standards we aspire to exist in SA over the coming decades. There are 3 different aspects of our freight infrastructure. Maintaining what we currently have, upgrading/expanding current infrastructure and the construction of new infrastructure.

Maintaining Current Infrastructure

Rural and Regional Road Maintenance – the deficit in regional and rural road maintenance continues to rise – this must be addressed in a meaningful way – Resources must be allocated to address significant road maintenance – noting that some of the issues originate from the different jurisdictions responsible.

Upgrading Existing Infrastructure

HPV network – SA should develop a HPV network for PBS4A vehicles from state border to state/territory border. This should also connect key origin/destinations in the state – i.e. ports key 'consumption' points and bulk storage facilities. As part of the success of this network it will also be important to address first and last-mile issues – enabling primary producers (for example) to access that network. Where major roads are being progressively upgraded/delivered they should be upgraded to be capable of taking PBS4A vehicles. Key physical infrastructure upgrades to consider – Greater Adelaide Freight Bypass, Duplication of the Swanport Bridge, PBS4A route plan connecting KI/Fleurieu with Murray Bridge (via Strathalbyn).

Increased air freight calls direct from SA. – This includes ensuring that access to key export/import points are maintained and improved but also requires improved land use planning. Much of SA's high value time sensitive products are exported via Sydney or Melbourne, meaning that our product takes longer to market and incurs additional costs. While much of the impetus for new, direct international air calls from Adelaide is driven by passenger demand – Freight represents approximately 20% of the economic revenue of particular flights. Direct, regular air calls from Adelaide to key destinations, while enabling increasing amenity and convenience for South Australians, will drive economic benefits in tourism and related activities and crucially it will enable primary producers to access new markets or expand existing ones. Continuing to develop

infrastructure that encourages inbound visitors is an indirect investment in developing freight opportunities. As part of this key outcome restrictions related to the Adelaide Airport Curfew must be sympathetically reviewed, particularly related to shoulder periods, to assess whether this is a restrictive factor in attracting reliable, consistent connections that have significant benefits to South Australia. Key destinations for high value SA product include Thailand, Japan, China, and the US, from a freight point of view, these should be prioritized with a view to having direct international flights to each within the next decade.

Increased container freight calls direct from SA. – This includes ensuring that access to key seaports are maintained and improved but also requires improved land use planning – potential land use conflicts from residential developments must not endanger the safe and efficient operation of our key export/import points. Increasing product availability for container export would be one of the benefits from connecting the Mallee rail (Pinnaroo) with Murrayville, enabling product from Mildura to be exported via rail through the port of Adelaide. This would support a direct container call between Adelaide and North Asia, for example.

Eyre Peninsula freight – the current debate around roads/rail/ports on the EP has been persisting for many years. While it would be desirable for market forces to resolve this, it would seem overly optimistic to expect this outcome. The inertia surrounding potential ports has led to uncertainty surrounding related freight infrastructure developments and upgrades. There is a role for the state government to expedite resolution of this issue noting that this debate has continued for decades, failing this resolution, infrastructure investments must be made to facilitate exports through current export pathways on the EP.

Separation of vulnerable road users from heavy freight – When considering the overall road network, the routes approved for B-doubles in metropolitan areas are very few. On some of those major freight routes cycle lanes exist without any physical separation from heavy vehicles. These few routes (particularly in the Adelaide Metropolitan area) should be expressly determined to be freight routes and cycle lanes should be removed or where possible physically separate from heavy vehicles. The freight industry recognises that cyclists are legitimate road users, however there are few designated heavy vehicle routes in the Adelaide metropolitan area and alternative cycling arrangements should be provided to enable all users to travel safely. Infrastructure planning should assess alternative cycling routes to remove this conflict. The 2 most obvious locations of this conflict exist at Portrush Road and at Cross Road.

New Infrastructure

Multi-User Minerals port – One of the major impediments for the development of resources in SA is the inability of miners to access efficient port infrastructure. Each proposed mining facility would appear to have their own individual port pathway thereby imposing financial barriers to viability. There exists an opportunity for government to provide a multiuser deepwater port to open up mining opportunities in the North and East of the state – establishing a multiuser facility and ensuring a (relatively) swift timeframe from development to establishment. Unlocking our resources is important in wealth creation for the state and in many cases will assist in the pathway to net zero.

Northern Water Project– for increased processing opportunities – With the government's intention of establishing a northern water project, a project that SAFC supports, – there would be significant economic opportunities for additional processing facilities that would drive growth – these could include additional cattle feed lotting (with was one of the reasons for capping the Strzelecki track) and wet pulse fractionation – as an example the latter could potentially be established in the northern EP a demand point for legumes.

Aviation Fuel Pipeline – There is a strong argument for the construction of a pipeline to move aviation fuel from Port Adelaide to the Airport Precinct. This would significantly reduce the number of truck movements currently required daily to facilitate this service. With a growing aviation sector for both passenger and freight, the expected demand for aviation fuel is going to increase. This could be combined with the opportunity for the state to take a national lead in the production of sustainable aviation fuel (discussed below).

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

SAFC recognise the need for the industry to move to reduce carbon emissions associated with freight movements. It should also be recognised that freight is a part of supply chains and only exist when product need to move from origin to destination. It is therefore difficult to examine freight emissions in isolation from the cargo it is moving.

Good policy demands an understanding of the problem that is trying to be solved. An orderly approach to decarbonisation must be achieved to maintain the economic standard of living in SA.

Transition to lower carbon is not a balance between sustainability, affordability, and reliability, but rather it is a progression from 1 to the others – freight must primarily remain reliable, then remain affordable and then become sustainable. This is not to say that sustainability is any less of an objective, but to point out that to achieve true sustainability while maintaining economic lifestyle it had to be in a measured manner.

Infrastructure investment is an important aspect of achieving sustainability targets – however the reliability and affordability of that freight must be considered to achieve that. Our infrastructure must be informed by rational consideration and robust academics. In order to achieve carbon targets we must be able to establish a baseline of information – including current footprint, consideration of whole of life of the asset (including electric vehicles) and modelling current trends to understand future demands.

While there is much that could be added around the future requirement of the electricity grid and network, with specific regard to freight we would offer 3 broad outcomes.

Outcome 1 – Electric Prime Movers – the weight of batteries is significantly more than traditional combustion engines; it is important to support businesses moving to electric trucks to accommodate this additional weight without a corresponding loss in payload. A phased movement to electric vehicles should be supported with a focus on smaller trucks/rigids that do not tend to cover the same geographical distances as B-doubles.

Outcome 2 – investigate the opportunity to produce sustainable aviation fuel in SA – noting that our central geographical location coupled with SA's competitive advantage in Hydrogen, would support this opportunity. This should be investigated as a matter of urgency.

Outcome 3 – Intermodal opportunities – as part of the decarbonisation requirement – there would seem to be little doubt that effecting some modal shift from road to rail would assist – however an intermodal precinct north of Adelaide would be necessary to allow this to happen in a meaningful way.

Support key Rail resilience projects based in SA. Upgrade the existing drainage assets along the ARTC corridor between Crystal Brook and the WA border. Upgrade to formation, bridge protection and drainage assets between Tarcoola and the NT border to minimize track closure associated with significant events. Construction of passing loops on the rail line at Pimba and at Zanthus.

Objective 6 – A stronger infrastructure industry optimizes our infrastructure investment through better planning and prioritization.

We recognise that much of our current infrastructure is generally fit for use, however the way it is currently used is a limiting factor. Assessing how the infrastructure operates currently will improve its effectiveness.

Regulation that enables – technology in all areas is advancing rapidly. Regulation is often framed in a proscriptive manner that retards innovation uptake. While regulation has an important role in ensuring positive outcomes, it should be enshrined in a way that enables innovative solutions.

Regulatory Consistency – regulations and restrictions change as the jurisdictions change – while we are committed to ensuring the freight is moved as safely as possible – every additional hour spent on unnecessary compliance with unnecessary regulatory complexity – is an unnecessary cost to our industry that is ultimately bourn by the consumer.

Protect key infrastructure routes/locations – the current process of protecting key freight routes and critical infrastructure is clearly insufficient. Pre-existing heavy industry has been forced to restrict activities due to urban encroachment, key freight routes are under increasing pressure from residential associations, interest groups and local government decisions. Poor residential planning has resulted and will continue to result in perverse outcomes for our state.
SAFC have had multiple examples raised where new developments or new residents have restricted the operation or development of key infrastructure assets, whether than be for road or rail transport, for heavy industry or for key export/import points.

Once again, thank you for the opportunity to comment on the discussion paper and we look forward to work with Infrastructure SA on key outcomes for our state.

Yours sincerely

Jonathan Wilson
Chief Executive Officer
SA Freight Council Inc.

South Australian Transport Action Group Inc. [SATAG]

Infrastructure SA 20-year Plan [ISA20]

In this paper:

- Who is SATAG
- South Australia's central location
- Transport Investment in South Australia
- The importance of who owns infrastructure
- Government responsibility
- Regional South Australia
- State borders- the dotted line syndrome
- Near metropolitan housing development and transport policy
- Standard and broad gauge rail in South Australia
- Adelaide Hills- passengers and freight
- Freight- the importance of an Adelaide Hills Rail Bypass
- Passenger rail for the Adelaide Hills
- The Grain Industry in South Australia – a major state issue

SATAG is a small group of individuals with many years of experience in the transport field in South Australia. This includes road freight, rail freight, shipping, port development, supply chain management and passenger rail, both at operational and management levels. It commenced in 2019 and was incorporated in 2020.

We held two Public Transport Forums in 2021 attended by the representatives of all South Australia's political parties. In both cases the cinema in Mount Barker was filled to capacity and the Advertiser's

live streaming received 20,000 hits. Public support for passenger rail was very obvious. Promises made are still to be delivered.

Our focus is essentially on freight and passenger transport to bring much needed modal options and balance into focus in South Australia.

SOUTH AUSTRALIA'S CENTRAL LOCATION

South Australia's central location puts it at the crossroads between the Eastern States and Western Australia. It is also the gateway to the Northern Territory given that Adelaide is the closest capital city to Darwin. Key transport infrastructure such as roads, ports and rail require a coordinated approach from both Federal and State perspectives.

Transport is also a key component of the liveability and economic success of regional South Australia and its attempts to save our environment.

TRANSPORT INVESTMENT IN SOUTH AUSTRALIA

The information in figure 10.1 of the ISA Report relating to the Planned Pipeline of mega projects is telling. Not one of the 19 rail megaprojects is in South Australia. We are aware that this is a significant understatement of relative rail freight and passenger rail investment as there are many other non-mega rail projects in the pipeline in other states.

We are not aware of any South Australian rail freight investment this century and even further back another 20 years. This is despite claiming to be a world leader in reducing carbon pollution when one train load equates to about 80 truck loads.

THE IMPORTANCE OF WHO OWNS INFRASTRUCTURE

When considering the economic and environmental consequences of an integrated transport network the ownership of infrastructure can and does plays an important role in decision making. It distorts objective assessments to achieve the net best economic, environmental and social outcomes.

In South Australia the privatisation of major transport infrastructure progressively since 1976 has made the decision a more fragmented process. Making the 'right decision' in the situation facing South Australia where:

- All our ports are privately owned
    - 8 ports sold to Flinders Ports in 2001
    - Four more ports approved/developed by other owners since 2017, not one rail served despite being bulk commodity ports
- Roads are owned by Federal, State or local government
- Interstate Rail lines owned by Federal Government since 1976, intrastate lines leased to overseas owned private operator since 1995, recently taken over by an Aurizon
- Metropolitan passenger rail privatised in 2018

has made transport decisions considerably more complex and lacks the centralised oversight in one authority that is essential to optimise infrastructure decisions. The multiple infrastructure ownership

encourages decisions to become compartmentalised, and, particularly in the case of both ports and rail freight, leaves South Australia in a situation where the State has less opportunity to learn and retain the necessary skills and culture for cross modal transport decision making.

GOVERNMENT RESPONSIBILITY

Private ownership and private responsibility for upkeep of supply chain infrastructure is creating a situation where State or Federal funding of this infrastructure is seen as not being a government responsibility even if it the best outcome when compared with funding government owned infrastructure. In South Australia this applies widely to port development and funding of rail infrastructure compared to roads. This situation is resulting in sub optimal decisions in both economic and environmental terms. Rail freight is declining and heavy road freight is increasing despite its obvious negative impacts on:

- multiple environmental pollution issues
- safety
- road capacity in regional areas
- major road damage caused by heavy vehicles creating an increasing maintenance backlog
- capacity of metropolitan Adelaide roads e.g., SE Freeway and route to Port Adelaide,
- investment in the Melbourne/Adelaide rail route which is the only section of the national rail network that cannot accommodate double stacking of containers
- justified government investment in one port being compromised by objections by an owner of a competing port on one element of the port's activity

If the Federal or State Government is not prepared to take back ownership and development and maintenance of the state's non ARTC rail tracks then it needs to more seriously consider financially supporting rail track maintenance where the costs of road maintenance [and carbon outputs] justify such funding. Experience to date suggests that private ownership of rail tracks appears to be a deterrent to above rail competition.

REGIONAL SOUTH AUSTRALIA

Compared to other mainland states South Australia's regional centres are poorly served by transport infrastructure. Passenger rail investments are occurring in all other mainland states. While we appreciate that South Australia's lower population is a factor and ISA has expressed concerns about the higher cost of serving smaller communities, we consider that planned regional development of a lower number of key regions such as:

- The South East [supports towns on route such as Murray Bridge and Tailem Bend].
- Riverland, with its cluster of towns
- Mid North [Gladstone, Crystal Brook]
- Port Augusta/Whyalla/Port Pirie
- Port Lincoln

could and should be served by both freight and passenger rail. All have rail lines that are either in use or could be reinstated. This would help support the retention of the much-needed population growth combined with targeted industrial and economic development best suited to each area. Such

growth would then justify medical, schooling and other requirements of a sustainable community. All regional areas are currently starved of both a workforce and accommodation. Passenger rail also offers better options than buses for the needs of disabled people and carriage of movement aiding devices.

In the case of Eyre Peninsula, we believe that the isolated rail system needs to be connected to the main interstate line between Kimba with Whyalla.

STATE BORDERS---The DOTTED LINE SYNDROME

More recognition needs to be given of the proximity of areas of bordering states to logical distance related supply chain destinations e.g.

- Lower South East of South Australia proximity to Portland as opposed to Port Adelaide
- Western Victorian Mallee region proximity to Port Adelaide compared to any Victorian ports [260 km v's 580 km at the SA/Vic border], or even Port Pirie in the case of some exports.
- Broken Hill proximity to Adelaide compared to Sydney

ISA and Infrastructure Australia need to influence logical distance related, rather than politically based, supply chain investment and activity.

NEAR METROPOLITAN HOUSING DEVELOPMENT AND PUBLIC TRANSPORT

In order to cater for the proposed population growth over the next 30 years [ISA 20 years] the State Government is identifying or has already rezoned, large tracts of land for residential development.

Given the need to constrain the commuting task and infrastructure cost it is essential that:

- Housing development is not urban sprawl and is more compact in nature while still maintaining liveability. Unfortunately, much of the development at Mount Barker does not reflect such an approach. Sprawl results in significantly higher cost of required associated infrastructure and greater demands on water.
- Public transport, including modern passenger rail, is made easily accessible. Uptake of public transport in greater Adelaide is particularly low.
- In the case of Mount Barker passenger rail can and should be introduced particularly given the prospect of planned growth at Murray Bridge. Public responses clearly indicate a strong preference for passenger rail as opposed to buses. We consider that the long-term cost of trying to utilise road for the growing commuter task, given the complications and unique terrain on this sole route to Adelaide, will both cost more as well as not optimise the uptake of public transport. Interestingly prior to the 1985 takeover of the line by ARTC as freight line there were 160 return trips on the Adelaide/Mt Barker line compared with the 23 scheduled return trips today.

We are concerned that the current proposals for near Adelaide population growth such as Mount Barker, Murray Bridge, Goolwa, Victor Harbour, Roseworthy, Two Wells, Mallala, have not all been preceded by transport corridor planning including passenger rail.

STANDARD AND BROAD GAUGE RAIL IN SOUTH AUSTRALIA

The Adelaide metropolitan passenger rail network is on a broad gauge system and the freight rail system is on the national standard gauge network. This is a relic of past insular thinking and results in major inefficiencies in utilisation and interchangeability on the rail network. Until 1997 the South Australian freight rail system was also on broad gauge with the exception of the isolated Eyre Peninsular system which is still on narrow gauge.

The state has to consider the options of converting all its metropolitan passenger rail systems to standard gauge or utilising some technology that overcomes this impediment.

Converting to standard gauge. Most of the metropolitan broad gauge network has concrete sleepers that are designed to accommodate both gauges by moving one of the rails. There is also a need to modify points and associated network infrastructure. All the existing passenger railcars bogies are set to broad gauge and would need to be adjusted to standard gauge.

Alternative technology. Variable gauge technology [VGT] that has been in use in Europe for decades, can overcome the gauge differences. This involves railcars with bogies that can change gauge at the intersection of different gauge tracks via a gauge changing track linking mechanism. The railcar passes over without having to stop. This alternative requires this type of railcar to be used where passenger rail is proposed on existing standard gauge systems but still retain access to the broad gauge Adelaide Central Station. Such technology would allow these railcars to operate on all the state's existing standard gauge rail freight tracks, for example to Whyalla, Bordertown, Mount Barker, Murray Bridge or reinstated Mallee lines to Pinnaroo and Loxton.

ADELAIDE HILLS -PASSENGER AND FREIGHT

This has been both the subject of a number of reports over the years by consultants as well as serious misinformation put out from State authorities on the cost and transit time of a passenger rail service.

The State Government's decision to double the size of Mount Barker as well as similar decisions to expand the population of other townships in the catchment zone of the SE Freeway has created a major problem for Hills communities. In addition, the total lack of focus on rail freight by both state and Federal Governments in this area has also seem major growth in heavy vehicle freight that is compromising both the capacity and safety of the one and only road access system into Adelaide with its unique steep gradients leading to a busy junction of a narrow major Glen Osmond Road with Cross Road and Portrush Road.

SATAG considers the long term solution must deal with both the growing freight and passenger transport issues with rail as a key focus. In both cases we are dealing with Federal owned infrastructure.

FREIGHT – THE IMPORTANCE OF AN ADELAIDE HILLS RAIL BYPASS

SATAG considers as much freight as possible should be on rail, however the Melbourne/Adelaide line is the weak link in the national rail freight network.

- It is the only section of the network that cannot double stack containers due to the small Adelaide Hills tunnels. This impacts rail's ability to compete with road on all the freight on this route including to Adelaide, Perth and the Northern Territory. A major issue given one train can carry the equivalent of 80 truck loads.
- Importantly 80% of the freight business on this line is Melbourne/Perth freight. This freight suffers delays in transit time due to reloading of containers [double stacking] at Dry Creek
- The Hills gradients require a 50% increase in horsepower and the tight curves reduce freight train speed and increase flange and rail wear.
- Its construction would reduce freight traffic on the Dry Creek to Mallala section of the line [assuming Mallala to be the meeting point of the bypass with the Adelaide/Perth line]., This will provide significant extra capacity for passenger rail to the expanded northern suburbs as proposed under the 30 year plan.

What are the consequences of not having an Adelaide Hills rail Bypass? A whole range of reports have commented on the need for this bypass and the potential impact on South Australia should an Inland Rail project materialise… WELL IT HAS MATERILISED.

"'South Australian Rail Freight Bypass to save the Heart of Adelaide" 2007

'Northlink getting SA on track '2010

- "Effectively remove the majority of rail freight business from the South Australian sector with considerable negative impact on major investments in our state"

- "We must lift our eyes beyond 2025. We must make the right decisions today to make sure we are not lumbered with an inefficient freight rail system beyond 2025 or, worse still, being cut right out of the national freight rail system".

Dr Ken Henry, Secretary of the Federal Treasury. 2010 "Getting it right with cities and infrastructure has significant potential, not just from a pure economic perspective, but also from a social and environmental sustainability perspective. Getting it wrong is likely to be very costly both socially and environmentally"

Similar comments in the KPMG and Tonkin reports including

The very real risk of not creating the Northern Rail Bypass is that Adelaide and wider South Australia becomes forgotten or at best is seen as an 'add on' to the national rail freight network; superseded by Inland Rail, intermodal facilities at Parkes, and the east-west rail corridor.

Further, modal choice becomes even less competitive with a road dominated transport network for freight across the state. Most concerning, it sends a message to current and future investors both locally and globally that we are seemingly 'less connected' than other states and less committed to best positioning ourselves for positive long-term economic growth.

Consequences of use of Inland Rail for Melbourne/Perth rail freight

As this freight constitutes 80% of the freight task on this line the ability of rail to provide a competitive service in terms of both price and frequency for the remaining 20%, the Melbourne/Adelaide rail freight will be totally compromised. **The most likely scenario is that all this freight will revert to road placing even more pressure on this road corridor.** This growth in road freight will be greater than any diversion of heavy road freight from the SE Freeway and city suburbs achieved by the construction of the Adelaide Hills Road Bypass.

PASSENGER RAIL FOR THE ADELAIDE HILLS

A brief outline of how this can be achieved

The SE freeway/Glen Osmond Road route with its extreme limitation, or extra ordinally high cost of increasing capacity, is the only viable road access to the city. SATAG has provided a report that the cost of trying to cater for the combination of growth in commuter demand and heavy freight by road is greater than the cost of a Hills Rail bypass. Admittedly both are expensive projects and will require Federal funding.

The nature of the SE freeway and its frequent delays on the route are clearly reflected in the ultra-low uptake of public transport from this region. Public responses to meetings and Department of Transport feedback have clearly identified commuter preference for passenger rail.

Looking to the future we need to cater for what will be an even greater population growth in this catchment area which will also bring with it increasing heavy vehicle traffic that seriously compromises the capacity and safety of the road route due to its steep gradients. Lanes will be blocked even more by slow moving vehicles on the steep gradients.

A passenger rail trial, requested publicly by SATAG in October 2021, to determine transit time on the existing route can easily be conducted by simply using a standard gauge rail car to traverse the equivalent distance. There appears to be a reluctance on the part of both the State and ARTC to accommodate this trial.

To operate a full passenger service on this route the existing standard gauge line can be used by:

- Upgrading/standardising the very short existing rail line between Mount Barker Junction and the Mount Barker Central Station which has been unused since 1985.
- Developing car/cycle and pedestrian access at the existing unused Adelaide Hills rail stations of Mount Lofty, Aldgate, Bridgewater, Balhannah, Mount Barker Central as well as new locations along the rail line to service Littlehampton, Nairne, Monarto and Heysen Boulevard .
- Utilising new Variable Gauge Technology railcars that can operate on both rail gauges .
- Installing the gauge change mechanism where the different gauges meet.
- Adding any hort bypasses to optimise utilisation. Existing stations have them.
- Use of the existing standard gauge freight line can also provide a 10 or 15 minute passenger rail service from Blackwood to the Adelaide Rail station.

It is important to note that the above are not all additional costs as introduction of passenger rail will significantly reduce the current/future need for buses. A three-railcar set replaces eight buses and only needs one driver.

It is worth noting that pre 1985 the Adelaide Mount Barker line had 160 return journeys a week compared with the current 23 return scheduled per week today.

THE GRAIN INDUSTRY IN SOUTH AUSTRALIA- A MAJOR STATE ISSUE

The grain industry is by far the largest user of transport in South Australia; and, given its largely export focus, is a major user of ports.

Historically this important supply chain was managed by the management of three organisations:

- The South Australian Co-Operative Bulk Handling Ltd [SACBH] later Ausbulk, who owned the storage infrastructure and ship loaders. The Australian Wheat Board [later AWB Ltd]. The Australian Barley Board [later ABB Grain ltd].
- All were grower owned and worked cooperatively on supply chain arrangements from farm to export markets.
- All rail freight assets were initially owned and operated by the Federal Government's SA based Australian National until the sale of its non-interstate assets to USA owned Genessee and Wyoming in 1997.
- All the State owned seven grain Ports were sold to Flinders Ports in 2001.

Up to this point the SA grain industry had a very efficient and well-coordinated supply chain and the state's grain growers enjoyed the lowest handling cost structures in the country along with the similarly structured West Australian grain industry.

What happened then?

The Federal government removed the AWB's sole export rights and sold its assets Australia wide to its biggest critic and competitor US based Cargill Grain, the world's biggest grain trader.

ABB's sole export rights were removed.

Control of the SA grain industry was handed to Grain Producers SA [GPSA], a grower committee.

The development of the new Outer Harbour grain terminal with a two km rail loop, 2,500 tph rail discharge and 2,500 tph ship loading rate [initiated and commenced by Ausbulk] was completed.

GPSA [presumably with the agreement of the State Government] removed control of the storage system from Ausbulk and gave it to ABB Grain, a grain marketer not a storage system operator.

After three years ABB Grain increased grain handling charges, we understand by about 40%, and even imposed a drought levy in a drought year. Note the SACBH/Ausbulk pricing policy since its inception in 1955 was based on five year average harvest levels so that reduced income in drought years was offset by retained surpluses in above average years.

Unhappy with the higher handling charges GPSA then decided to sell the now ABB Grain port and country silo assets to Canadian owned grain marketer Viterra in 2009 [note Canada is Australia's biggest competitor in the world grain market since the introduction of the EEC farm subsidies dramatically increased grain production in Europe forcing it's focus onto Pacific rim markets]. Viterra on sold to Glencore Agriculture who recently on sold to Bunge.

Still unhappy with Viterra handling charges GPSA supported development of TPorts 3,500 tonne self-unloader port operation at Cowell to avoid high handing charges of Viterra. TPorts claimed to be the first grain self -unloader operation in SA and its ship loading rate to be equal to SE Australian grain ports when in fact a 15,000 DWT self-unloader was trialled in SA in 1990 and the ship-loading rates at Port Lincoln, Port Giles and Outer Harbour are about five times faster than the TPort self -unloader operation and can operate on days when high waves prevent the Tport operation. The financial consequences on shipping costs of slow loading are significant.

We now have Tport ship-loading facilities at Cowell and Wallaroo [next to the Viterra facility]. Cargill have a portable ship loading facility at the shallow berth 20 at Inner Harbour that is not rail served can and only load at a maximum of half the rate of the Outer Harbor facility and can only fully load about 35,000 dwt vessels due to draft restrictions. The State Government also approved a grain port at Tumby Bay that is not rail served.

The Mallee rail lines ceased operations in 2015, based partly on a seriously over estimated cost of $700 million to retain rail operations. The Eyre Peninsula rail lines ceased operation in 2019.

The result in South Australia

- South Australian country roads are being seriously impacted by millions of tonnes of previously rail transported grain now carried in trucks operating at maximum axle weights creating a major backlog of road maintenance. 60 trucks per train load.
- Tens of thousands of truckloads of grain using the SE Freeway and suburban routes destined for Port Adelaide and Outer Harbour.
- Tens of thousands of extra truckloads of grain travelling through Port Lincoln
- The general community paying for road damage due to inadequate cost recovery of additional and unnecessary grain transport by road
- Carbon emission levels increased dramatically in a state that is spending billions of dollars to generate clean emission free energy.
- The State Government approval of the four new non rail served ports seriously undermines the business of both Flinders Ports and the private rail operator. Both these organisations acquired the assets in good faith. A very poor message to prospective investors in the State.

Compare this with Western Australia

- The still grower owned Western Australia Co-operative Bulk Handling Ltd. [CBH] management controls the grain industry supply chain.
  - It has the lowest grain handling charges in Australia, more than 50% lower than in SA. Prior to all the above SA and WA charges were near identical.
  - It has invested further in rail transport of grain and has attracted funding for this from both Federal and State Governments.
  - It owns a very large fleet of rail grain wagons and locomotives.
  - It still only operates four grain ports despite having grain production more than twice that of SA. This provides economies of scale at each port.
  - It is directly involved in international grain marketing providing essential grain market intelligence. This also incorporates shipping intelligence and knowledge.

The result in Western Australia

- Growers are receiving significantly more for their grain than SA growers.
- The general community is not having to fund excessive non recovered road maintenance
- Communities are not faced with massive increases in grain trucking activities.
- Their state government has taken a positive role in a very important industry.

WITH EXPERIENCE AND OBJECTIVITY WE CAN MITIGATE THE MISTAKES THAT ARE UNIQUE TO SOUTH AUSTRALIA.

CONCLUSION

One very obvious observation is that every mainland state except South Australia is putting more focus on rail as well as obtaining significant Federal funding in the process. Privatisation of elements of the supply chain should not be an escape from responsibility.

On behalf of the SATAG committee

John Hill, Chair [redacted]

Transport Action Network

Attention: Strategy Team
Infrastructure SA
infrastructure@sa.gov.au

13 November 2023

Response to the Infrastructure SA Discussion Paper

Thank you for the opportunity to respond to the Infrastructure SA Discussion Paper.

The Transport Action Network (TAN) comprises community organisations, active and public transport advocacy groups, urban and transport planners, practitioners, and researchers concerned for the future of sustainable transport and land use integration in South Australia.

Network participants have reviewed the Infrastructure SA Discussion Paper with a specific concern for land use and transport integration. As part of our submission, we have attached TAN's Paper *Greater Adelaide Public Transport: A Network for 21st Century Challenges*. While acknowledging the need for significant improvements to active and public transport in regional centres, TAN's Paper focuses on transport proposals related to the development of Greater Adelaide over the next thirty years.

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Response to the Infrastructure SA Discussion Paper

The Discussion Paper rightly points out the role active and public transport can play in reducing GHG emissions, easing traffic congestion, enhancing equity, and significantly improving personal and environmental health and social cohesion.

Given that role, TAN is concerned that Infrastructure SA does not envisage significant investment in public or active transport infrastructure over the next 20 years. Perth, Brisbane, Sydney, and Melbourne have made and/or are making substantial investments in active transport infrastructure and public transport infrastructure and services. These are the Capital Cities that have grown at a significantly greater rate than Adelaide (or Hobart) over the past 50 years.[i]

Public Transport

TAN has responded to the question *How can we improve public transport services across Adelaide and outer metropolitan areas to encourage greater patronage?*

Our paper *Greater Adelaide Public Transport: A Network for 21st Century Challenges,* attached, provides a suite of proposals for building public transport patronage through service and fare structure improvements across Greater Adelaide. We also understand that improving services and the overall efficiency of the system will require investment to reinstate existing infrastructure and to build new infrastructure.

We agree that a comprehensive review of the Greater Adelaide bus network is required and it should include access to and conditions at stops and interchanges. That review must be followed up with ongoing evaluations of the network to ensure changes are meeting the needs of passengers and *growing patronage* (see TAN's paper p.35). We agree the road network should be optimised for bus services. This means expanding bus priority lanes across the road network particularly to major service centres on cross suburban routes and on routes that feed into rather than compete with train services.

Now is the moment to plan for the heavy and light rail infrastructure that will serve Greater Adelaide and South Australia into the future. Metropolitan and City of Adelaide strategies and plans have identified the need to link the northern and southern rail lines to improve the efficiency of the rail network.[ii] In its 2020 Strategy, Infrastructure SA noted that Adelaide Railway Station places a constraint on rail operations and noted an underground loop linking the northern and southern rail lines would need to be investigated at some point.[iii] TAN makes the case in the attached Paper (see Section 4) that we need to start that investigation as soon as possible. It will take some years to complete a feasibility study and prepare any application to secure infrastructure funding from the Federal Government. Now is the time to start planning for this investment so that we are well-positioned to build on the skills and expertise developed during the north-south corridor project.

Adelaide's heavy rail network continues to be seriously compromised by poor land use decisions with high intensity uses such as shopping centres being located at a distance from rather than integrated with stops and stations. In recent years, low value land uses such as car parking have been prioritised adjacent to train stations (and bus interchanges) placing an impost on public finances to supply parking,

squandering opportunities to capture value, facilitating urban sprawl, and rendering access by active transport and personal mobility devices difficult and dangerous.

We recommend:

- a feasibility study into linking the northern and southern rail lines via an underground CBD loop,
- securing rail corridors to serve anticipated growth areas,
- investigating a light rail route to Adelaide Airport via Keswick creek and re-committing to trams that serve inner and middle suburbs to improve access and liveability in these localities, and
- investigating re-purposing large scale carparking at train stations and bus interchanges. This could include public private partnerships to underground car parking and intensify land uses to maximise the return on this high value land.

Decarbonisation

The Discussion Paper notes that the transport sector is responsible for the greatest proportion of GHG emissions at 29% of all emissions. Australia's transport sector GHG emissions are forecast to rise over the next decade before they begin to fall sometime in the mid to late 2030s.[iv]

The Infrastructure SA Discussion Paper asks, *What are the most significant challenges for decarbonising transport and how do we address them?*

The short answer to this question is 'the failure to think beyond the private motor vehicle for passenger (and freight) transport is the most significant challenge and threat to decarbonising transport.'

The global transition to electric vehicles is already underway and will reduce, if not eliminate, operational transport sector GHG emissions in the latter part of this Century. However, electric vehicles are not a 'silver bullet.' The transition will take decades and they do not address the broader economic, social, and environmental issues of our existing transport system (see TAN paper pp.8-12).

E-Bikes, e-Scooters and other Personal Mobility Devices (PMDs) are at the forefront of changes in how Australians travel.[v] These vehicles have a role to play as feeder modes to public transport and they are also changing the terrains and distances people can travel without relying on a car. When people do need a car, share vehicles will play an increasing role. Adelaide is slowly following interstate trends with an increase in the availability and use of share vehicles. It is likely that cosmopolitan millennials, interstate visitors and environmentally conscious householders will push the share vehicle trend as part of a shift to mixed- or multi-modality. [vi]

The infrastructure requirements for cycling and micro-mobility (including eScooters and PMDs) need to be addressed by Infrastructure SA. Brisbane, Melbourne, Perth, and Sydney have submitted applications to Infrastructure Australia for Active Transport infrastructure funding.[vii] To remain an attractive place to live, particularly for highly educated, skilled workers, South Australia would do well to start investing in infrastructure that facilitates the use of these modes.

It is not appropriate or possible to leave network planning for these modes to local governments. Councils must be involved in network planning but they are not the relevant level of government to develop metropolitan wide cycling/micro-mobility routes and establish the infrastructure they require.

Further, the Department of Infrastructure and Transport (DIT) has a fundamental role in ensuring cycling network connectivity and only DIT is empowered to ensure safe, direct, convenient access across major roads.

We recommend:

- including cycling and micro-mobility infrastructure as a high priority in the next 20-year SA Infrastructure Strategy.

In terms of public transport and decarbonisation, TAN is concerned that recent experimentation with hydrogen trains and buses will create fragmentation of the network and, depending on the expertise required for the different technologies, could lead to increased costs and network inefficiencies.

Addressing climate change while ensuring well-functioning, productive, equitable regions requires taking steps now to facilitate a shift away from rather than reproducing an unsustainable transport status quo.

Active Transport

The Discussion Paper notes the health benefits of walking and cycling. It also notes the challenge of ballooning health budgets and the need to re-orient health infrastructure and service provision. However, Infrastructure SA has not 'joined the dots' and grasped the potential to reduce health infrastructure and services costs with primary health care. The TAN paper notes the high return on investments into walking and cycling (p.11).

We have addressed the need for cycling infrastructure in the previous section so our focus now turns to walking infrastructure. Footpaths are essential to 'walking for transport' and in many local government areas there are either no footpaths at all or footpaths have only been formed on one side of the street. Further, few footpaths across Greater Adelaide or in regional centres are disability access compliant and few are wide enough for people to walk side by side. In larger, local government areas there is a significant backlog of 30 or 40 years for footpath maintenance and renewal. Low quality footpaths in new housing estates places an additional burden on Councils to renew footpaths earlier than should be required.

Many local governments do not have the necessary resources to form new footpaths or maintain existing pedestrian infrastructure. Lack of pedestrian access across main roads whether to reach public transport stops or key services undermines walking as an active form of transport. A warming climate will make walking for transport more difficult unless there is significantly greater emphasis on greening streets in our cities and towns.

We recommend:

- the next 20 year Infrastructure SA Strategy include:

- a requirement for a comprehensive review of footpath conditions across Greater Adelaide and regional centres (many local governments will have this information in their asset management plans),
- identify an ongoing investment strategy to assist local governments, particularly those in middle and outer suburbs and regional towns, to systematically upgrade footpaths, and
- a requirement to identify poor walking connections across road infrastructure and develop and implement a program to improve connectivity at these points.

Final Observations

Infrastructure SA constitutes public transport users as either commuters or those with 'limited choice.' These stereotypes are no longer (if they ever were) fit for purpose. There is growing recognition of and research into multi-modality although South Australian transport data collection methods are not equipped to capture most journeys or the diversity of modes of transport people use.

Mixed modes or multi-modality (i.e., people using a variety of modes across a given time-period) have long been a feature of transport. However, the focus on single modes or single journey types in our data collection has made active and micro-modes (e.g., skateboarding) as well as journeys to non-work destinations largely invisible. Research into Mobility as a Service has helped direct attention to multi-modality and this needs to be understood in the South Australian context while planning our future urban form.

Transport infrastructure decisions are being made with inadequate data and this is leading to sub-optimal transport outcomes. A rolling household travel survey can provide base line travel data for use of active and public transport and capture changes in use to determine whether targets are being met.

We recommend:

- the next 20 year Infrastructure SA Strategy include investment in transport data collection that covers a broader range of journeys and diversity of modes.

Finally, it is not clear why Infrastructure SA has produced their Discussion Paper ahead of the development of the Greater Adelaide Regional Plan (GARP). In fact, it appears that Infrastructure SA and the State Planning Commission have not engaged with each other in developing their respective Discussion Papers given they each rely on different population forecasts. This serious misalignment on such a fundamental factor as population raises questions about how well coordinated State Government agencies are in the development of policy and strategy.

Further, there is no explanation of whether and how Infrastructure SA has consulted with the raft of relevant state government agencies (e.g., health, education, housing) when generating the Discussion Paper. Although the Paper speaks of the challenges faced in areas such as health, education, housing, and public transport, it does not provide insight into the scale and distribution of existing infrastructure or how its proposals for the future will relate to existing infrastructure.

[i] Australian Bureau of Statistics (2023) 50 years of capital city population change: An overview of Australia's capital city population change between 1971 and 2021. https://www.abs.gov.au/articles/50-years-capital-city-population-change

[ii] For example, South Australia Planning Review (1992) 2020 Vision: A Planning Strategy for Metropolitan Adelaide, Adelaide City Council (2012) Smart Move: The City of Adelaide's Transport and Movement Strategy 2012-22. Adelaide.

[iii] Infrastructure SA (2020). *20 Year State Infrastructure Strategy*. Infrastructure SA: Adelaide p. 125

[iv] DCCEEW (2022) Australia's Emissions Projections - 2022. Canberra, Page 9: DCCEEW; DCCEEW (2023) National Electric Vehicle Strategy. Canberra: DCCEEW

[v] https://www.racv.com.au/royalauto/transport/cycling/bike-sales-trends-victoria.html, https://bicyclenetwork.com.au/newsroom/2023/04/27/australias-ev-strategy-misses-the-turnoff-for-rapid-climate-results/

[vi] Groth, S., Hunecke, M., & Wittowsky, D. (2021). Middle-class, cosmopolitans and precariat among Millennials between automobility and multimodality. *Transportation Research Interdisciplinary Perspectives*, *12*, 100467.

[vii] https://www.infrastructureaustralia.gov.au/search-infrastructure-prioritylist?nid=&search_api_fulltext_db=cycling

Transport Action Network

Greater Adelaide Public Transport:
A Network for 21st Century Challenges
2023

Tom Wilson and Jennifer Bonham PhD
for the
Transport Action Network

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1. Executive Summary

The Greater Adelaide Region needs an **integrated land use and transport plan** to meet the challenges of housing affordability, population health, social equity, environmental sustainability, and economic development. The future is multimodality where people use a variety of modes of transport across a day, week, month, or year. Currently, we do not have data that readily captures multimodality.

This Paper focuses on public transport forming the backbone of a vibrant, equitable, and prosperous region. It conceptualises public transport infrastructure and services as a *network*, not a system, to emphasise movement from anywhere to anywhere across Greater Adelaide with changes in direction enabled at key transfer and activity nodes.

The Paper offers a range of proposals for improved public transport in both newly developing and established areas across Greater Adelaide.

TAN's foremost ask is that public and active transport planning forms a central component of the new Greater Adelaide Regional Plan.

Most transformational amongst TAN recommendations is the connection of the north and south rail lines and the creation of several new CBD stations via an Underground City Rail Loop. These interventions are considered fundamental to improving the efficiency, accessibility, service frequency and patronage of the Adelaide heavy rail lines and, by extension, would greatly enhance the operation of the entire public transport network. As a priority, we recommend developing the case for this project and preparing an application for Federal Government infrastructure funding.

We outline a variety of proposed requirements for heavy rail, light rail/tram, and bus services in newly developing and established areas, including expanding Adelaide Metro services into towns and communities which form part of the Greater Adelaide Region.

As localities flagged for significant future growth, we propose reinstating rail services in the outer north-west to Riverlea, Virginia and Two Wells and in the outer north-east from Gawler to Concordia, Roseworthy, and the Barossa. We propose an urgent trial of a reinstated rail service to Mt Barker with an extension to Murray Bridge in the longer term, extension of the Seaford line to Sellicks Beach, and in the longer term, investigation of extensions from both Sellicks Beach and Flinders University.

In the near term, we recommend investigating light rail to the airport via Keswick Creek and, in the longer term, investigating conversion of the Outer Harbor and Grange heavy rail to light rail to enable greater long-term expansion.

Improvements to bus services include implementing peak hour bus priority lanes, extending the operating hours of Go Zone services, and implementing or increasing services that connect town centres.

We anticipate all public transport services to be supported by walkable neighbourhoods and integration into local and metropolitan cycling/micro-mobility networks.

The Federal Government's commitment to rejuvenating Australia's rail network and its renewed focus on Cities and Suburbs has created the right conditions for public and active transport plans that create a lasting positive legacy for Greater Adelaide.

Priority recommendations:

- Conceptualise and plan for public transport as an anywhere-to-anywhere network.
- Embed public transport in the Greater Adelaide Regional Plan, Infrastructure SA Plan, and Green Energy Transition Plan.
- Commence analysis, consultation, planning, and seeking funding for underground CBD loop.
- Commence trial of the Mt Barker line.
- Secure rail corridors to areas identified for new development including Sellicks Beach, Concordia, and Two Wells.
- Integrate safe, convenient walking and cycling routes with existing and future train stations and public transport interchanges.
- Progressively expand bus priority lanes on arterial roads and extend Go Zone network and operating hours.
- Implement a fairer fare structure and expand Adelaide Metro across the Greater Adelaide Region.
- Investigate light rail via Keswick Creek to the airport.

2. Planning for the Growth of Greater Adelaide

The challenges we face in terms of environmental sustainability, equity within and across generations, housing supply and affordability, aging of the population, personal health, amenity, liveability, attracting industry investment, and retaining a skilled workforce all demand a sophisticated approach to guiding the development of Greater Adelaide. The location of new development, whether within the established urban footprint, in greenfield sites or regional centres, requires judicious decision making. It is wise to augment populations in existing centres and ensure any new housing estates have the threshold populations required to support local services from the outset of occupancy and avoid additional or longer journeys. Any proposed development requires close alignment with sustainable forms of transport so that people can move safely and efficiently in their local areas by active transport while maintaining public transport access to opportunities across the broader region.

Since the Metropolitan Adelaide Plan was adopted in 1962, Adelaide has been developed as a low density, dispersed metropolis. This dispersed settlement was to be facilitated by a network of motorways and cloverleaf interchanges according to the 1967 Metropolitan Adelaide Transportation Study (MATS). The public transport components of MATS were largely ignored in the subsequent debates over the Study and almost lost to history when the motorway components of MATS were rejected by Adelaide residents. However, from the mid-1990s, variations of the motorways and ring routes envisaged in MATS have been designed, funded, and constructed but the Public Transport projects have been somewhat overlooked.

South Australians have demonstrated their commitment to using quality public transport with a resurgence in light rail patronage after the upgrade of the Glenelg line and on-going high patronage of the O-Bahn. Public transport patronage peaked at 76.1million in 2018/19 and slumped during the COVID pandemic (commencing early 2020) as people worked from home or changed modes.[1]

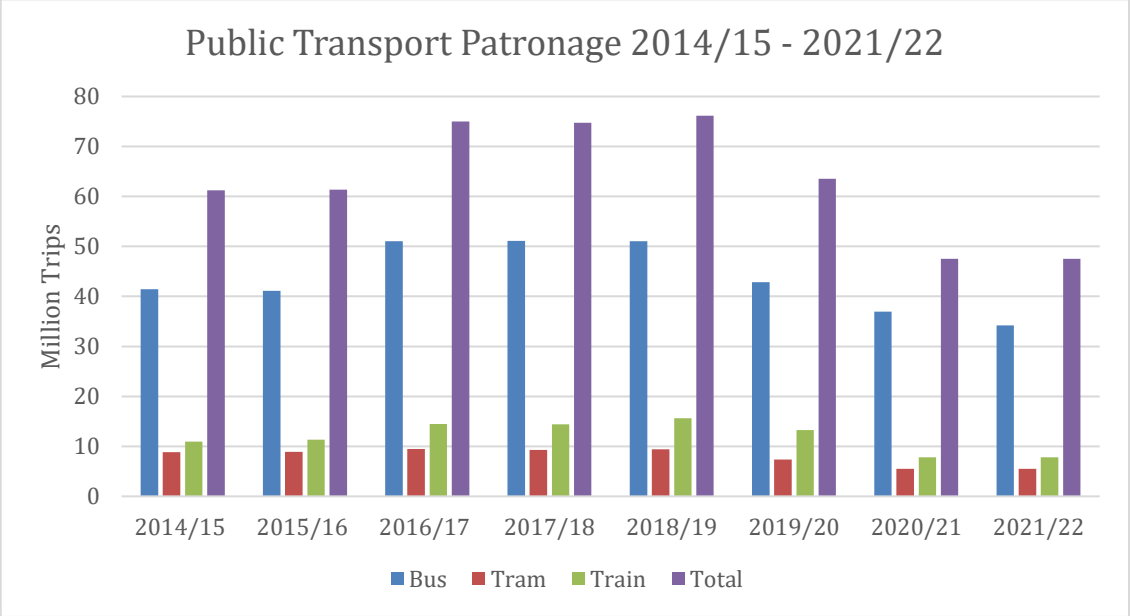

Figure 1. Data Sources: DIT Annual Reports (2014/15-2021/22)

Together the Greater Adelaide Regional Plan and the Passenger Transport Strategy offer a once in a generation opportunity to put both Greater Adelaide and South Australia on a pathway to sustainable transport and land use integration.

Despite our significant concerns about the expanding urban footprint, the announced new land releases and potential development in regional towns offers an opportunity to plan and deliver a comprehensive public transport *network* for Greater Adelaide.

Conceptualising public transport as a *network* anticipates people moving anywhere-to-anywhere across Greater Adelaide with transfer nodes allowing fast, smooth changes in direction. A *network* approach calls for the expansion of Adelaide Metro services and a fairer fare structure. Currently, communities beyond the reach of Adelaide Metro are served by limited frequency, commercially operated bus services with high fares and little to encourage patronage. Councils in these areas are concerned about the risks to their communities of poor public transport services.[2] These risks will be exacerbated if proposed increases in population are not accompanied by significant investment in public transport. The Brisbane and Perth public transport networks stretch for 180 km and 120 km north to south respectively. It is time for the South Australian Government to expand Adelaide Metro to better serve all communities within the Greater Adelaide Region.

TAN's Paper 'Greater Adelaide Public Transport: A Network for the 21st Century' uses a *network* approach to public transport. It anticipates integration of heavy rail, light/rail and bus routes with active transport networks and land use planning practices that locate people in safe, convenient, inclusive comfortable active transport reach of the everyday services and facilities they need. Our paper focuses on heavy rail as a central component of the Greater Adelaide transport network as it can carry people efficiently to employment, education, social and cultural hubs across several stops or the entire metropolitan area.

Although this paper addresses the Greater Adelaide Region, TAN strongly supports further investigations into: investment in regional passenger and freight rail, enhancing intra- and cross- regional bus services, and improving bus services in regional centres.

3. Transport: Why Public Transport Matters

Transport plays a critical role in everything we do. It is one of the most effective platforms to address the environmental, social, and economic challenges facing the Greater Adelaide Region. Share and private vehicles, including driver deferred vehicles, will meet some of Greater Adelaide's future transport needs. However, they cannot serve as the backbone of the Region's long term transport network. A comprehensive public transport network well-integrated with local land uses and active transport (walking, cycling, scooting, and skating) networks is vital to addressing each of these challenges together.

3.1 Environmental Sustainability

Urban heat, stormwater runoff and pollution (air, soil, and water) are widely acknowledged and well understood road transport environmental issues. They are key factors in warning against increasing road capacity with major new road infrastructure and intersection and road widening projects. For the past 30 years, the front of mind environmental issue for transport researchers has been climate change.

The transport sector contributes 19% (93million tonnes (Mt)) of Australia's GHG emissions. These emissions are forecast to increase to over 24% (103Mt) by 2030 and despite starting to fall after that date they will still be above current levels (99Mt) in 2035.[3] Increases in emissions are due to uptake of vehicles such as SUVs and increasing activity of medium and heavy-duty trucks.[4]

While leading the country in reducing electricity sector emissions, South Australia is lagging on transport emissions. South Australia's transport sector emissions are 29% (6.3Mt) of total emissions with passenger vehicles[5] accounting for 45% (2.8Mt) of these emissions.[6]

Fuel efficiency standards, electric and hydrogen powered vehicles, incentive programs for electric and hydrogen fuel cell vehicle uptake, and rollout of electric battery charging stations are part of the solution to reducing transport sector GHG emissions. Renewable energy sources will eventually eliminate vehicle *operating* emissions and, in decades to come, recycling and green manufacturing will reduce vehicle production related emissions. However, the pace of change will not be fast enough for transport to play its role in keeping global temperature increases to 1.5 degrees Celsius. Further, environmental concerns around critical minerals mining and materials such as micro-plastics will need to be addressed to improve the 'green credentials' of renewable energy powered vehicles.

South Australia has over 1.38m cars and sports utility vehicles in its fleet and on current trends this will reach 1.72m by 2050.[7] Only, 0.5% of Australia's vehicle fleet is fully electric and electric vehicles make up 3.8% of annual new vehicle sales.[8] This figure is projected to increase to 23% of new vehicle sales by 2030.[9] The second hand car market, where commercially registered electric vehicles are sold as passenger vehicles, will also assist in the transition to a no-carbon transport fleet. However, even if we had 100%

uptake of electric (or hydrogen fuel cell) vehicles as of today (August 2023), it will take three decades to transition to a renewable energy powered passenger vehicle fleet.[10] Transitioning the vehicle fleet to renewable energy sources is essential but it is an adjunct to, not the centre piece of, a rapid reduction in transport sector GHG emissions.

South Australians want to participate in reducing their GHG emissions. A comprehensive public transport network well-integrated into local neighbourhoods with direct, safe, and amenable walking and cycling routes will be fundamental to reducing GHG emissions and improving the amenity and environmental quality of neighbourhoods. Patronage on the O-Bahn and Glenelg light rail routes are testimony to the keenness of South Australians to use quality public transport services.[11] Enabling more people to catch public transport through improved services, better local access and expanded infrastructure can quickly reduce transport sector GHG emissions.

3.2 Social cohesion, equity, and housing affordability

Public transport services are essential to independent access for all South Australians. About 70% of South Australians are reported to hold a driver's licence but not all licence holders own, have access to, or are able or confident to use a car for all the journeys they want to make.[12] This is particularly so for the 20% of licence holders (250,000 people) in younger and older age cohorts. Older people modify their journeys, such as the distances and times of day they travel, as they age and transition away from driving.[13] Those who have used a mix of modes throughout their lives and have good access to other modes (active and public transport, mobility scooters) are in a better position to relinquish a driver's licence altogether.[14] Younger people, particularly teenagers and older children, are also put at risk through poor transport options. Lack of public transport combined with a built environment that fails to provide for active transport (walking, cycling, scooting, and skating) undermines their independent mobility and the social and spatial skills developed through this independence.[15]

In Australia, it is women who continue to provide the greater share of transport services, 'mobility of care journeys,' for family members, friends and others in their networks who do not have access to reliable transport options.[16] There can be positive dimensions to these 'serve passenger' journeys but as a regular responsibility it often brings additional stress into everyday routines. Driver deferred (aka autonomous) vehicles may, in the long-term, provide access for a greater proportion of the population but this comes with the risk of increasing rather than reducing traffic congestion and requiring additional infrastructure.[17] A comprehensive public transport network well-integrated with active transport networks can ensure independence and equity for the vast majority, of our population.

Quality of public transport varies significantly across Greater Adelaide and the South Australian regions. Providing new housing in outer suburban and peri-urban areas without quality public transport services and integrated active travel networks is untenable. It will continue to create transport disadvantage and exacerbate cost of living and affordability pressures. Savings on lower cost housing is lost if families must buy

second (and as their children grow up third or fourth) cars to meet their transport needs. In 2022, the cost of owning, maintaining, and running a car for Adelaide residents was put at over $17,000.[18] Fuel accounted for 26% of this cost and it will be exacerbated as petrol prices remain high for the foreseeable future and forecast 'oil shocks' create price spikes.[19]

International research indicates millennials (those born from the early 1980s to late 1990s) are more likely to be multimodal (use a range of modes) than older age cohorts. Millennials are reported to be more likely to walk, cycle and use public transport.[20] Of course, millennials are not a homogeneous group and socio-cultural factors have a bearing on transport mode. Further, there is a risk they will become mono-modal, particularly car dependent, as they move through lifecycle stages (e.g., partnering, having children) and moving to locations more affordable for a family, if these locations do not provide the full range of transport options.

Traditional cost benefit analyses (CBA) often report low return on investment for additional public transport services. Using traditional cost benefit analysis for Adelaide's O-Bahn showed a Benefit-Cost ratio of 0.7, yet the O-Bahn has been highly successful. This shows that traditional cost-benefit analysis either needs to be modified or at least not be the only factor in determining the worth of a project. Recent research indicates that the direct value of additional public transport services is significantly greater (4:1) in areas where people are at risk of mobility related social exclusion.[21] Transport CBA's need to include the broader social, and physical and mental health dimensions of transport services and infrastructure projects. Masking the social and individual health expenditures associated with these dimensions distorts the CBA results.

3.3 Economic Sustainability

Infrastructure Australia and the Bureau of Infrastructure and Transport Research Economics (BITRE) have regularly warned of the rising costs of congestion across the Greater Adelaide Region.[22] Infrastructure Australia has acknowledged that congestion cannot be addressed by road building alone but requires significant investment in public and active transport. Research has consistently demonstrated that expanding road capacity increases the rate of traffic growth and the amount of traffic on the overall road network.[23]

The road building 'solution' may ultimately undermine the productivity of our urban environments. As Engineers Australia notes:

> Over 80 per cent of Australia's GDP is produced in cities, while the total transport sector (all modes) represents 7 per cent of GDP (ABS 2018). In this context, the local economy in an urban area may be worth more than any travel time savings from road upgrading.[24]

Road widening has opportunity costs in removing valuable urban land from other uses. In the case of major road projects, it is not only the roadway itself but adjacent land must be taken up to address the impacts of high traffic volumes and speeds. The financial costs of acquiring land and the costs to the community and local economy of displacing businesses and households means road widening is not a viable transport

solution into the future. Property acquisition made up a significant proportion of the costs of widening the Portrush/Magill, Fullarton/Glen Osmond, and Fullarton/Cross Road intersections. In addition, it is well understood that any expansion of the car-based infrastructure induces further car traffic (induced demand), through the perception of easier and quicker travelling amongst those who previously did not use these roads, eventually leading to loss of any short-term time savings and worsening congestion

By contrast, public transport projects can generate broader economic benefits. Clearly, one of these benefits is to increase patronage and move more people into and through a locality with a smaller infrastructure footprint than is possible by road. An SKM study into the Glenelg Tram extension reported a significant increase in daily patronage into, around and through the CBD once completed.[25] Further, a recent study in Melbourne, reported that improvements in heavy rail resulted in uplift benefits for properties within an 800metres of stations: that is, properties within the 800metre radius had a higher value (over 8%) than those in the surrounding area.[26]

The SKM study also identified a significant increase in employment in the CBD tram catchment area. This second point is echoed in a recent international review of the literature that shows with relevant land use policies light rail can increase employment in the catchment corridor with businesses able to improve access for employees by re-locating into these more favourable areas.[27] Employment access benefits have also been demonstrated for heavy rail, including in low density urban areas.[28]

The South Australian Economic Statement identifies four key workforce challenges in South Australia.[29] Two of these are directly related to transport.

- A *spatial mismatch* between the location of available jobs and willing workers—whether that's in regional parts of South Australia, within Adelaide's suburbs, or the state as a whole.
- The existence of *barriers to participation and utilisation*, particularly for marginalised groups, leading to poorer employment outcomes.

The supply of quality public transport within Greater Adelaide and across regions can connect workers to existing employment hubs and facilitate greater workforce participation by marginalised groups.

Individual rail line improvements are important but it is the extent and quality of the overall network, access to stations and the potential to travel anywhere across the network rather than to a single central destination, that makes services attractive and increases the return on investment.[30]

The health costs associated with sedentary lifestyles have been attributed, in part, to over-reliance on automobile travel. Active transport (walking and cycling) has been demonstrated to have a ROI of 13:1 and 5:1 respectively. The high return on investment for walking (13:1) and cycling (5:1) infrastructure makes the integration of public and active transport a worthwhile investment.[31] As noted in the previous section the health

impacts of transport infrastructure and services need to be included in Cost Benefit Analyses.

We need to ask whether it will be possible to attract or retain a skilled, well-educated workforce in Adelaide if the first thing they must do is buy a car to achieve a modest level of access?

Public Transport for the 21st Century

Overall, Greater Adelaide will lag on goals of prosperity, equity, sustainability, and liveability if we simply substitute electric/hydrogen power for fossil fuel vehicles and plan for the transport status quo. This paper offers proposals for a comprehensive public transport network integrated into walking and wheeling networks to reduce the extent and cost of congestion and provide greater, more equitable access for all people living in and visiting Greater Adelaide. We cannot afford to be inactive or even worse, take counter-productive actions to delay the transition towards socially, environmentally, and economically sustainable transport.

4. 'Doing' Sustainable Land Use and Transport Integration

4.1 'Doing' Integration

'Doing' integration means thinking transport and land use together. It will vary according to: location - whether it is an established or newly developing area, existing and proposed land uses and their relation to each other, existing and proposed modes of transport, the design, construction, and regulation of infrastructure that enables access. Above all, doing integration will be shaped by what we hope to achieve and the people we anticipate serving.

TAN is keen to ensure people can access everyday goods, services, and facilities within easy walking, cycling, scooting, or skating distance from their homes. It would be ideal to access employment, education, social and cultural opportunities close to where people live. Remote access will make more of these opportunities available over time and this will increase the importance of local neighbourhoods. For the foreseeable future, people will still want or need to travel beyond their local area. Quality public transport will be essential for accessing non-local opportunities. Public transport can operate more efficiently than the private car to areas with a high concentration of activities. Following from this, it can reduce the use of private cars and therefore reduce their impact on both those activity centres and local neighbourhoods.

Public transport nodes can also operate as community hubs with local shops and community services located at stations and interchanges. Creating community hubs at public transport nodes reinforces the role of both hub and node. Increasing connectivity between public transport and retail/entertainment centres such as at Elizabeth, Playford and Tea Tree Gully can begin to create genuine community hubs. Public Private Partnerships to underground some car parking and a portion of land for medium density living can put people in closer proximity to the services they need and foster community hubs. Active transport access to community hubs/public transport nodes maintains the amenity of the hub and extends the reach of both public and active transport.

Achieving land use and transport integration means embedding the necessary infrastructure and regulations when planning new developments and ensuring they are delivered. In established suburbs it means retrofitting those suburbs to facilitate public and active transport access. TAN is currently working on a 'doing integration' project. In this paper we have focused on integrating public transport to create a network that ensures people can move anywhere to anywhere.

4.2 Elements of an Efficient Public Transport Network

The Queensland Department of Transport and Main Roads has published a comprehensive guide to Public Transport Network Infrastructure.[32] TAN has adapted a few of their recommended approaches below. These are proposed as guiding principles for further developing Adelaide Metro as a well-functioning and accessible public transport network.

Connectivity

- Network. Transport infrastructure and services should be designed as a network, for efficiency as well as ease of movement across Greater Adelaide. Conceptualising public transport as a network, rather than an A to B system, emphasises movement between key transfer and activity nodes, which enable efficient changes in direction.
- Local. Walking and wheeling (cycling and micro-mobility) infrastructure is inexpensive and provides for deeper connectivity into local neighbourhoods. Personal and environmental benefits of walking and wheeling can only be realised when these modes are prioritised with direct, safe, comfortable, well-shaded and legible routes.

Convenience and Catchment

- Stops and stations are to be conveniently located for pedestrian access – e.g., generally within 400m-500m of homes (origins) and centrally within activity centres (destinations). Patrons may choose to walk longer distances, such as to high-quality rail services, however the intention of the network as-a-whole is to offer a high level of accessibility and fine-grained connectivity.
- Cycling and micro-mobility extend public transport catchment areas and facilitate better access in dispersed suburbs. Secure, conveniently located bike parking at train stations and major bus/tram stops will enable bike access. Public transport services that are only conveniently accessed by car not only encourages car use but also pushes up demand for expensive Park'n'Ride facilities.

Transfers

- Seamless transfers between services are fundamental to network efficiency. Weather protection, comfortable conditions, and short transfer times at key nodes and activity centres make for quality customer experience.

Speed and frequency

- Public transport vehicles *operate most efficiently in their own right of way*. Bus priority lanes, at least during peak hour, will improve the efficiency of the bus network and make it more attractive to shift mode away from the car.
- High service frequencies encourage public transport as it allows people to 'turn up and go,' taking the anxiety out of using public transport, and maximising flexibility for patrons.

Value Capture

- Land use planning at and around train stations and bus interchanges should seek to increase activities and residential opportunities through carefully considered mixed use development. Stations and interchanges need to be designed to seamlessly integrate into surrounding activity spaces.

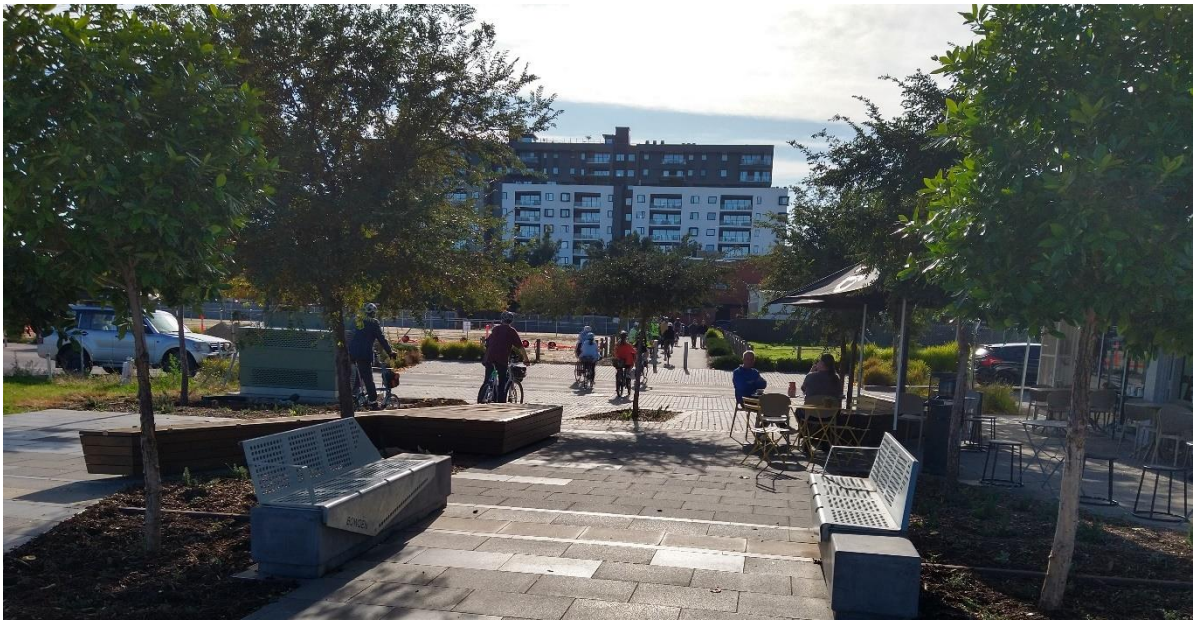

Photo 1: Value Capture, Walkability and Connectivity at Bowden, South Australia (Jennifer Bonham)

Photo 2: Value Capture and Walkability at the tram interchange, Bordeaux, France (Tom Wilson)

5. Reinvigorating Heavy Rail

Train services provide for the outward expansion of urban development more effectively than buses alone. It is essential to identify, secure and maintain suitable corridors for rail into areas subject to urban and regional development in the next 50 years. Regional and interstate railways should be evaluated and secured for new, revived, and realigned services. Hybrid battery/electric powered trains can reduce the cost of converting Adelaide's diesel trains to renewable energy.

Valuing rail users is essential to retaining and increasing heavy rail patronage. In areas where increasing land use intensity is not possible in the short term, the quality of access to stations is essential to maximising patronage.[33] Upgrading stations and station precincts, investing in existing public transport network connectivity and prioritising access for feeder bus services, and investing in safe, direct, and convenient local active transport connectivity represent immediate opportunities to deliver better, more accessible, and more attractive environments and services.

5.1 Central – Underground City Rail Loop (Figure 2)

The entire public transport network can be transformed by connecting the northern and southern lines via an underground CBD loop. This connection has been included in metropolitan Adelaide and City of Adelaide plans and strategies since the 1960s and it is a project that's time has come. Infrastructure SA has acknowledged the functionality and attractiveness of Adelaide's heavy rail network is constrained by the limitations of having only a single, non-centrally located, CBD station.

> The terminus nature of the Adelaide Railway Station puts a natural constraint on the rail network as it limits the number of trains that can be put into service at any one time and results in frequencies of 15–30 minutes for most services…the terminus nature of the Adelaide Railway Station will need to be reviewed with the potential to create a CBD rail loop. While this will provide operational efficiencies, any study should also consider the potential economic benefit of enabling more intensive development of CBD employment precincts when needed, and a shift to greater public transport use in existing intensive employment zones such as the Royal Adelaide Hospital and BioMed City precinct.[34]

The underground loop will improve access across the metropolitan area as well as throughout the CBD. Such important infrastructure projects have occurred in all other Australian mainland capital cities (e.g., Sydney's Underground Loop and new Cross-Harbor North West to South West Line, Melbourne's Underground Loop and Metro 2, and Cross River Rail in Brisbane) as well as Auckland, New Zealand.

Connecting the northern and southern rail lines via an underground city rail connection will have the following **benefits**.

- Significantly reduces train time at the station and associated operating costs allowing for productivity gains with more services per shift.

    - Currently there is up to 8minutes delay on every train as drivers change ends when stopping at the Adelaide Railway Station.

- Addresses suppressed demand for cross metropolitan journeys.
    - Currently, transferring passengers at Adelaide Railway Station must change platforms and can take from 1minute to well over 20 minutes for a connecting train. The average wait times for a sample of north-south connecting services (62 peak and afternoon services) is 12 minutes.
    - In the Underground loop it is likely that trains for several different lines will share the same platforms, following each other through the loop, or stopping on either side of the same Island platforms. In such cases changing between trains will involve virtually no walking (just wait a few minutes) or crossing an island platform (less than one minute's walk).
    - A more attractive rail service can spur more intense development at select suburban stations.

- Enables the creation of several new CBD stations that will:
    - increase access and convenience for passengers,
        - currently people with destinations of more than 10minutes walk from Adelaide Railway Station are less likely to catch the train (see Table 1), and
    - effectively triple the train catchment area and facilitate greater utilisation of trains,
        - currently Adelaide rail patronage is 1/3 of Perth CBD and 1/4 of Brisbane CBD.

- New stations will facilitate interchange with to all other city public transport services.
    - A station near Hindmarsh Square would link with buses on Grenfell Street (including the O-Bahn) and Pulteney Street.
    - A station at Victoria Square would link with the trams and with all King William Street buses.
    - A station at Whitmore Square would link with buses using Morphett Street and Sturt Street.
- Modifying existing Adelaide Station buildings and platforms can facilitate services that do not utilise the underground rail tunnel, such as interstate and regional services, and provide space for other activities.
- Modifying track requirements at Mile End and leading into the Adelaide Railway Station could see land made available for other uses such as a return to parklands.

- Utilising expertise and workforce capacity developed with the Torrens to Darlington (T2D) project and incorporating knowledge developed interstate in the Metro 2 and Cross River Rail projects.

The Time Has Come

Advocacy for this project sits at the intersection of three key factors: the Federal Government's renewed focus on heavy rail, Infrastructure Australia's revised assessment criteria to include Climate Change, and the opportunity to apply for Federal Grant funding for a major project beyond Torrens to Darlington.

An underground loop is estimated to cost $3b - $5b and modern tunnel boring machinery (TBM) now being used extensively internationally can undertake much of the work.

Figure 2: Underground City Rail (Map adapted from SAPPA). Possible routes for an underground loop integrating with buses on Grenfell Street, including the O-Bahn, and existing and potential new tram routes.

Table 1: Access Time Differences: Current vs Underground Loop

Destination/ Service	Seaford, Flinders & Belair Lines (from Showground Station)	Time in Minutes**	Gawler Line (from Ovingham Station)	Time in Minutes**
Adelaide Railway Station	Current	7	Current	6
	Via New Loop	12	Via New Loop	6
Hindmarsh Square*	Current: 7(T) + 18 (WW)	25	Current: 6(T) + 18 (WW)	24
	Current: 7(T) + 8 (WW) + 8 (T/B)	23	Current: 6(T) + 8 (WW) + 8 (T/B)	22
	Via New Loop: 9(T)	9	Via New Loop: 9(T)	9
Victoria Square*	Current: 7(T) + 16(WW)	23	Current: 6(T) + 16(WW)	22
	Current: 7(T) + 4(WW) + 11 (T/B)	22	Current: 6(T) + 4(WW) + 11 (T/B)	21
	Via New Loop: 6(T)	6	Via New Loop: 12(T)	12
Whitmore Square*	Current: 7(T) +23 (WW)	30	Current: 6(T) +23 (WW)	29
	Current: 7(T) + 10(WW) +10 (T/B)	27	Current: 6(T) + 10(WW) +10 (T/B)	26
	Via New Loop: 3(T)	3	Via New Loop: 15(T)	15

Notes: Current – all trains via Mile End; T – Train; WW - Walk and Wait (at lights/for tram or bus); T/B: Tram/Bus

*New Station

**The table uses actual times. Transport planners add weightings to items like walking and waiting that are based on passenger surveys of how annoyed or inconvenienced they are by walking and waiting. These are sometimes double the in-vehicle time.

Possible Routes:

- Trains from the north could dive underground in the vicinity of the rail yards, heading between the University buildings on North Terrace, under Morphett Street, and east beneath North Terrace and integrating with the Adelaide Railway Station underground.
- Trains could then turn to the south from North Terrace to Victoria Square, either via a direct route with a Central CBD station in the vicinity of King William / Rundle Mall / Grenfell Street or looping further to the east with wider coverage with a station in the vicinity of Pulteney Street / Rundle Mall / Hindmarsh Square. Both options would then continue from Victoria Square through the southwestern part of the CBD.
- Trains could then continue underground, emerging to link with the southern lines north of the Showgrounds Station. Trains from the south would follow the same route through the CBD in reverse of the above, linking with the northern lines west of Adelaide Station
- Tunnel boring machines are being used on other Australian undergrounding projects, increasing local knowledge and skills, and addressing issues of 'cut and cover' proposals. Cut and cover involves excavating a trench, covering with a tunnel support structure, and then refilling with excavated material. It is not really feasible in areas with above ground constraints – like buildings and precious parklands.
- The optimal alignment and location of new stations may be subject to constraints relating to the required curvature of the track and availability of suitable land for stations.

  Similar interstate projects are delivered with Federal Funding and South Australia has not sought funding for rail projects for some time. Rail projects will benefit from the new Infrastructure Australia assessment criteria which address climate change.

Photo 3: Heavy rail, Mawson Lakes, South Australia. (Jennifer Bonham)

5.2 Northern Heavy Rail

5.2.1 Virginia, Riverlea, Two Wells and beyond (Figure 3)

Housing construction is well underway at Riverlea and adjacent areas with a current population of approximately 11,000. The 2020 Land Supply Report for Greater Adelaide contemplates capacity for up to 23,000 new dwellings or 53,000 new residents. Currently, services and facilities in the area are limited and it is unlikely to be a significant employment hub in the short- to medium- term.

This area can be served by rail either by:

- Branching from the Gawler Railway at Salisbury and following, at least partially, the interstate railway via Direk and Virginia. This route would have the advantage of providing a link from Riverlea and Two Wells to Salisbury and other potential passenger destinations along the Gawler Line; or
- Branching from the Gawler Railway in the vicinity of Dry Creek and proceeding along the proposed freight corridor to the west of Port Wakefield Road to Virginia. This route would provide a faster link with Adelaide from Riverlea and Two Wells.

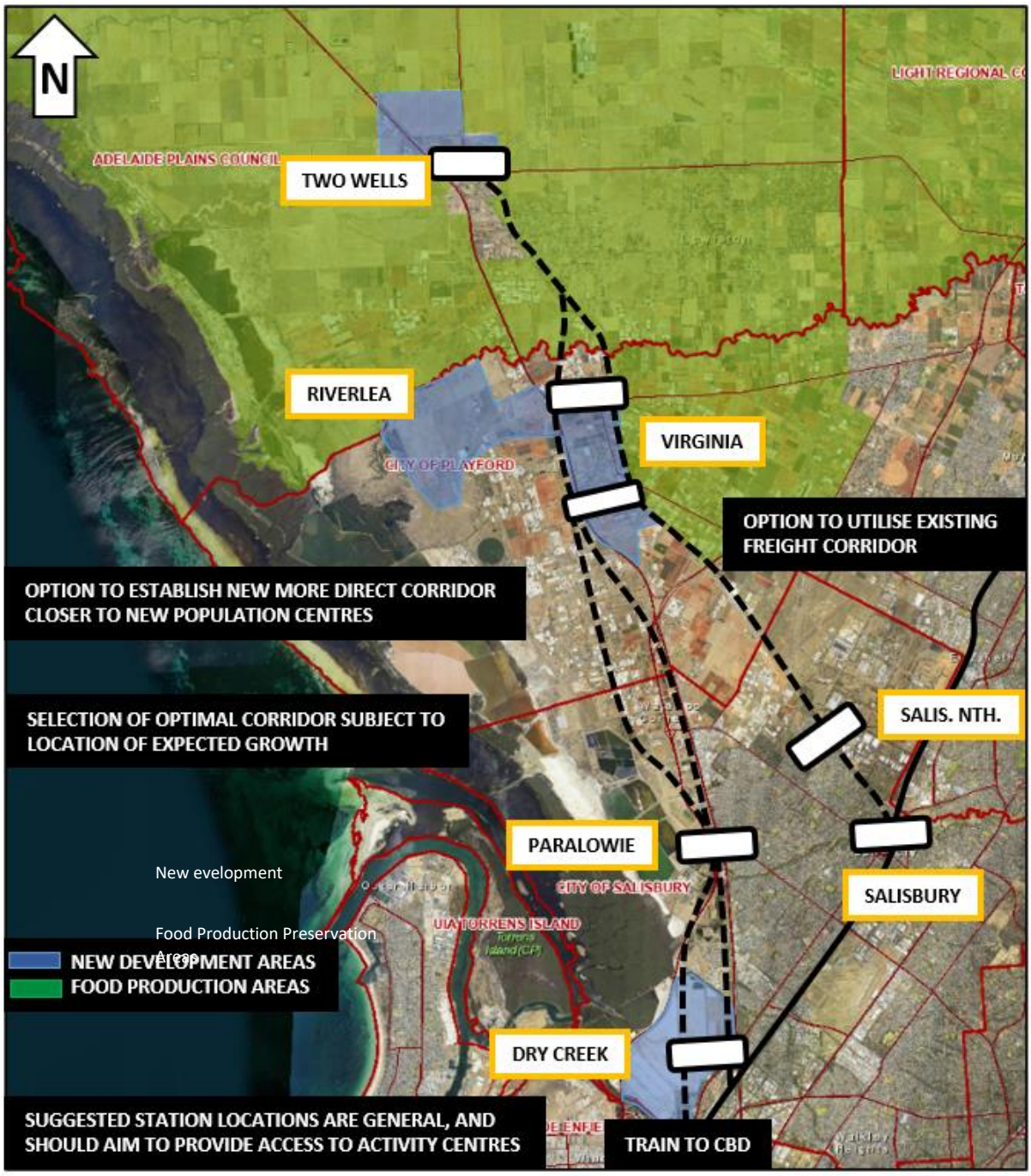

Figure 3: *Virginia, Riverlea, Two Wells and beyond (Map adapted from SAPPA)*

5.2.2 Gawler, Roseworthy, Concordia (Figure 4)

Current population approximately 31,500 – capacity for up to 17,500 new dwellings or 40,000 new residents is contemplated in the 2020 Land Supply Report for Greater Adelaide. Midway between Gawler and Lyndoch, there is a real risk that these towns will be overwhelmed by traffic if retail and community services are not provided in Concordia with first occupancy. If development of Concordia proceeds, it presents a vital opportunity

to create a walkable community hub around the train station with high quality public spaces, and a mix of services and facilities.

Existing disused railways already run through both Roseworthy and Concordia. These lines could be extended to both Concordia and Roseworthy in the shorter-term, with a potential longer-term extension to the major towns of Tanunda and Nuriootpa. Localised alignment improvements to increase the line speed and reduce travel times could be of benefit to the service.

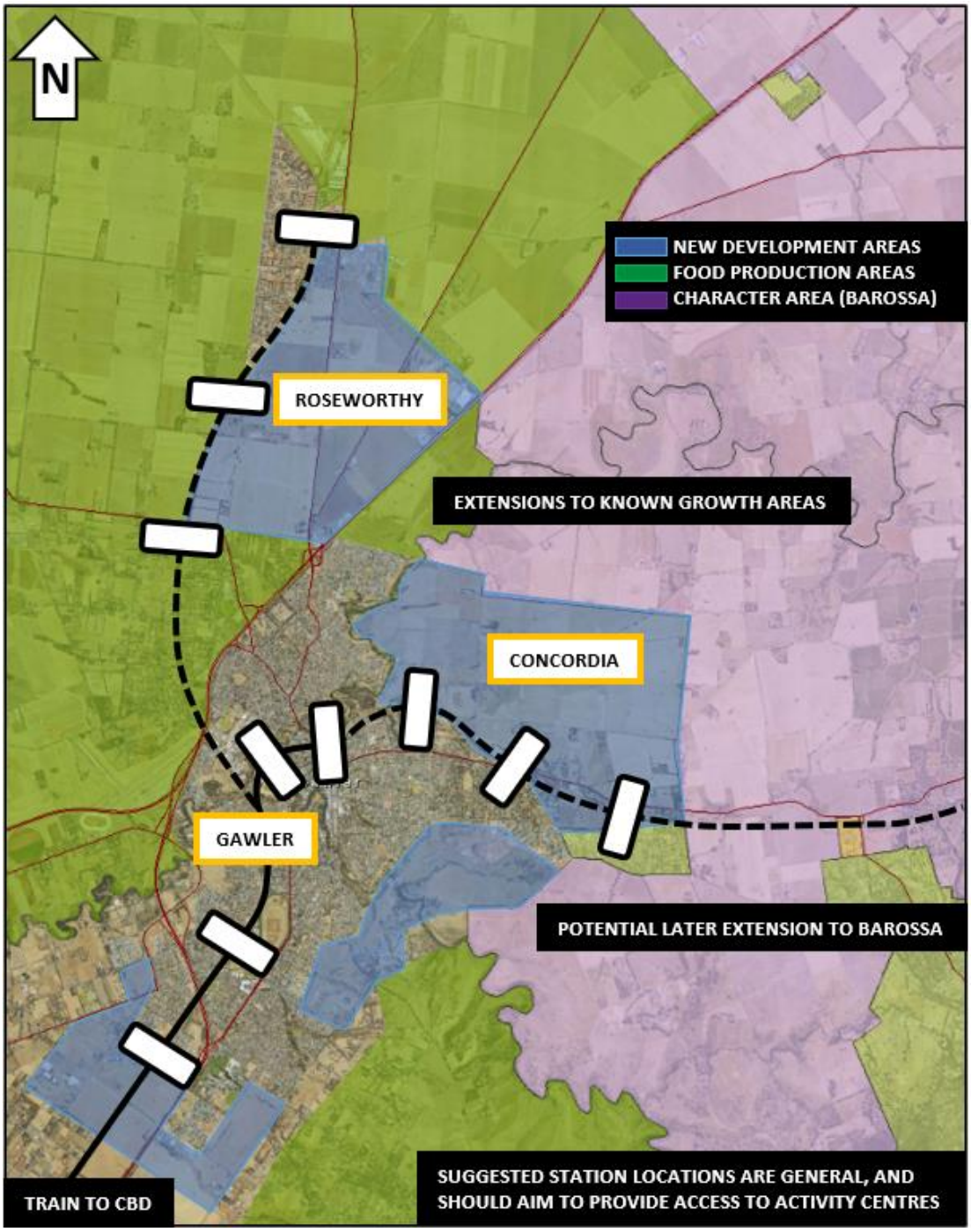

Figure 4: *Gawler, Roseworthy, Concordia* (Map adapted from SAPPA)

5.2.3 Lyndoch, Tanunda, Nuriootpa, Angaston (Figure 5)

The current population in this area is approximately 24,800. Capacity for up to 1,600 new dwellings or 3,800 new residents is contemplated in the 2020 Land Supply Report for Greater Adelaide.

Existing disused railways run through the Barossa as far as Nuriootpa. These lines could potentially be reactivated as-is, or may benefit from some localised alignment improvements to increase the line speed and reduce the number of road crossings required.

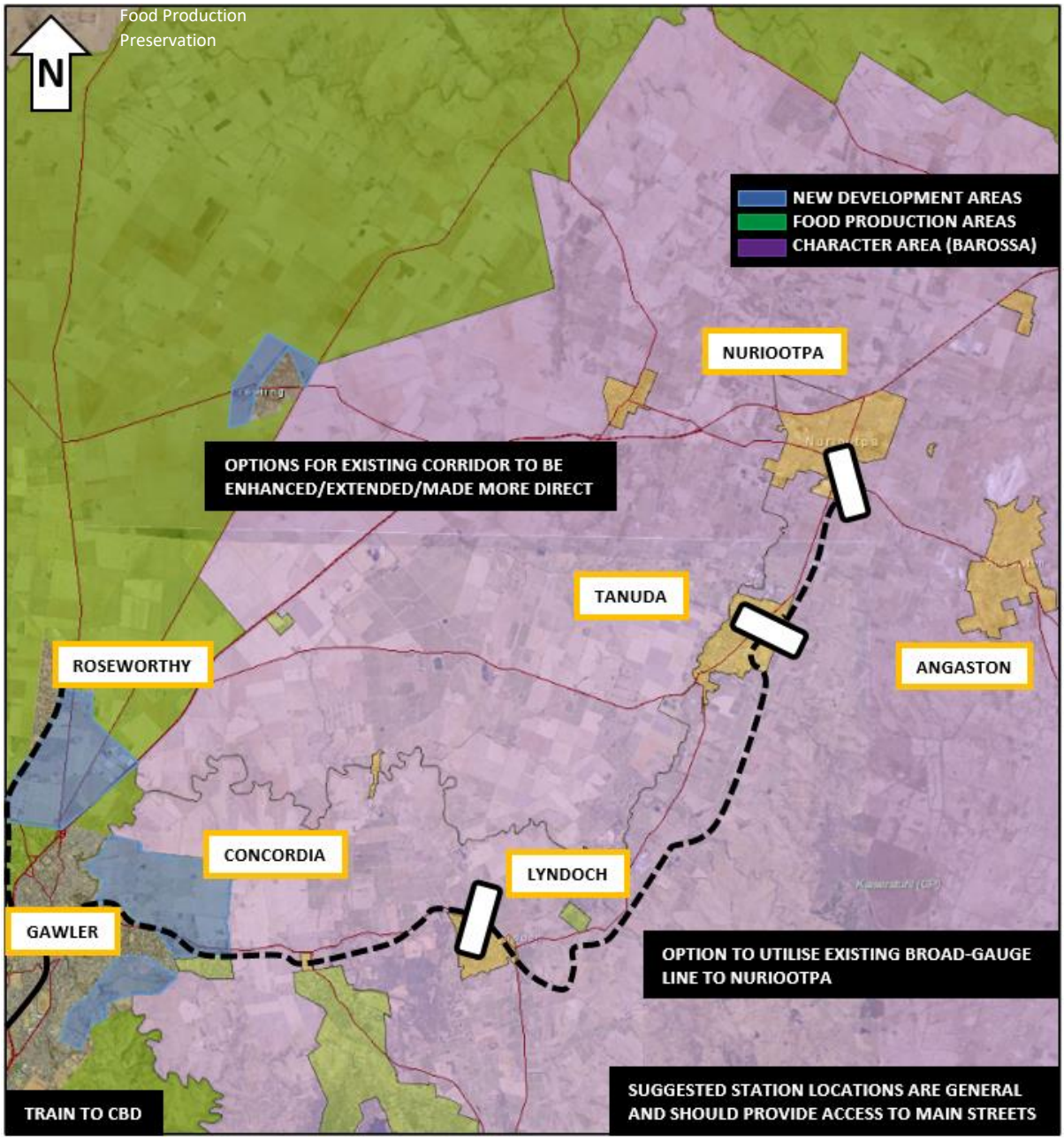

Figure 5: Beyond *Gawler, The Barossa via Concordia* (Map adapted from SAPPA)

5.2.4 Outer Northern Suburbs to LeFevre Peninsula Public Transport for AUKUS Employees

The possibility of providing public transport between outer northern suburbs and the Le Fevre Peninsula in conjunction with the AUKUS Project needs to be investigated. A high frequency bus services could be trialled in the first instance – possibly connecting from the Gawler Railway Line at Dry Creek, Mawson Lakes or Salisbury to the Peninsula. If the service was well patronised, consideration could be given to reinstating passenger rail services between Dry Creek and Port Adelaide.

5.3 Southern Heavy Rail

5.3.1 Adelaide Hills

The current hills population is approximately 80,000. Approximately 50,000 people live along the rail corridor through Aldgate/Stirling, Hahndorf, Nairn, and Mt Barker. The 2020 Land Supply Report for Greater Adelaide contemplates capacity for up to 7,500 new dwellings or 17,000 new residents contemplated in these towns. Growing traffic congestion in the Belair, Blackwood, Eden Hills, and Craigburn Farm areas, competition between cars, bikes, and buses on main roads along with problems associated with road widening means public transport operating on its own right of way makes rail an important future option.

Undertaking a trial of both standard and variable gauge passenger rail to Mount Barker is a priority within this term of Government. Several studies have emphasised the complexity and challenges of serving the growing Adelaide Hills community with quality public transport. Verifying baseline travel times utilising existing rail infrastructure is the essential next step.

Modest, inexpensive modifications to rolling stock and rail infrastructure could be prioritised in the first instance to enable a comprehensive operational trial.[35] Patronage and operational options will take time to fully understand, TAN is recommending a two-year trial of passenger services once initial operational trials have been undertaken.

A reinstated rail service can serve residents travelling both to the CBD and between major townships in the Hills. When combined with an Underground CBD loop, Mt Barker residents would have significantly greater access across the metropolitan area.

Long-term investments into the Adelaide Hills rail network could benefit passenger rail, freight, and The Overland, and could lead to passenger services being expanded along the Adelaide-Melbourne corridor, such as to Murray Bridge.

Investment in Adelaide Hills rail can also address the critical issues of air pollution, road safety and traffic congestion in Hills townships as well as on Glen Osmond Road, Cross Road, Portrush and Hampstead Roads, and the South Eastern Freeway.

Evidence given to the Select Committee on Public and Active Transport indicates that the issues identified in the Infrastructure SA 2022 report *Mount Barker Mass Transit* can be addressed.[36] Along with the initial trial, TAN recommends a comprehensive analysis of long-term rail options to Mount Barker inclusive of scenarios assuming the construction of an Adelaide Hills Freight Rail Bypass, and the subsequent conversion of dual passenger tracks between Adelaide and Belair to a unified gauge.

Upgraded bus services (already proposed) and bus priority lanes including the possibility of tidal flow, remain important irrespective of the train trial - especially along the South Eastern Freeway and Glen Osmond Road. It is understood that bus services are particularly badly affected by congestion along Glen Osmond Road at peak times.

5.3.2 Seaford Line Extension (Figure 6)

The current population between Seaford Station and Sellicks Beach is approximately 28,000. A further 11,000 people reside in McLaren Vale and Willunga with capacity for up to 9,000 new dwellings or 20,700 new residents contemplated in these towns in the 2020 Land Supply Report for Greater Adelaide.

Extending the Seaford Line south is a priority given the significant development occurring in Aldinga and proposed future development at Sellicks Beach. The rail extension will provide rapid transit between Seaford and Aldinga and should integrate with existing bus and bike routes in the area.

The State Government is to be congratulated on securing the rail corridor to Aldinga. It is imperative that they now move to secure a corridor through to Sellicks.

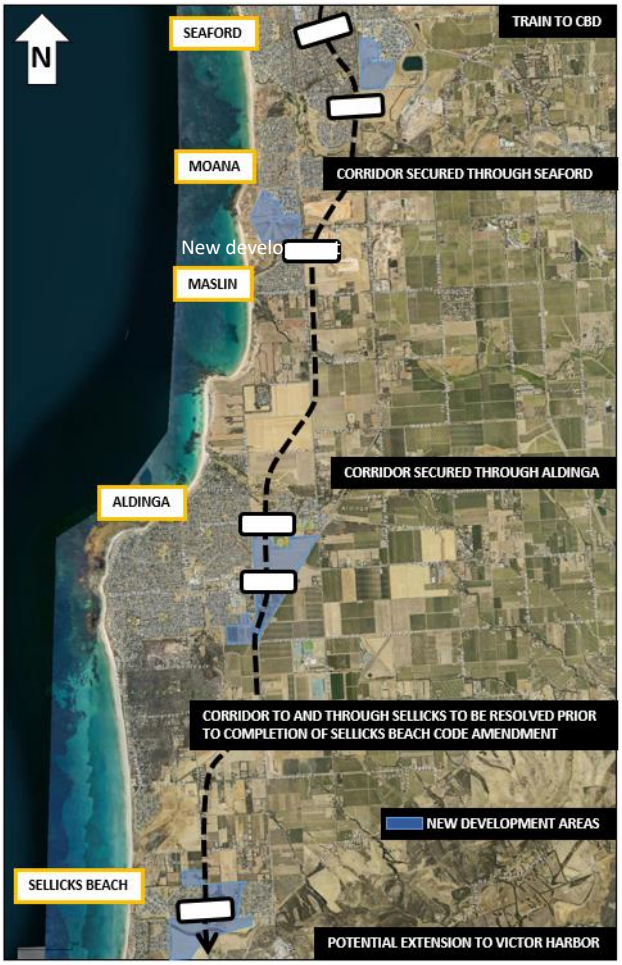

Figure 6: *Extension of the Seaford Line, Aldinga, Sellicks Beach and beyond*(Map adapted from SAPPA)

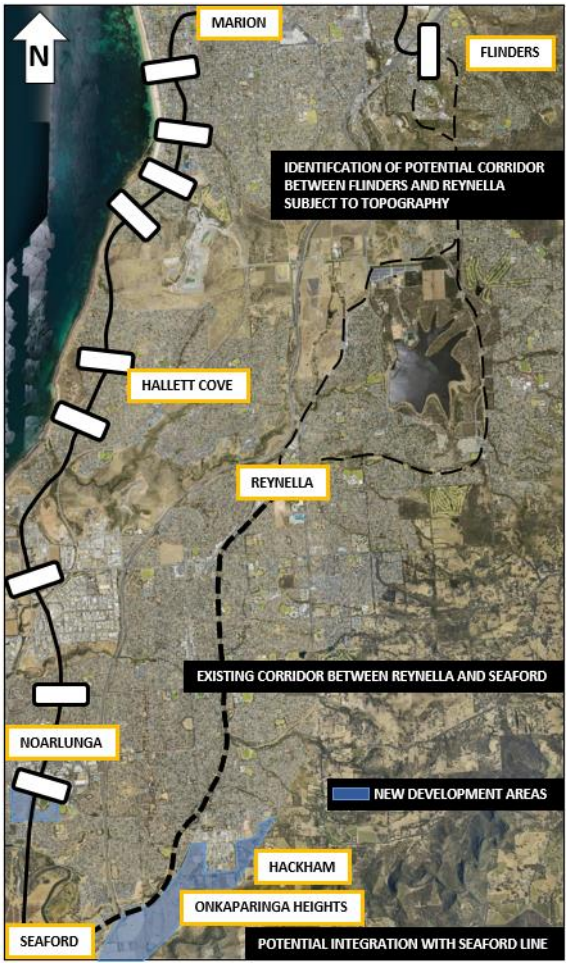

Figure 7: *Investigation into extending the Flinders Line/Reactivation of Willunga Rail Corridor* (Map adapted from SAPPA)

Photo 4: Heavy rail, Seaford, South Australia (Tom Wilson)

5.3.3 Victor Harbor to Goolwa

Current Population 28,500 - capacity for up to 14,000 new dwellings or 32,000 new residents contemplated in the 2020 Land Supply Report for Greater Adelaide.

Planning for the rail extension to Aldinga and beyond to Sellicks must consider the identification and reservation of a corridor for a longer-term extension to Victor Harbor via Sellicks Hill and Hindmarsh Valley. Such a route would be substantially more direct than the old route via Strathalbyn and likely competitive with road travel time.

Provision should also be made in the near future for:

- Regular public transport (buses) from the rail head (whether Seaford or Aldinga) to and within Victor Harbor through to Goolwa.
- Regular public transport along the coast between Victor Harbor and Goolwa.
- Consideration that the above services are provided by Adelaide Metro.

5.3.4 Flinders Line Extension (Figure 7)

The former Willunga railway south of Old Reynella serviced many inland suburbs. The reactivation of the Willunga rail line alignment could be achieved by:

- extending the Flinders Line over or through the escarpment to Old Reynella, then re-joining the original rail corridor south of Old Reynella and as far as Onkaparinga Heights, potentially re-joining the Seaford Line near Seaford Meadows.

The potential route south of Flinders has not been more seriously considered due to the substantial assumed cost of earthworks or tunnelling involved. TAN recommends that a study of a potential route designed for modern lightweight rolling stock be carried out, and that the rail corridor south of Old Reynella be retained for potential future use of such a railway.

6. Re-considering Light Rail/Tram

TAN supports the objectives of the previous AdeLINK plan and recommends the continued investigation of introducing segregated tram and light rail routes on sufficiently wide streets (e.g. CBD, North Adelaide) and where there are existing strategic corridors (e.g. Airport via Keswick Creek).

Light rail's greatest attribute is its adaptability; being able to seamlessly transition from a dedicated corridor to a mixed-street environment, enabling the deployment of light rail directly into commercial centres, high patronage areas, and through otherwise impermeable urban fabric. Whilst dedicated corridors for light rail are preferable where possible, the limited deployment of light-rail into mixed-traffic environments should be seen as a valuable tool to enable enhanced public transport in circumstances where it would otherwise not be feasible (as it currently does in Glenelg). Improving tram technologies that permit a combination of power sources negates the need for an entire route to be serviced by catenary wires. This allows a wireless light-rail solution in a variety of locations, such as through Grange Golf Course, Port Adelaide or along Semaphore Road.

Developments in trackless tram technologies are promising although they will be challenging to integrate into conventional tram networks. It is important to monitor trials currently taking place in other cities.

6.1 Adelaide Airport and Inner-West (Figure 8)

Adelaide Airport currently generates ~50,000 vehicle trips per day. Accommodating just 20% of these trips (10,000) on light rail would be equivalent to the combined patronage of the Outer Harbour and Grange lines and it would significantly reduce local congestion. Importantly, daily trips to the airport are projected to grow to 126,000 by 2039. This growth will substantially increase congestion in the inner west without a high-quality public transport solution.

Existing bus services facilitate only around 1% of trips to and from the Adelaide Airport (despite also being patronised for their local connectivity exclusive of Adelaide Airport) and it is proposed that a light-rail service along a dedicated corridor would offer a more intuitive, attractive, dependable, comfortable (incl. with baggage) and better integrated service which would drive substantially greater patronage.

In light of challenges of delivering such a service along Henley Beach Road or Sir Donald Bradman Drive, TAN proposes that consideration is given to an alternate route which branches from the existing Hindmarsh line in the vicinity of the new Women's and Children's hospital, travels over Henley Beach Road to connect with James Congdon Drive, crosses South Road in the vicinity of an already proposed signalised intersection and travels along the existing Keswick Creek alignment, which could potentially be upgraded in the process.

A high-quality, high-frequency, light-rail connection between Adelaide Airport and the CBD would offer a convenient, comfortable, highly prominent, and highly-patronised service for tourists, business travellers, international students, as well as western suburbs locals.

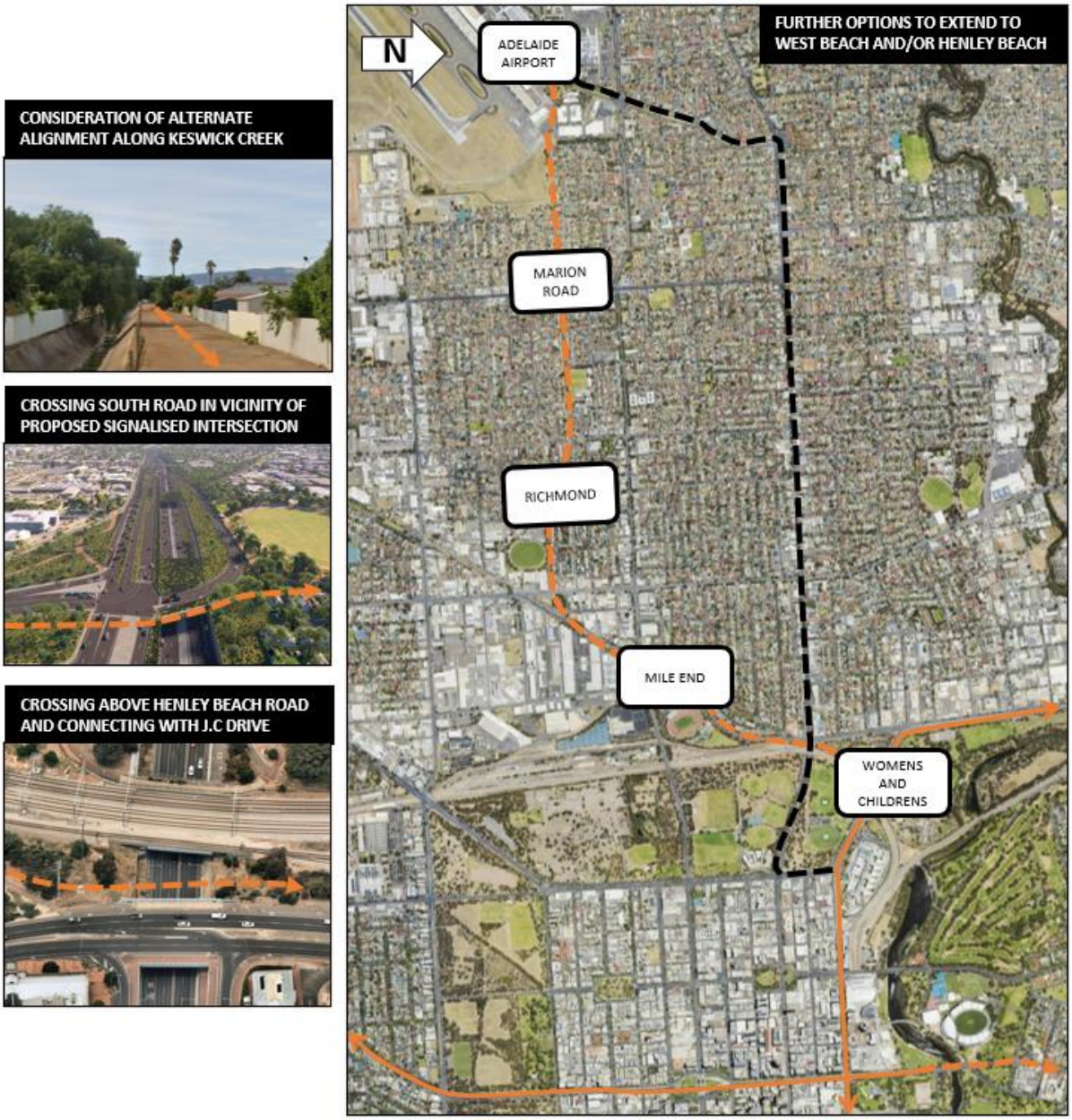

Figure 8: *Adelaide Airport and Inner West - Connecting to North Terrace and New WCH/RAH (Map adapted from SAPPA)*

6.2 North Adelaide and Beyond (Figure 1)

Review the future of the Festival Plaza tramline. Investigations should include extensions to:

- Adelaide Oval
- North Adelaide – O'Connell Street
- North Adelaide – near Aquatic Centre
- Blair Athol via Prospect Road
- Gepps Cross via Main North Road
- Ovingham Station to better serve the Aquatic Centre and link the Gawler Line with North Adelaide.

6.3 Northwest – Outer Harbor and Grange (Figure 9)

TAN is aware that the Government is engaging a consultant to advise on the replacement of the remaining 3000 Class diesel electric rail cars used on the Outer Harbor, Grange, and Belair lines. The investigation into vehicle propulsion is an ideal time to review and improve the routes and services operated.

TAN recommends a thorough investigation of replacing heavy rail with light rail on the Outer Harbor and Grange lines. This should be completed before further work on the heavy rail spur to Port Adelaide is completed to ensure future compatibility. TAN suggests replacing trains with light-rail on the Outer Harbor and Grange Lines would be ideal, regardless of their power source, as light rail is likely to have the following **unique benefits**:

- Potential for improved rail access throughout the port centre and across the port area by including the new Port Spur as part of the light rail conversion and extending the line along St Vincent Street, potentially rejoining the existing rail route at Glanville. Alternatively, the light rail could divert from the existing line near the Commercial Road Station (but at ground level) and operate along both Commercial Road and St Vincent Street. Either of these routes will improve access into the port centre from LeFevre Peninsula.
- Potential for improved rail access to Grange Jetty and Esplanade (similar to Glenelg) by running on-street in Grange through to a new terminus in this location.
- Potential for the return of rail to Semaphore, by branching from the Outer Harbor via Port service at Glanville.
- Flexibility to divert or extend from the existing rail corridor into mixed traffic environments allows greater permeability into the areas being served, and potential to generate additional value out of the existing rail corridor.

- Full integration with the existing CBD tram network, with options to connect into existing Hindmarsh Terminus, as well as into King William Terminus via Adelaide Oval.
- There is some concern with replacing heavy rail with light rail with regards to speed, comfort, and capacity, so it is important to consider the following:
- Trams are currently available that are suited to longer distances, higher speeds and greater comfort – many trams around the world operate at greater average speeds than the current Outer Harbour line. Unlike trains, it is common practice for trams to bypass stops where there are no passengers wishing to board or alight.
- It will be possible to run a combination of all-stop and express services and ensure options for service transfers at key stations.
- Additional travel time through limited sections of on-street running (Grange, Port, Semaphore) would in those instances be balanced by more direct passenger access to those destinations, and would not negatively impact the speed of the services otherwise.

The current Outer Harbour and Grange services accommodate about 10,000 passengers per day. Some tramlines in Melbourne carry up to 40,000 per day.

Figure 9: *Conversion of Outer Harbour and Grange Lines to Light Rail, extensions in Grange, Port Adelaide and Semaphore, full integration with existing CBD tram network.* (Map adapted from SAPPA)

6.4 Southeast

A successful trial of the Mt Barker rail line could lead to an investigation of a modern interchange (incorporating the existing heritage building) at Mitcham Station where passengers can seamlessly transfer to buses or trams for travel to non-CBD destinations.

7. Buses

A comprehensive review is required of the Adelaide bus network that includes access to and conditions at stops and interchanges. It must be followed up with ongoing evaluations of the network to ensure changes are meeting the needs of passengers and growing patronage. Local residents are best placed to identify service improvements. That said, we propose the following recommendations based on discussions with local politicians and members of the community.

- Improve transfers and ensure seamless integration with rail and tram services, for example by buses and trams sharing the same platforms (e.g., across the platform transfer) where possible, provide weather protection for transferring passengers and do not require passengers to transfer across roads.
- Increase safety for public transport passengers both on services and around stops and interchanges, particularly at night.
- Go Zones
    - Increase frequencies and limited-stop arrangements along existing and new or extended Go Zone bus routes. New Go Zone bus routes could include Sixth Avenue (St Peters), Fullarton Road, Main South Road, and Beach Road (to Noarlunga Centre).
    - Extend operational times of Go Zones into evenings and weekends - particularly on roads with high levels of activity and/or to large activity centres such as along Port Road, Torrens Road, Churchill Road, Prospect Road, Main North Road (to Gepps Cross), Hampstead Road (not only to Lights View but also to Ingle Farm), North-East Road, Payneham Road, The Parade, Glen Osmond Road, Unley Road (to Mitcham), King William Road, Goodwood Road, and Henley Beach Road (to Henley Beach).
    - Progressively implement peak hour bus priority lanes on arterial roads, e.g., Anzac Hwy, Golden Grove Road.
- Combined City of Adelaide and State Government Concept Plan for Currie / Grenfell Street High Frequency Bus Corridor, to identify long-term opportunities to improve accessibility, weather protection and on-street amenity for bus users. Investigate the potential inclusion of an east-west bike route.
- Provide traffic signals that prioritise buses at locations where buses have difficulty making right turns, or where the bus route must change from its normal route at peak times, or buses have to follow an extended, inconsistent and inconvenient route (e.g., Grant Avenue / Portrush Road, Dulwich Avenue / Fullarton Road, and Dunrobin Road / Brighton Road).
- Investigate key routes for increasing bus frequencies especially at night and on weekends. This improvement could be expanded to more services over time.

- Improve inter-suburban access, particularly between outer suburban and peri-urban centres. For example:
    - extend O-Bahn services into new suburbs to be developed north of Greenwith and Golden Grove,
    - improve bus links from Golden Grove to Mawson Lakes, Salisbury, Elizabeth, and Lyell McEwan hospital,
    - improve east-west link between Two Wells and Riverlea to Salisbury, Elizabeth and Gawler,
    - introduce an Adelaide Metro bus service to operate between Tea Tree Plaza, Lobethal, Mount Pleasant and Springton, including associated school bus services (including links from Mount Pleasant to the Barossa Valley),
    - extend the Adelaide Metro area to include Mannum, Murray Bridge and Strathalbyn, and operate normal bus and school bus services in that area as Adelaide Metro services (thus avoiding the double-ticketing system on buses in the area), and
    - extend the Adelaide Metro area to include Goolwa and Victor Harbor, and operate normal bus and school bus services in that area as Adelaide Metro services.
    -
- Improve public knowledge of the bus network with easily available hard copy (such as pocket maps as in many other cities) and digital information. Re-establish at least a small public transport information service near the heart of the bus network which is located at King William and Grenfell/Currie Streets. Provide signage including maps and timetables at all high-use public transport stops and stations. Many passengers do not or cannot use digital information.
- Improve wayfinding to bus stops (tram stops/train stations) with design cues and signage.
- Increase funding to local governments to ensure walkability to local bus stops and interchanges. For example, by addressing the backlog of footpath maintenance, up-grading and widening footpaths within public transport catchments, improving legibility of walking routes, cycling/micro-mobility routes and greening/tree planting of verges.
- Provision and funding of bus shelters should not be left to advertisers or local governments. The Department for Infrastructure and Transport needs to take a greater role in providing shelters and on-time service information.
- Provide safe routes and secure bicycle/PMD facilities at major public transport stops and stations – with bike hire/repair services at the largest centres.

Localities identified in the Planning and Design Code for high concentrations of activity and intensive development such as the Urban Boulevard, Urban Corridor, Township Mainstreet, Suburban Activity Centre and Business Neighbourhoods zones should be prioritised for high frequency public transport services.

Photo 5: Bus-rail interchange, Smithfield, South Australia (Tom Wilson)

8. A Fairer Fare System

Adelaide Metro's exclusively tap-on fare system is simple in operation, but leads to fare inflexibility which may constrain the effective growth of the public transport network in the long term.

8.1 Short Distance Fares

TAN suggests the current fare structure discourages short-distance trips, with passengers travelling locally (such as from Seaford to Noarlunga) charged the same fare as passengers commuting to the CBD (such as from Seaford to Adelaide).

The short distance fare structure could better incentivise living locally in a variety of ways; through reintroduction of the two-section fare, or through introduction of a tap-off system with reduced fares for limited distance travel or travel which does not end in the CBD.

8.2 Long Distance Fares

TAN acknowledges that substantial expansion of the suburban rail network to the extent described in this submission would take many years. It is important that in the interim, public transport patronage in the commuter belt beyond the Adelaide Metro area is encouraged by supporting measures that will lower costs and deliver more frequent services.

TAN proposes that the Adelaide Metro ticketing system and more frequent, integrated services, should be progressively provided as far out as Two Wells, the Barossa, Mannum, Murray Bridge, Strathalbyn, Goolwa, Victor Harbor and Normanville. Currently, many of these towns have only limited services operated by Link SA.

TAN proposes that an immediate improvement would be to equip Link SA buses with Adelaide Metro readers, which could either charge the full applicable fare, or could be utilised purely as a free tap-off function that enables free interchange with Adelaide Metro services.

TAN does not expect typical Adelaide Metro service frequencies to be provided initially to all regional towns within Greater Adelaide, but rather that existing service frequencies are supported and increased to encourage progressively greater patronage until expansion of Adelaide Metro services is warranted.

8.3 Emerging Opportunities

Mobility as a Service (MaaS) models provide an opportunity for Adelaide Metro to work with micro-mobility and share vehicle providers to expand the reach, patronage and return on investment of the public transport network. MaaS and other share vehicle providers (e.g., cargo-bike share, local community initiatives) can be integrated into mixed use developments at train stations and interchanges.

9. Public Transport: Meeting the Challenges

It is inconceivable that our major land use, transport, and infrastructure agencies are not planning for major improvements and investments in public transport infrastructure and services over the next 20 years. Perth, Brisbane, Sydney, and Melbourne have made and/or are making substantial investments in public transport infrastructure and services. These are the Capitals that have grown at a significantly greater rate than Adelaide (and Hobart) over the past 50 years.

The challenges we face in terms of environmental sustainability, equity within and across generations, housing supply and affordable living, aging of the population, personal health, amenity, liveability, attracting industry investment, and retaining a skilled workforce all demand a sophisticated approach to transport. TAN's *Greater Adelaide Public Transport: A Network for 21st Century Challenges* provides a strong starting point for our key agencies to review, plan for, and invest in a quality public transport network that will set us on the right track into the second half of this Century.

Transport Action Network

The Transport Action Network (TAN) comprises community organisations, active and public transport advocacy groups, urban and transport planners, practitioners, and researchers concerned for the future of sustainable transport and land use integration in South Australia.

Acknowledgement

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[1] In 2016/17, the reporting term shifted from 'initial boardings' to patronage and it is unclear whether 'patronage' refers to combined initial AND transfer boardings.

[2] For example: Adelaide Plains Council (nd) *Adelaide Plains Council Strategic Plan 2020-2024*; Mount Barker District Council (nd) *Integrated Transport Plan Lead Strategy*; Town of Gawler (nd) *Gawler Community Plan 2017-2027*; City of Victor Harbor (nd) *Community Plan 2030*.

[3] DCCEEW (2022) Australia's Emissions Projections - 2022. Canberra, Page 9: DCCEEW; DCCEEW (2023) National Electric Vehicle Strategy. Canberra: DCCEEW

[4] DCCEEW (2022), Page 10.

[5] Excluding cars and SUVs used as commercial vehicles.

[6] DEW (2021). Report on the operation of the *Climate Change and Greenhouse Emissions Reduction Act 2007* (South Australia); DEM (2023) South Australia's Green Paper on the Energy Transition. Adelaide: Government of South Australia. Based on DCCEW (2022, p. 37) figures indicating passenger vehicles accounted for 45% of emissions in 2019. This figure excludes cars and SUVs used for commercial purposes (LCVs). LCVs and passenger vehicles combined account for 62% of South Australia's GHG emissions or 3.9Mt.

[7] Assuming the South Australian fleet growth rate is in line with the national rate. BITRE (2023) Identified a national growth in the passenger fleet of 1.8% from 2022-2023 (Page 5). This is consistent with average growth over the previous decade of 1.7% or 19,720 vehicles per year (BITRE 2022, Table 6.9b).

[8] DCCEEW (2023). Page 2.

[9] DCCEEW (2022). Page 39. This figure is at odds with the South Australian Department of Energy Mining Figure which used a 2020 forecast of 40% of vehicle sales being BEV or PHEV by 2030. DEM (2023) South Australia's Green Paper on the Energy Transition, DEM: Adelaide.

[10] New car sales for 2022 were 1,081,429 vehicles (Australian Automotive Dealer Association - https://www.aada.asn.au/bulletins/2023/01/06/2022-new-car-sales-results-released/). Assuming South Australia's share of Australian new vehicle sales remains at 6% (based on BITRE new vehicle sales by State for 2017-18 – the latest available). The share of new car and SUV sales for 2022 is just under 65,000 vehicles. Assuming this rate remains for the foreseeable future, it would take until 2050 to reach a car fleet with net zero operational emissions.

[11] Bray, D & Scrafton, D. (2019). The Adelaide O-Bahn: evolution, operation and lessons. In *Developing bus rapid transit: the value of BRT in urban spaces: transport, mobilities and spatial change* (pp. 14–31). Edward Elgar Publishing Limited. https://doi.org/10.4337/9781788110914; Infrastructure SA. (2020). 20 Year State Infrastructure Strategy. Adelaide: Infrastructure SA

[12] Based on BITRE 2022 year book, Table 6.12.d

[13] Ang, B. H., Oxley, J., Chen, W. S., & Lee, S. W. H. (2019). Factors and challenges of driving reduction and cessation: A systematic review and meta-synthesis of qualitative studies on self-regulation. *Journal of safety research*, *69*, 101-108. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0022437518306923

[14] Bonham, J., Jervis, C., Lumb, P., & Berndt, A. (2004). Relinquishing a driver's licence. In *Australasian Transport Research Forum (ATRF), 27th, 2004, Adelaide, South Australia, Australia* (Vol. 27).

[15] Frater, J., & Kingham, S. (2020). Adolescents and bicycling to school: Does behaviour setting/place make a difference? *Journal of Transport Geography*, *85*, 102724–102728.

[16] Craig, L., & van Tienoven, TP (2019) Gender, mobility and parental shares of daily travel with and for children: a cross-national time use comparison, *Journal of Transport Geography*, 76: 93-102, https://doi.org/10.1016/j.jtrangeo.2019.03.006

[17] Hensher. (2018). Tackling road congestion – What might it look like in the future under a collaborative and connected mobility model? *Transport Policy*, *66*, A1–A8. https://doi.org/10.1016/j.tranpol.2018.02.007.
[18] Budget Direct. https://www.budgetdirect.com.au/car-insurance/research/car-owner-cost-statistics.html#50-year-on-year-comparisons-ref-number2. For Victoria, the RACV (2020) put the costs between $9,000 and over $17000 depending on the make and model of car. https://www.racv.com.au/royalauto/news/car-running-costs.html. This figure includes car loan repayments through to fuel and servicing and repairs.
[19] Dodson, Sipe, N., & Nelson, A. (2017). *Planning After Petroleum*. Routledge. https://doi.org/10.4324/9781315650715
[20] Lee, Y., Circella, G., Mokhtarian, P. L., & Guhathakurta, S. (2020). Are millennials more multimodal? A latent-class cluster analysis with attitudes and preferences among millennial and Generation X commuters in California. *Transportation (Dordrecht)*, *47*(5), 2505–2528. https://doi.org/10.1007/s11116-019-10026-6
[21] Stanley, J. K., Hensher, D. A., & Stanley, J. R. (2022). Place-based disadvantage, social exclusion and the value of mobility. *Transportation Research Part A: Policy and Practice*, *160*, 101-113.
[22] E.g., Infrastructure Australia (2019) Urban Transport Crowding and Congestion. Infrastructure Australia: Canberra; BITRE (2023*) Freight Vehicle Congestion in Australia's Five Major Cities – 2022*. Australian Government: Canberra.
[23] See the systematic review of studies in Bucsky, P., & Juhász, M. (2022). Long-term evidence on induced traffic: A case study on the relationship between road traffic and capacity of Budapest bridges. *Transportation research part A: policy and practice*, *157*, 244-257.
[24] Engineers Australia (2021) *Urban Transport Systems: A Transport Australia Society Discussion Paper*. Engineers Australia: Barton, ACT.
[25] Elaurant, S., Evans, G., Buchanan, P., Tisato, P., (2014) *Measuring the Wider Economic Benefits of the Glenelg Tram Extension*. Paper presented to the Conference on Railway Excellence, Adelaide, 5-7 May 2014.
[26] Zhang, M., & Shukla, J. (2023). Measuring the impact of heavy rail transport infrastructure on house prices in Melbourne, Australia: a case study of Mernda rail extension project. *Property Management*, *41*(1), 97–110. https://doi.org/10.1108/PM-02-2022-0013
[27] Knowles, R.D., Ferbrache, F. (2016) Evaluation of wider economic impacts of light rail investment on cities. *Journal of transport geography*, 54: 430-439.
[28] Tarkowski, M., Połom, M., Puzdrakiewicz, K., Pilch, D. (2022) Improvements in space-time accessibility as outcomes of heavy rail transit development in the sprawled residential district. Empirical evidence from Gda´nsk. Case Studies on Transport Policy 10: 1273–1282.
[29] Government of South Australia (2023) South Australian Economic Statement. Government of South Australia: Adelaide
[30] Mees, P. (2010). *Transport for suburbia : beyond the automobile age* (1st edition). Earthscan. https://doi.org/10.4324/9781849774659
[31] Victoria Walks (2018) *The Economic Case for Walking*, Victoria Walks: Melbourne; Department of Main Roads (2023) *Cycling Investment in Queensland*, Queensland Government: Brisbane.
[32] Queensland Department of Transport and Main Roads (2020) *Public Transport Infrastructure Manual.*
[33] Tarkowski, M., Połom, M., Puzdrakiewicz, K., Pilch, D. (2022) Improvements in space-time accessibility as outcomes of heavy rail transit development in the sprawled residential district. Empirical evidence from Gda´nsk. Case Studies on Transport Policy 10: 1273–1282.
[34] Infrastructure SA (2020) *20 Year State Infrastructure Strategy*. Infrastructure SA: Adelaide p. 125
[35] See for example, Rod Hook & Associates (2021) *Rail Public Transport Options for Mt Barker and the Adelaide Hills*.
[36] See transcripts of hearings and submissions to the Select Committee on Public and Active Transport from Gary Field, Mt Barker Residents Association, South Australian Transport Action Group. For broader support of the rail network see the submission from the Transport Australia Society. District Council of Mt Barker has questioned the scope of the Infrastructure SA report and is calling for detailed, comprehensive investigation of rail options to Mt Barker.