

19 August 2019

Mr Anthony Shepherd AO  
Chair  
Infrastructure SA  
GPO Box 2343  
ADELAIDE SA 5001

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

Dear Mr Shepherd AO,

### **Infrastructure SA's 20-Year State Infrastructure Strategy for South Australia**

We appreciate your office agreeing to accept our late Infrastructure Strategy submission for consideration by Infrastructure SA. We welcome the State Government's decision to create an independent board to oversee priority infrastructure project for South Australia. We have responded to the questions outlined in the 20-Year State Infrastructure Strategy Discussion Paper (June 2019), from a City of Playford perspective.

By way of introductory comments we remind the Infrastructure SA Advisory Board that as one of Australia's fastest growing communities, the City of Playford area will require significant infrastructure investment to meet our regions growth curve. Our City rose from the industrialisation of northern Adelaide in the 1950s, becoming Adelaide's first satellite city and home to a thriving community, abundant with a diversity of housing, land-use and people of mixed cultural backgrounds. While we proudly are the State's second Central Business District (CBD), the City has a range of economic, social and environmental challenges relating to its growth.

To navigate the future, we must lead the way for our community. This means understanding our community's needs and providing opportunities, not just for economic prosperity, but for social wellbeing and improved livability.

The City of Playford has a plan to transform the City through a range of catalyst projects, where economic infrastructure can be leveraged for social value. Projects such as the transformation of our CBD into a retail, business, cultural, arts and entertainment showpiece; the development of the Playford Health Precinct as a leading health services provider in South Australia, the expansion of the region's horticultural industry; unlocking the potential of employment lands within Greater Edinburg Parks; and the further expansion of our defence, science and aerospace sector.

These projects address industrial diversity, employment transformation and will revitalise the community. However, we cannot do it on our own. While the City of Playford community creates the vision and framework, all levels of government and the private sector must work together to realize the City's potential.

The infrastructure that links our city to Adelaide, South Australia, Australia, and the world is critical to our city achieving its strategic objectives. We seek to work with a range of partners to support these catalyst projects and invite you to be part of the transformation, through this submission.

Yours sincerely,  
[DELETED]

**Sam Green**  
**ACTING CHIEF EXECUTIVE OFFICER**

## ***What infrastructure investment would make the biggest impact to unlocking economic growth in South Australia in the next 0-5, 5-10 and 10-20 years?***

- The provision of uncontended fast, big data capable, secure broadband.
- Secure, sustainable, green energy supply with the back-up infrastructure to support hi-tech manufacturing and Industry 4.0.
- Secure supply of water and recycle water to meet the needs of agriculture, horticulture, manufacturing and a growing residential community.
- The establishment of the proposed Globelink and a freight 'by-pass' to link the Virginia Horticulture and Elizabeth manufacturing precincts.
- Investment in transport and stormwater infrastructure across Greater Edinburgh Parks (GEP) to unlock the potential of these employment lands and leverage recent government investment in the Northern Connector and Northern Expressway. GEP is the future industrial heartland of South Australia and is projected to provide around 40,000 jobs. GEP will also host the businesses responsible for value adding and distribution to local, national and international markets of high value perishable produce from nearby Virginia – already Australia's single largest protected cropping area. The key to the timely and efficient development of GEP is the provision of regional scale stormwater drainage. Longer term, this can be funded by development however the initial infrastructure needs to publicly funded and, to date, the cities of Playford and Salisbury have been left to coordinate this and confront the costs. Whilst we are capably coordinating matters, we are struggling to fund this lead infrastructure and are seeking co-investment from the State and Federal Government.
- Undergrounding the Elizabeth Railway Station to stimulate investment in the Northern CBD, particularly on the western side of the railway line.
- Greater investment in public transport infrastructure (particularly light rail) to increase public transport rates and create a less car dominant society.
- Completion of the North-South corridor.

## ***How would Adelaide's infrastructure need to change if its population hit two million?***

- the Northern CBD will play a significant role in an Adelaide with a population of two million people and it will be critical that the traditional infrastructure (roads and rail) grow to protect direct, fast connections between Playford and Adelaide.
- Regional rail lines will need to be re-opened to mid-north South Australia townships such as Saddleworth, Riverton, Hamley Bridge, Freeling and the Barossa Valley. Fast rail links will feed commuters by fast regional rail links to the Playford CBD.
- The northern rail line will need to be configured to permit double the number of trains to run between Playford CBD and the Adelaide CBD, with spur lines to allow more fast trains to run express services and connection to new communities, such as Buckland Park.
- Spur line off the interstate rail line into the Edinburgh Defence base.
- The upgrade of Main North Road to link Adelaide to Playford, with additional lanes and central linking tram service.
- Autonomous light rail services to radiate out of the Playford CBD, connecting the mass transit line from Gawler to Adelaide line, to link centres such as Playford Alive, Edinburgh Defence Base and DSTG, Lyell McEwin Hospital, Virginia, Angle Vale and One Tree Hill.
- Increased public transport services including park and ride facilities.
- Greater investment in walking and cycling infrastructure, including end of trip facilities.
- The Lyell McEwin Health Precinct will be required to support a larger and ageing population. Greater investment in the Precinct is required to support a broad range of services and facilities. These include a public and private hospital, allied health, university and research facilities and health related industry.

- Enhanced waste management capacity will be critical to support a larger population. Particularly investment in recycling and waste to energy infrastructure. The City of Playford is a member Council of the Northern Adelaide Waste Management Authority (NAWMA) who is leading the sector in contemporary waste management solutions. Increased investment in NAWMA facilitating sustainable regional waste management will be required.

### ***How can South Australia better manage demand on current infrastructure?***

- Decentralisation of the CBD and move government administration and agencies to Playford CBD.
- More Co-working Hubs (private and government collaborations) that would allow for more employees to work from Hubs (in metro, peri-urban and regional centres), reducing the number of times employees need to commute into the city of Adelaide.
- Reopen regional rail lines in the mid-north of South Australia.
- Transition heavy freight transport off the road network to rail (semitrailer drive on and off rolling stock).
- Increase the frequency of public transport services to increase use of public transport. There is a requirement for greater east-west public transport service across the city of Playford.
- Further encourage city based residents to live and work in regional South Australia.
- Further encouragement of high density residential Transport Orientated Design (TOD) along rail line corridors.
- Prioritisation and staging of trunk infrastructure to support the industrial and residential growth fronts of Playford.

### ***What opportunities are there to better leverage private investment to drive public infrastructure development?***

- Establish an improved process to manage growth and support private and public investment in public infrastructure such as roads, stormwater infrastructure and community facilities. The City of Playford has recent experience in developing and coordinating individual infrastructure deeds with the State Government and land owners. While they are effective they do come with ongoing challenges related to administration, timing and ability to meet community expectations. Plans to improve this process through the new Planning and Design Code with the establishment of Infrastructure Agreements do not appear to be sufficient following a recent trial.

### ***What challenges and opportunities does South Australia have in supporting our cultural, sporting and tourism activities to ensure our global competitiveness and vibrancy as a location?***

- Long term Arts, Sport and Tourism outcomes will be important post Commonwealth Games legacy for our northern community. The City of Playford is keen to participate in the Commonwealth Games bid to leverage the contemporary sports infrastructure in Playford and develop further more sports infrastructure that can play a role in the city attracting other major sports events to South Australia, Adelaide and Playford.
- Leverage the Commonwealth Games to achieve urban renewal in the Elizabeth suburbs dominated by Housing Trust homes.
- Playford seeks to work with the State and Federal governments to develop sport facilities that would be utilised during the Commonwealth Games for competition and training. Playford has recently invested in world class tennis and lawn bowls facilities within the Playford Sports Precinct that would support this.
- The City of Playford seeks to develop art and cultural experiences through an international standard museum in the Playford CBD to host travelling exhibitions and exhibit items from the South Australian Art Galley that are currently hidden from public viewing. This could create an opportunity for Playford to share its famous rock and roll heritage.

- With the increased participation of females in previously male dominated sports it is important to promote and support gender equity in all sports and this requires the investment of governments in local sports amenity (such as change rooms) that facilitate and support gender diversity participation in sport.
- Sport related Tourism is a major opportunity to attract more visitors to Adelaide to use the diverse sporting infrastructure that could be available with careful planning and investment.
- Investment in programs as well as infrastructure is required to grow opportunities with the creative industries sector. A vehicle for this is Playford's Northern Sound System which has a long and successful history of providing local pathways to employment.

### *What strategies should be adopted to ensure Adelaide maintains its livability as it grows?*

- Population growth must be measured and sustainable. The northern suburbs are deemed to be the region that will absorb the greater part of the expected growth in Adelaide. However, that growth needs to protect existing high liveability standards and lift low liveability standards to ensure equity of liveability across the city.
- The key measures of liveability need to be further invested in; especially health facilities (private and public), public safety (CCTV, public road safety, SAPOL services, public lighting), public housing.
- Mitigation of climate change, with increased investment in urban greening initiatives.
- The State Government supports a two CBDs policy for Adelaide (Adelaide and Playford) and plans for decentralised private and public services to serve the expected growth.
- Investment is required to ensure job growth occurs near where people live. In Playford, the opening up of Greater Edinburgh Park through provision of trunk stormwater, potable water, sewer and road networks will ensure long term job creation opportunities, supporting defence, horticulture, food, logistics and high tech manufacturing.
- Increased investment in social housing, including the renewal not just maintenance of existing social housing.
- Ongoing protection of valuable primary production land.
- Planning for autonomous vehicles.

### *How can technology and data be embraced to improve quality of life?*

- Any infrastructure that is upgraded, is new or repurposed must be embedded with the necessary sensors to collect the data that will make for good future infrastructure decision making, can enhance the life of existing infrastructure and measure the effectiveness of the infrastructure. Well managed infrastructure will translate into better user experiences and improved quality of life for all infrastructure users, across all infrastructure.
- Broadband telecommunications that meet world's Top 10 country standards is a minimum requirement for South Australians and ubiquitous, affordable access would be a game changer for all business and residents and visitors.
- The Council will continue to work with the State Government to support the local business and residential community to encourage the early adoption of new technologies. Such support through training and education will ensure equity of access to online education and training.
- Council will work closely with the State and Australian governments to collect freely available data to aid in better decision making by those seeking to invest and/or set policy, that impacts on Adelaide.
- The Internet of Things and Industry 4.0 must become a cultural paradigm shift for all of South Australia and we must take the steps to ensure no one slips through the cracks as our community transitions to a digital everything world.
- Playford is committed to being a site to test new technologies before they are ready to be expanded. As an example Playford has recently participated in an autonomous bus trial with

private operators and the State Government within the Lyell McEwin Health Precinct and Playford Alive.

### ***What services are we likely to use in the future that will require supporting digital infrastructure?***

- Digital infrastructure is the underlying technology that will support all services provided by Council to the community, from building and maintaining roads to the provision of social services to ensure the community is resilient and connected.
- Community Hubs that provide shared services for employees from multiple businesses and public sector departments. Teleworking will dramatically reduce the number of residents in the northern suburbs and peri-urban regions that currently commute to the Adelaide CBD. These Hubs will become important collaboration locations, site of innovation between seemingly unrelated sectors, that will come to work together.
- Industry 4.0 is here and we must adapt to, embrace and work with the digital changes that are now part of everyday life and everyday business activity.
- Supporting infrastructure such as optical fibre will be essential and will be the based infrastructure that will be essential to see Autonomous vehicles that use the roads and air space of the future.

### ***How can South Australia best prepare its infrastructure to be able to adapt to and embrace future technological disruptions?***

- The infrastructure we build needs to have integrated capacity for growth. If we build a bridge, it must have the capacity for extra lanes of traffic to be added at some future point in time. Railway line corridors need to be able to add extra tracks. The creation of multi-purpose buildings and precincts that can be adapted with the introduction of new technologies over time. An example is the re-purposing of the former Holden site to create a mixed use/multi-purpose employment precinct that incorporates the commercial, industrial and manufacturing sectors.

### ***How will changing delivery models in education and training impact infrastructure requirements?***

- Education and training at all levels (primary, secondary, tertiary and VET/TAEF) will move 'online' and will enable students to study from anywhere, including home and or regional co-working Hubs.
- Training and Education institutions need to work much more closely with industry sectors to ensure a secure, planned pipeline of skilled workers. This may include the likes VET/TAFE being based in the workplace, especially in defence sector employment on the Edinburgh Defence Base. Another example would be the creation of a training/employment centre of excellence with the Adelaide Plains horticultural areas.
- Training and Development will be more experiential and involve increased use of 'digital twins', where students can practice and test new knowledge and skills on a 'twin' that might be anything from a welding on a digital submarine, to a digital township.
- Government's will need to ensure that students and educators have equitable access to the support technology to carry the data required to run applications that make digital 'twinning' work.

### ***How should infrastructure be planned in increasingly urban environments with ageing populations?***

- Infrastructure that will cater for autonomous vehicles. Both the physical infrastructure for the autonomous vehicle itself and the digital infrastructure that the vehicles will rely on to run effectively.
- Road infrastructure must be thought of in three dimensions as the world fast tracks autonomous flying machines (taxis, cars, shuttles). This may well include the capacity for flying, autonomous vehicles to move quickly between Adelaide and Playford. Our public infrastructure will need to



cater for such air transport (Autonomous aircraft developers and manufacturers are aiming to have such autonomous vehicles operational in Australian cities within five years).

- There is a greater emphasis on supporting people in their home environments as they grow older. This has implications for health services and health related infrastructure such as hospitals and allied health facilities.
- New technology such as driverless buses will support greater moveability of an ageing population.
- The development and implementation of asset management plans by all levels of government requires better coordination. There are many examples where local infrastructure overlaps or meets state and federal owned infrastructure. A coordinated renewal approach does not currently occur.

### ***What complementary infrastructure can be built to support better health outcomes across the population?***

- Broadband telecommunications that meet world's Top 10 country standards is a minimum requirement.
- Greater investment in infrastructure to encourage a more active population, such as shared paths, parks and gardens. There is strong evidence that supportive environments and contact with nature has a positive impact on an individual's health and wellbeing.
- Increased focus on greening Adelaide to reduce the health impacts anticipated from climate change.

### ***How can infrastructure provide resilience against bushfires, drought, flooding, sea level rises and the like?***

- Potable water infrastructure will require more than one source (Murray River) to deal with the predicted impacts of climate change. We must accept the public consumption of desalinated water.
- Infrastructure needs to be constructed to allow for predicted sea levels rises due to man-made climate change. An important consideration for Playford with the regions exposure to the low lying coastal strip, that is also home to mangroves that play a major role in the production of oxygen and cleaning of water ways (BlueCarbon).
- The previously promised construction, operation and maintenance of flood mitigation infrastructure for the Gawler River must be honoured to protect both prime horticultural lands, townships such as Virginia and residential areas.
- Investment in stormwater infrastructure needs to increase and be better coordinated across all three levels of government. In many cases the large capital cost associated with new stormwater projects to protect communities from flooding and sea level rises is beyond the financial capacity of Local Government.
- Playford is planning for stormwater infrastructure and land use to cope with the high emissions pathway the world continues to track along. In our region, this is projected to lead to a 9% and 17% increase in rainfall intensity by 2050 and 2090 respectively. This, together with our need to provide for a large proportion of South Australia's residential and industrial growth over the same period, will require large investment in stormwater infrastructure beyond the financial capacity of City of Playford alone.

### ***What infrastructure is required to support our justice system and emergency services across the state?***

- Reliable telecommunications infrastructure (with redundant built in network systems) is essential; especially the provision of optical fibre to hospitals and SAPOL and the Courts to carry increased use of videoconferencing (Elizabeth Magistrates Court could be relocated and regional areas can hold court hearings via video link, in lieu of moving those arrested to Elizabeth from regional areas).

- Health video-conferencing for patients, with doctors based in the Lyell McEwin Hospital.
- A masterplan for the Lyell McEwin Health Precinct is required to enable the precinct to grow to a similar scope as the Adelaide Biomedical Precinct and Flinders Medical Precinct. Playford is currently undertaking community consultation on a Development Plan Amendment to support this expansion in a coordinated manner over time. This will enable the creation of jobs and education and training opportunities, as well as continued access to world class health services.

***What strategies should the Government adopt to ensure the necessary infrastructure is in place so our regions can thrive?***

- Fast tracking of infrastructure projects to ensure the infrastructure is in place before it is needed.
- Development of a comprehensive state-wide transport plan which is regularly updated to align with the 30-Year Plan for Greater Adelaide.
- A state-wide Heavy Vehicle Access Framework/Committee to help understand the needs of industry and assist with advice, direction and allocation of government funding.

***How will technology change the transport system in South Australia?***

- The move to autonomous vehicles on rail, road and in the air will dramatically change our transport system.
- The move to vehicle users not needing to own vehicles.
- The greater use of autonomous vehicles and ride sharing and Uber like services will impact public transport.
- As previously mentioned autonomous flying machines (taxis, cars, shuttles) may well include the everyday use of flying, autonomous vehicles, to move quickly between Adelaide and Playford. We must view our roads in three dimensions.

***How can South Australia take the lead on reducing emissions from transport?***

- We need to encourage road users to transition to non-fossil fuelled vehicles.
- It will be important that the three levels of government and the private sector continue to work together to create a state-wide network of electric vehicle charging stations.
- Public transport and private bus operators will need to be supported to transition from diesel combustion engines to electric or hydrogen, with the supporting infrastructure to facilitate refuelling.
- South Australia can follow the lead of European countries and the UK in banning the use of fossil fuel vehicles post 2030/2040.
- Both the South Australian and Local Government vehicle fleets need to fast track transition to electric vehicles.
- Greater investment in public transport to reduce the reliance on personal vehicles.

***What factors should be considered when making inevitable trade-offs about investment in public infrastructure in the context of funding constraints?***

- Debt financing of infrastructure is an acceptable investment in the future of our State.
- Exploration of value capture rates and developers contributing greater amounts to offset greenfield and brownfield development costs incurred by governments.



***What options are there to establish a reliable, affordable, decarbonised energy system in South Australia?***

- Continued support for the expansion of renewable energy generators that utilise new battery storage technology and supply base load power.
- Micro power generation, with battery technology to take regional centres 'off-grid'.
- Continued fast tracking of private sector investment in decarbonised energy generation.