



31 July 2019

InfrastructureSA
GPO Box 2343
Adelaide SA 5001

Dear Sir/Madam,

Re: Infrastructure SA 20-Year Strategy

On behalf of the Board of the Botanic Gardens and State Herbarium (the Board), thank you for the opportunity to prepare a submission to outline the needs and views of the Board to help formulate the 20-Year State Infrastructure Strategy. The timing of this Strategy's development is ideal because of significant planning work the Board has been doing to address current and future needs of the Botanic Gardens and State Herbarium and ensure the sustainability of our world class scientific and cultural institution for South Australian residents and visitors.

The Board has several functions under the *Botanic Gardens and State Herbarium Act (1978)* that pertain to managing significant infrastructure including establishing and maintaining botanic gardens for the use and enjoyment of the public and supporting lifelong learning; establishing and maintaining a Herbarium for scientific research; and maintaining all lands and premises under the control of the Board.

The Board's assets make a significant contribution to liveability for all South Australians and the State's tourism industry, as well as providing sustainable environmental and heritage stewardship through the ongoing management and activation of heritage, cultural and living assets. The Board are pleased to be part of the Government's forward thinking strategic work, which is critical to South Australia, and highlight how its work is part of the social and cultural fabric of South Australia and contributes to a more sustainable and resilient community and its supporting public infrastructure.

Please find attached the Board's response to relevant guiding questions in the Discussion Paper. Should you wish to discuss this submission, please contact Dr Lucy Sutherland, Director of the Botanic Gardens and State Herbarium (Email: Lucy.Sutherland@sa.gov.au; Tel 08 8222 9320).

Yours sincerely

[DELETED]

Judy Potter
PRESIDING MEMBER
BOARD OF THE BOTANIC GARDENS & STATE HERBARIUM

Attachment 1: Board of the Botanic Gardens and State Herbarium's response to the 20-year State Infrastructure Strategy Discussion Paper

<p><i>What opportunities are there to better leverage private investment to drive public infrastructure development?</i></p>	<p>In the context of the work of the Botanic Gardens and State Herbarium (BGSH), three examples of potential private investment around public infrastructure development include:</p> <ul style="list-style-type: none">- Lot 14 - Explore opportunities where innovation in Research and Development can be furthered to support the work of state public institutions that will benefit all South Australians and that can be patented to showcase South Australian innovation globally whilst bringing an economic return e.g. development of robotics to manage Herbarium collections thereby creating efficiencies in the building space required for institutional operations, efficiencies in the curation of collections and leading the world in the use of robotics for collections management that has global implications to thousands of institutions including botanic gardens, herbaria, art galleries, libraries and museums.- Co-investment in scientific and education infrastructure that supports priority industries and government science programmes e.g. the BGSH Australian Centre of Horticultural Excellence provides foundational training for early career people entering the horticultural industry; the work of the SA Seed Conservation Centre at BGSH provides foundational science for lands restoration supporting resource extraction industries and natural resource managers; the work of the State Herbarium provides evidence based scientific information that can inform climate change policy and land management strategies.- The Botanic Gardens of South Australia (Adelaide, Mount Lofty and Wittunga) attract 2.2 million visits per year and support the Government's agenda in tourism and arts and culture – there are opportunities for private investment in public related infrastructure to enhance visitor experiences, increase stay duration and expenditure, and create return visits (e.g. Mount Lofty Botanic Garden visitation grew 17% in 2018-19 and provides opportunities for private investment in food and beverage and nature-based tourism; Botanic Park use and visitation increased 15% in 2018-19 through international music acts).
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<p><i>How would Adelaide's infrastructure need to change if its population hit two million?</i></p>	<p>Green infrastructure is critical and the City will need more public open space provision with a growing population. Botanic gardens are important places that connect people with plants, landscapes, biodiversity, cities and with each other. Destination gardens, such as the Mount Lofty and Wittunga Botanic Gardens, will need infrastructure and associated investment as they both lack basic accessible visitor infrastructure. Adelaide Botanic Garden will need significant asset upgrades. All three Gardens will need increased maintenance programmes and human resources to manage an increased population with diverse needs and to ensure South Australian botanic gardens are world class and contribute to the tourism industry.</p> <p>Around 2.2 million people already visit the Botanic Garden estates (Adelaide, Mount Lofty and Wittunga) annually and trends are showing increasing numbers to Mount Lofty Botanic Garden and Botanic Park - this is predicted to grow with increased residents in Adelaide. More than 21,000 students visit the Botanic Gardens and State Herbarium as a part of its education programme and volunteers contribute over 46,000 hours annually. These connections reinforce how the botanic gardens contribute to the social fabric of South Australia and investment is needed in BGS infrastructure to enhance tourism experiences and expenditure, and meet society's ongoing needs.</p>
<p><i>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?</i></p>	<p><u>Opportunities:</u> Investing in Botanic Park as the State's premier outdoor venue within a heritage landscape to ensure South Australia continues to deliver a high quality WOMAdelaide experience, attract international music artists to contribute to the city's vibrancy and the state economy, and support local community and businesses health and wellbeing agendas (e.g. charity days, fun runs)</p> <p><u>Challenges:</u> Investing in foundational visitor infrastructure in growing tourist destinations e.g. Mount Lofty Botanic Garden; Adelaide Botanic Garden has experienced reduced visitation due to neighbourhood developments (OBAHN, Tram works, and closure of Old Royal Adelaide Hospital and subsequent Lot Fourteen) and active curation of public programmes and events supported by high quality green infrastructure will ensure the vibrancy of the City's east end. Ensuring Lot Fourteen development takes a holistic wide precinct perspective taking in the Adelaide Botanic Garden, River Torrens, National Wine Centre, Adelaide Zoo, Adelaide Botanic High School and Universities, as well as the planned Aboriginal Arts and Culture Centre.</p>
<p><i>What strategies should be adopted to ensure Adelaide maintains its liveability as it grows?</i></p>	<p>Lot 14 – integrated investment and partnerships to achieve a holistic precinct approach with a sustainable governance model.</p>

	<p>MLBG – Mt Lofty Precinct – ensure Mount Lofty Precinct development recognises Mount Lofty Botanic Garden as one of the key destinations in the precinct and matches investment accordingly to develop the tourism destination, its role as a community hub and a holistic Mount Lofty precinct experience that is world class and contributes economic return.</p> <p>Shared infrastructure – joint proactive private and public investment.</p>
<p><i>How can technology and data be embraced to improve quality of life?</i></p>	<p>In the context of the Botanic Gardens and State Herbarium, technology can support the management of green infrastructure and assets, including the botanic gardens' living collections and city street landscapes, to transition this urban living infrastructure to changing climates. Furthermore, technology to support water and power creation and monitoring of use (e.g. smart meters etc.)</p> <p>Autonomous vehicles and their future use in botanic gardens management and visitor experience enhancement.</p>
<p><i>What services are we likely to use in the future that will require supporting digital infrastructure?</i></p>	<p>State Herbarium collections management (e.g. robotics, data access)</p> <p>Digitally connected botanic gardens that service regional South Australian communities</p> <p>Tourist attracting virtual reality experiences supporting plant focussed immersion experiences</p> <p>Automated traffic management to support activation of Botanic Park and Adelaide Zoo on BGSB lands.</p>
<p><i>How will changing delivery models in education and training impact infrastructure requirements?</i></p>	<p>The growing desire for outdoor classroom experiences and real life learnings and skills will require infrastructure investment in government assets (pro-active government initiatives); and rely on government and industry partnerships e.g. BGSB's Australian Centre of Horticultural Excellence and Registered Training Organisations.</p> <p>Social connection and accessibility to evidence based science through digital infrastructure.</p> <p>Virtual reality experiences supporting plant focussed immersion and learning experiences.</p> <p>The careful location of the Adelaide Botanic High School has provided significant opportunities for this high school to integrate and leverage off surrounding infrastructure. This careful positioning of education infrastructure enables efficient and effective partnerships which drive community benefits.</p>
<p><i>What complementary infrastructure can be built to support better health outcomes across the population?</i></p>	<p>Provision of safe accessible open space and supporting infrastructure has an important role in delivering health and wellbeing. The Botanic Gardens and State Herbarium is a pivotal contributor to community health and wellbeing and a recent survey of SA community highlights its role as a destination for wellbeing in terms of peace, calmness, serenity, enabling relaxation, freedom and joy.</p> <p>The Little Sprouts Kitchen Garden supports health and wellbeing education for early learners and school children. The creation of a third phase to the BGSB Kitchen Garden and community greening infrastructure associated with social</p>

	<p>housing outreach will enable a health and wellbeing programme that will connect with community members who need support and development of life skills.</p> <p>Ongoing investment in the Gardens' green infrastructure supports an important Health Parks Healthy People Agenda and is shown to support Mental Health initiatives, as well as climate change amelioration agendas.</p>
<p><i>How should infrastructure be planned in increasingly urban environments with ageing populations?</i></p>	<p>Well planned public open space, that is appropriate and tailored for an aging community, needs to be guided by current research that highlights the value of plants, biodiversity and natural experiences to people's health and wellbeing and can guide innovative design and support important community connections such as volunteerism and connecting people throughout their life with nature.</p> <p>Investment is needed in accessibility focussed infrastructure to increase compliance with the Disability Discrimination Act Activation programmes with positive health and community connection outcomes supported by appropriate infrastructure.</p>
<p><i>How can infrastructure provide resilience against bushfires, drought, flooding, sea level rises and the like?</i></p>	<p>Investment in forward thinking design that provides for multipurpose use is a critical consideration for infrastructure development in the future. For example, Mount Lofty Botanic Garden provides an opportunity to create multi-purpose infrastructure that supports the increasing visitation and need for vastly improved visitor services and experiences, while providing a safe fire refuge in case of emergencies for staff and visitors, including local residents.</p> <p>Investment in green infrastructure to transition to an urban landscape for changing climates requires a cross agency and local government approach that will transform the City through the Green Adelaide agenda.</p> <p>Botanic Gardens lead the way in Succession Planning of Living Green Assets in Australia.</p>
<p><i>What factors should be considered when making inevitable trade-offs about investment in public infrastructure in the context of funding constraints?</i></p>	<p>Rigorous assessment methodology is needed that qualifies and quantifies the value of said infrastructure and recognises those 'hard to measure' value criteria. For example, a recent survey of 795 people highlighted the critical role of the Botanic Gardens and State Herbarium in health and wellbeing; this value is difficult to quantify but nonetheless still needs to be considered in any prioritisation methodology for investment strategies for infrastructure.</p> <p>Any investment in the care of living collections (i.e. green infrastructure) is an investment in key Government agendas including – Health Parks and Healthy People programme, Carbon Neutral City, and a National Park City. The living collections provides evidence based data for sustainable decision making for adaptive management of city landscapes.</p>