



Australian Institute
of Landscape Architects
1966/2016

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Submission by:

AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS

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To whom it may concern

**RE: AILA Submission regarding
Infrastructure Victoria's All Things Considered Options Paper**

The Australian Institute of Landscape Architects (AILA) Victorian Chapter provides the following submission as part of development of Infrastructure Victoria's 30-year strategy for Victoria. With release of the **All Things Considered options paper** we would like to raise key opportunities associated with Green Infrastructure for acknowledgment and inclusion in the strategy.

AILA is the growing national advocacy body representing 2,500 active and engaged landscape architects, and promoting their crucial role in shaping the world around us. Our membership covers a diverse range of professional services including strategic planning, urban design, building settings, open space design and natural resource management working across all levels of government and within the private sector. Our profession is at the forefront of the planning, design, construction and management of quality open spaces and the public realm.

AILA acknowledges that Infrastructure Victoria's 30-year Strategy will enable significant and essential investment in the future of the State and we do not underestimate the importance of the legacy it will leave for future generations. We also believe that 'good infrastructure is not an end in itself, but an enabler of better social, economic and environmental outcomes'. We therefore outline the following key considerations that need to be recognised within the 30-year Strategy in order to achieve the objectives.

AILA asserts that Green Infrastructure (or living infrastructure) is fundamental to the health of individuals and communities. Green Infrastructure must be recognised and prioritised as an asset class to ensure the health and wellbeing of Victoria's population, and our ecosystems, now and into the future.

Green Infrastructure is defined as:

- 'The network of natural and built landscape assets, including green spaces and water systems within and between settlements. Individual components of this environmental network, such as gardens, parks, recreation areas, highway verges and waterways, are sometimes referred to as 'green infrastructure assets'.¹

¹ Australian Standard 5334-2013 : Climate change adaptation for settlements and infrastructure - A risk based approach



AILA fundamentally believes that both soft and hard infrastructure should be considered by the government and planned for within the 30-year Victorian Infrastructure strategy. Natural infrastructure assets are key to tackling the major issues facing cities, towns and regions including; an ageing population, climbing obesity and diabetes rates, reduced fitness particularly in young children, social exclusion and the increasing importance of positive mental health, major transportation challenges, and heat related death. Increasing investment in Green Infrastructure is a minor cost that will bring significant liveability benefits, and will directly contribute to the objectives of the 30-year strategy including:

- Foster healthy, safe and inclusive communities
- Protect and enhance natural environments
- Advance climate change mitigation and adaptation
- Build resilience to shocks

AILA's submission on the **15 Year Infrastructure Plan for Australia** dated August 2015, makes the following observations.

The 2015 Intergeneration Report Australia in 2055, notes "Australian Government health expenditure is projected to increase as a proportion of GDP from 4.2 per cent in 2014-15 to 5.7 per cent of GDP in 2054-55". An aging population is often pointed to as a reason for the rising cost of health care. Whilst it contributes to a rise in costs, approximately 80% of the increased expenditure per person relates to non-demographic factors – people seeing more doctors, having more tests and taking more medicine². The physical and mental health benefits of regular engagement with natural environments are well known. Creating cities that encourage people to be more active and connected with their community are essential preventative health measures and as a result can reduce escalating health care costs.

In contemporary western societies chronic disease has now overtaken infectious disease as a major cause of death³. Over 60% of Australian adults are considered overweight or obese with this figure predicted to reach close to 80% by 2025⁴. Increased activity is one way of preventing obesity and related diseases but the priorities on how we plan and design our cities needs to shift. Research has shown the quality of a local environment can have a significant impact on activity levels. For people living in a residential environment incorporating "*high levels of greenery, the likelihood of being more physically active is more than three times as high, and the likelihood of being overweight and obese is about 40% less*"⁵. Landscape architects design streetscape and open space improvements that encourage people to be more active. Well-designed streets and open spaces reduce the barriers of people walking or riding, instead of using a car, by providing well connected path and cycle networks. When upgrading existing streetscapes government have the opportunity to reprioritise spaces to support healthier modes of transport that enable people to be more active.

² Australian Government, '2015 Intergenerational Report' (Canberra, 2015)

³ Center for Active Design, 'Design + Health' website: <http://centerforactivedesign.org/data/>

⁴ Australian Institute of Health and Welfare, website: <http://www.aihw.gov.au/risk-factors-overweight-obesity/> and Obesity Australia 'No Time to Weight' available at <http://www.obesityaustralia.org/resources-1/no-time-to-weight> p.26 [10 August 2015]

⁵ Ellaway et al, 'Graffiti, Greenery, and Obesity in Adults: Secondary Analysis of European Cross Sectional Survey', British Medical Journal, available from <http://www.bmj.com/content/331/7517/611> [5 July 2005]



Green Infrastructure provides the opportunity to embed not only ecosystem services within our network of infrastructure investments, but also enhance human health and well-being by providing open space networks of parks, trails and corridors. Providing connections between people and nature promotes active living and improves mental health⁶. With cardiovascular disease being the leading cause of death in Australia (almost 50,000 deaths in 2011), the contribution of Green Infrastructure to slowing the rate of death from this preventable disease is potentially significant. Green Infrastructure, when planned well and integrated into our infrastructure investments, promotes passive recreation, sport and recreation. Parks and other landscapes that incorporate active living elements, such as play grounds and walking trails, directly encourage less sedentary behaviour.

Further to this, Green Infrastructure has been shown to reduce air pollution, air-borne particulates and greenhouse gas emissions. Computer simulations suggest that trees and forests in the United States removed 17.4 million tonnes of air pollution in 2010, with a value to human health of US\$6.8 billion⁷.

In addition to the health and well-being benefits, Green Infrastructure helps protect life against flooding, excessive heat (urban heat island impact) and other climatic variables. It supports biodiversity and provides the critical connections within and between ecosystems. Green Infrastructure is also considered a more efficient and effective means of managing stormwater, when compared with traditional grey infrastructure solutions. Green Infrastructure also provides enhanced visual amenity which is crucial for gaining the community's support for public infrastructure projects.

Climate change presents one of the greatest risks, if not the greatest risk to the nation's infrastructure assets. Globally, there is a transition away from single purpose 'grey infrastructure', to more multi-purpose infrastructure that mimics nature, provides critical ecosystem services and promotes healthy and active living. Embedding landscape led thinking as a key design function within all projects builds greater resiliency across built and natural systems.

We believe there is a real opportunity for Infrastructure Victoria to take a leadership position and formally acknowledge green infrastructure as key infrastructure asset, and one that has a tangible impact on creating a higher quality of life for Victorians.

AILA recommends the inclusion of a statewide Green Infrastructure Plan as a part of Infrastructure Victoria's 30-year strategy.

Guidelines supporting the delivery of green infrastructure should be included in the final documentation.

Specific reference should be made to the delivery of high quality, well-connected public open space networks to support human health and well being, as well as ecosystem health and sustainability outcomes.

⁶ Townsend and Weerasuriya for Beyond Blue and Deakin University, 'Beyond Blue to Green: The Benefits of Contact With Nature for Mental Health and Wellbeing' 2010

⁷ Nowak, D., Hirabayashi, S., Bodine, A., and Greenfield, E. (2014) Tree and forest effects on air quality and human health in the United States. *Environmental Pollution*, 193, 119-129



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Particular attention must be given to the delivery of high quality, safe and accessible public realm designed to prioritise pedestrian circulation and cycle networks in an environment where environmental comfort is maximised.

We look forward to your consideration of this submission, and would be pleased to meet with Infrastructure Victoria representative to discuss further. Should you have any queries or would like to arrange a time to meet please contact Felicity McGahan, AILA Victorian State Manager, on 0401 811 976.

Yours sincerely,

Felicity McGahan

AILA Victorian State Manager

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