



Australian Institute of Landscape Architects

The Australian Institute of Landscape Architects – South Australian Chapter (AILA SA) is pleased to provide comment on the Planning, Development and Infrastructure Bill (The Bill). AILA SA has previously provided industry contribution towards the Planning Reform and the 30 Year Plan Review (ongoing), and we remain keen to engage collaboratively with the State Government and its agencies to promote a more prosperous and sustainable future for South Australia.

AILA SA is part of AILA, the growing national advocacy body representing 2,500 active and engaged landscape architects. Committed to designing and creating a better Australia, landscape architects have the skills and expertise to solve macro issues with innovative, integrated solutions. Landscape architects contribute leadership, creativity and innovation as they strive to collaborate to achieve better health, environmental, social and economic outcomes. From citywide strategies to the redesign of local parks, landscape architects are making places and spaces more sustainable and productive.

AILA SA commends the Minister for the ambition to transform the planning system, and in particular the greater focus and central position design is given in the new framework for planning, development and infrastructure in South Australia.

It is recognised that the Bill for consultation is the first step in the transformation of the planning systems. The planning framework set out under the Bill introduces a number of new positions of authority, as well as new codes, standards and policy. However the detail of each of these planning ‘tools’ is yet to be articulated and will ultimately determine the effectiveness of the Bill, its ability to unlocking the next generation of development and to contribute to a more liveable and resilient South Australia.

Without the forthcoming detailing of mechanisms permitted by the Bill, it is inappropriate for AILA SA to endorse the Bill at this time. However AILA supports the intent of the Bill, and provides the following comments to highlight areas of concern and provide direction that may inform the subsequent implementation phase of the Bill.

Objects and Planning Principles (Part 2, Division 1)

AILA SA commends the vision, ambition and language used in setting the Objects of the Act and the Principles of Good Planning. However, AILA SA believe the recognition of place, public realm, open space climate change (including adaption and mitigation) and Green Infrastructure could be strengthened in the wording of both items.

It is felt that a greater emphasis of the above would maximise the intended ambition of the Bill and drive the transformation of South Australia’s built environment. Subjective language such as ‘appropriately landscaped’, whilst encouraging does not adequately reflect the potential for the Bill and the role those elements listed above can play in the development of world class cities, towns and suburbs.

AILA SA would be please to elaborate further on the above should it be appropriate. The items highlighted above will be discussed in greater detail in subsequent sections of the response.

State Planning Commission (Part 3, Division 1)

In support of the Bill and the pivotal role the State Planning Commission will play, it is requested that the Minister include the profession of *Landscape Architect* within Subsection 3b.

Increasingly, Landscape Architects are taking leading roles locally and nationally in the planning and redevelopment of urban and regional areas as well as major infrastructure projects. The liveability of cities, towns and suburbs will determine the long term economic success and resilience. Landscape Architects are champions for liveable cities, in particular through the professional respect of place and increasingly the integration of green infrastructure in advancing climate change adaption and mitigation.



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Landscape Architects shape project outcomes in a variety of ways. They bring a critical eye to the potential opportunities and constraints of a place, site or landscape. They create the conditions for nature to function and thrive, ensuring that development puts back as much as it takes from the landscape. They bring together other disciplines, in an integrated way to generate better outcomes. They are active on all types of development, connecting, facilitating and navigating to help achieve shared outcomes.

AILA SA is willing to support the formation of the commission and remains available for further engagement regarding appropriate candidates, as well as offering industry support to the Commission once formed.

Community Engagement (Part 4, Division 1)

AILA SA's advocacy for developing stronger communities is a central pillar of the profession. AILA SA supports the Bill's proposal to engage early with the community on key planning policy and rules and to include citizens in the decision-making on issues that affect them. Subject to the detail of the proposed Community Engagement Charter, a more flexible and tailored approach to community engagement is a welcomed change and will provide new opportunities to increase community awareness, understanding and input.

Communities are demanding more from government and landscape architects are increasingly collaborating with the public and other stakeholders to achieve shared outcomes.

The Charter should encourage or mandate the forming of partnerships between experts (such as Landscape Architects) with citizens, academia, industry and government to more deliver integrated and informed outcomes.

AILA SA recognises the opportunity that early engagement may lead to wider community support for individual outcomes. However the Bill and its Charter must put in place mechanism that keep the community informed through stages of major projects with high levels of community impact. Without continuity of communication between high level strategies and on ground outcomes, the Bill risks alienating the community, leading to a loss of local identity / connection to place and ultimately risking economic decline

The Charter should include the principles from Better Together <http://bettertogether.yoursay.sa.gov.au/>

Planning and Design Code (Part 5, Division 2, Subdivision 3)

The proposed Planning and Design Code is one of the most exciting opportunities of the Bill. Yet, without knowing the detail it is in particular difficult to endorse. AILA SA supports the importance of "good design" and encourages a Code to enable better design outcomes that enhance the local amenity and character of communities across the State.

Support for design through the Code must be articulated in its detail. Moving away from a complex web of different zones is supported; however the Code must avoid over simplification or generalisation of the planning and design requirements of developments. Without sufficient guidance and performance requirements of the Bill, it will place too great a responsibility on the designer to respect / respond to local conditions, and risk the loss of local character or sense of place.

Climate Change and Carbon Neutral strategies are an advancing agenda of the current Government, for which they must be congratulated. The integration of climate change adaption and mitigation strategies into the Planning and Design code should provide one of the most significant and lasting legacies of the new Bill.

"The liveability of Australia's cities will be affected by how their sustainability is managed." (Department of Infrastructure & Regional Development, *State of Australian Cities* 2013)

As average temperatures continue to rise, and the number of extreme heat days increase annually, methods to cool our cities are becoming increasingly important. With over three-quarters of Australians now living in



urban areasⁱ, combating the “urban heat island effect” within our cities is becoming a major public health issue.

The State of Australian Cities 2013 reports “People living in cities, particularly those in Australia’s inland cities, can be more susceptible than non-urban dwellers to the effects of heatwaves as a result of the urban heat island (UHI) effect. This is caused by the prevalence in cities of heat-absorbing materials such as dark coloured pavements and roofs, concrete, urban canyons trapping hot air, and a lack of shade and green space in dense urban environments.”ⁱⁱ

Increases in urban temperatures can increase air pollution, greenhouse gas emissions and reduce human comfort, making it harder for people to cool down. Research undertaken by Melbourne City Council has found that average temperatures within Melbourne's CBD are up to 4°C higher than the surrounding suburbs. During the evenings, the temperature difference can be up to 12°C. As a result, on hotter days and nights health risks increase for the most vulnerable within cities, particularly the young and elderly.

Melbourne averaged approximately 200 heat-related deaths in 2013, in comparison to the state road toll of 242 deaths. By 2030, the number of deaths as a result of heat is expected to double.ⁱⁱⁱ

The City of Melbourne has commissioned a report into the current and future costs associated with heat, heat waves and the intensification of the urban heat island effect. It considered the impacts on health, transport infrastructure, energy demand and infrastructure, trees and animals, and crime. The report concluded: “The total economic cost to community due to hot weather is estimated to be \$1.8 billion in present value terms. Approximately one-third of these impacts are due to heatwaves. Of the total heat impact, the urban heat island effect contributes approximately \$300 million in present value.”^{iv}

Over half of the surfaces within our cities are heat absorbing materials, such as darker coloured roofs, car parks, roadways and footpaths. The urban heat island effect occurs because of the capacity (thermal mass) of these darker surfaces to absorb the sun’s energy, converting up to 80 per cent of sunlight into heat that is stored and then released, raising local temperatures. As development occurs, these darker, absorbent surfaces and materials are increasing, while the overall extent of vegetation, shade and open spaces is decreasing within our cities.

Cooler cities provide the following benefits:

- Better air quality – an annual economic benefit of nearly \$1 billion annually in the US^v
- More resistant to heat and pollution-related illness and death
- Reduced peak energy demand and CO2 emissions (For every 1°F / 0.6°C increase in temperature, peak utility loads in medium and large US cities increase by 1.5 – 2.0 per cent)^{vi}
- Healthier, more comfortable and enjoyable urban spaces
- Improved economic performance (main streets)
- Increased longevity of road infrastructure when shaded by trees

Landscape architects have a major role to play in the design of cooler cities and the mitigation of rising temperatures at a city-wide, neighbourhood and local site scale. The planning, design and construction of our urban environs, through the application of green roofs and walls, street trees and tree planting, greener open-space design, rain gardens and reflective roofs and pavements can all contribute to improving the comfort, quality and health of the city and its residents. Every 1°C temperature reduction that can be achieved through the better design of cities can equate to five per cent energy saving through reduced cooling loads.^{vii} Reduced cooling loads will have significant social, economic and environmental impact to the long term sustainability of Australian cities.



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Alternatively, without changing the way we manage the growth of our cities, a Flinders University-led study has found that a 1°C temperature increase boosts cooling loads by 1.5million kWh per year, generating 1000 tonnes in carbon dioxide emissions. viii

The development of South Australia's urban areas has not followed the same pace as other cities nationally. In planning for growth, and principally the increased uplift and densification of urban centres, the Planning and Design Code has the opportunity to learn from the effects of progressive densification of other cities to increased warming through the urban heat island effect.

The planning and design code and design standards should seek to address the following contributory effects:

- Poor site planning (orientation), leading to design of buildings that consume increased energy for mechanical heating and cooling
- Over-development of the site, including loss of existing green space and undervalued importance of existing trees
- Building design and construction using darker, heat absorbent materials and surfaces
- Reduction in communal and private open spaces in redeveloped sites, including reduction in amount of planting compared to paving
- Limited requirement to address urban heat island effect through design standards, materials selection or green initiatives (green walls or roofs)

Across neighbourhoods, the changing character of local streets and public spaces has also seen the decline in many of the elements that would help mitigate against warming, including:

- Increase in extent of hard paved areas, predominately with darker, heat absorbent materials
- Loss of trees and tree canopy cover, through age, maintenance or as a result of local redevelopments
- Loss of green open spaces, grassed areas and planted areas, including redevelopment of vacant lots
- Decline of maintenance standards required to support greener streets and public spaces

AILA SA advocates for the recognition of the urban heat island effect and for greater efforts to limit the impact of warming in the long term planning and development of South Australia's cities, towns, suburbs and supporting infrastructure.

AILA SA encourages greater awareness of opportunities to integrate effective cooling measures into the planning, design, redevelopment and management of urban areas. Climate responsive design and adaptation initiatives should be a shared responsibility. The Bill and role of the Planning and Design Code and Design Standards provides important tools to assign responsibility to all.

AILA SA advocates for:

- Greater protection of existing trees within urban areas through increased value assessment of their worth to deter removal and drive responsive design outcomes
- Greater incentivisation or regulation for the inclusion of water sensitive urban design and integrated water management in new urban developments and maximise opportunities to retrofit into existing sites
- Greater incentivisation or regulation for the inclusion of green roofs and green walls in new urban developments and maximise opportunities to retrofit into existing
- Greater incentivisation or regulation for specification of reflective roofs and footpaths / pavements surfaces, as well as specification of materials with lower embodied energy. Lighter coloured surfaces have an increased ability to emit absorbed heat – studies indicate that the use of cool roofs and pavements can reduce local temperatures by 2-3°C, as well as lower the running cost of buildings.ix
- Greater awareness of the value in maximising the greening of new and existing urban spaces. Studies have indicated that grass surfaces can reduce surface temperature by 24°Cx, and planting vegetation for shade can reduce a building's cooling energy consumption by up to 25 per cent annually.xi

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- Greater consideration to master plan urban sites to address sun paths, prevailing winds, over shadowing and utilisation of other natural systems to reduce the long term requirements for mechanical heating and cooling systems.
- The establishment of Cooling Cities criteria to assess/rate the impact of new development or redevelopment will have on local conditions, with expectation that sites design aspire to zero net addition to local temperatures

Climate Change adaption or mitigation within cities, towns and suburbs must be recognised and targeted through the detail of the Planning and Design Code, as well as Design Standards. This provides a leading opportunity for international recognition of the Bill.

AILA SA including our national professional network is willing to support the Minister and DPTI staff in the development and review of the Planning and Design Code.

Design Standards (Part 5, Division 2, Subdivision 4)

AILA SA applauds the recognition of public realm within the Bill and its critical role in the development of liveable cities, towns and suburbs. The introduction of design standards and supporting design manuals and guidelines is one of the most important opportunities to positively influence the design of the public realm and the opportunity to maximise public benefit through unlocking greater development.

The design standards and supporting documents must seek to prioritise people in the redevelopment of the public realm. In past, transport of infrastructure needs have been prioritised to the detriment of the social, cultural, economic and environmental character and long term potential of place.

The standards must drive change, promoting the qualities of place through a holistic approach that balances the needs of the individual and community, the transport and infrastructure requirements and the economic conditions. Green Infrastructure should be central to setting the design standards to ensure resilience cities, towns and suburbs. Refer to 'Infrastructure Framework' for further details regarding the role of Green Infrastructure within the Bill.

It is recognised that achieving a better balance between infrastructure and place can be difficult to achieve through a set of standards. It is recommended that design review is utilised in support of the Design Standards to assess strategic projects, major transport infrastructure projects or where there is a direct impact or interface with the public realm.

Accredited professionals (Part 6, Division 4)

AILA SA supports the requirements for accredited professionals on Assessment Panels and requests the inclusion of Landscape Architects. As educated professionals, Landscape Architects add value a complimentary voice in support of the Bill and the assessment process, in particular in respect to the assessment of place. AILA SA requests the professional status of "Registered Landscape Architect (RLA)" being included in the detail resolution of the Bill and accredited professionals.

Landscape architects hold, at a minimum, a university bachelor degree and potentially a master's degree. They are increasingly seen as a profession set to dominate the debates of the next century and lead policy making to deliver fantastic outcomes for cities, towns, regions and their inhabitants. The work of Australian landscape architects is increasingly being recognized on the world stage as other countries realise their unique skills in creating liveable cities, healthy active spaces and sustainable design. AILA SA would be please to provide the Minister with further information as necessary regarding the institute's accreditation processes.



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Design Review (Part 7, Division 4)

AILA SA is supportive of the Design Review process currently undertaken by the Office of Design and Architecture South Australia (ODASA) for projects within the City and Inner Metro Region. Landscape Architects have a history providing a valued professional opinion into the review process.

AILA SA supports the inclusion of Design Review in the Bill and believe it could provide a key instrument to reinforce the Objects of the Act and the Principles of Good Design. It should also provide independent assessment to ensure the Planning and Design Code is appropriately applied and development integrated through relevant design standards.

Design Review in the Bill is lacking further detail regarding when it is to be utilised, its membership and submission requirements (including applicant professional accreditation). AILA SA support the role of the Government Architect in Design Review and query the absence of reference to the ODASA in this section (or any other areas) of the Bill.

Subject to the development of detail, AILA SA request the professional status of “Registered Landscape Architect (RLA)” being included as a relevant skill in the formation of tailored Design Review panels.

AILA SA recommends the Bill provide stronger terms of reference for Design Review, in association with the resolution of the Planning and Design Code. AILA SA is willing to assist the Minister where appropriate in review of further detail.

Infrastructure Framework (Part 13)

AILA SA supports the Minister in the ambition of the Bill and the aspiration of the Object of the Act and Principles of Good Planning. AILA SA values the greater recognition of design in planning, development and infrastructure. The Planning and Design Code, as well as Design Standards have the opportunity to fundamentally change our built environment. AILA SA recommends this change should place a greater focus on people and place, and embed a greater resilience to climate change into our built environment.

The inclusion of infrastructure into the Bill recognises the critical role it can play the realisation of more liveable cities, towns and suburbs, as well as a catalyst for growth.

The Bill must seek to better integrate infrastructure into the built environment. Design Standards and the role of Design Review must be strengthened to ensure that advancing essential infrastructure does not result in loss of long term place outcomes. Overall, the language regarding Essential Infrastructure (Clause 122 and 123) and Infrastructure Frameworks (Part 13) does not reinforce the transformation ambition of the Bill, Object of the Act or Principles of Good Planning. Infrastructure should be integrated into the public realm. Currently the language lists public realm (and by association the characteristic / quantities of place) as an addition to “roadworks”.

The opportunity to recognise the importance of Climate Change and the role infrastructure can play in climate change adaption and mitigation should not be lost. AILA SA recommends recognition of Green Infrastructure as a central component of the provision of infrastructure within South Australia.

AILA SA fundamentally believes that both soft and hard infrastructure should be considered key to tackling the major issues facing Australia’s 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.

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.



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In contemporary western societies chronic disease has now overtaken infectious disease as a major cause of death. Over 60% of Australian adults are considered overweight or obese with this figure predicted to reach close to 80% by 2025^{xii}. 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”^{xiii}.

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.

As identified in the *Australian Infrastructure Audit*, Climate change presents one of the greatest risks, if not the greatest risk to our built environment assets, including infrastructure. 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.

AILA SA recommends the integration of Green Infrastructure in the development of the Design Standards and supporting design guidelines and manuals.

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 health. With cardiovascular disease being the leading cause of death in Australia (almost 50,000 deaths in 2011), the contribution of Green Infrastructure to slow the rate of death from this preventable disease is potentially significant. Green Infrastructure, when planned well and integrated into the built environment, 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.

Green Infrastructure has been shown to reduce air pollution, air-borne particulates and greenhouse gas emissions. In addition to the health and well-being benefits discussed earlier, 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 with nature. 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.

Overall, the Bill has the potential to establish Design Standards and supporting materials for infrastructure that will play a significant role in promoting long term prosperity, productivity and health and well-being for Australia’s cities and towns.

Funds and Off-set Schemes (Part 15)

AILA SA continues to value and support the Planning and Development Fund as an important enabler to undertaking major projects across the State, and support its continuation in the Bill.

The Off-set scheme proposed in the Bill is recognised as an opportunity to leverage from development opportunities and share the responsibility for public realm enhancements or revitalisation (partnerships). The incentivisation of the scheme and the criteria for contribution requires further detail and must not



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compromise the establishment of a minimum standard. However, AILA supports the principle of the scheme and await further detail.

The Open space contribution is noted to have been amended to correctly capture multi-unit buildings, however AILA SA considers the status of the scheme an opportunity unfulfilled and out of step with the current Bill.

The importance of the role of open space is undisputed and it will be an increasingly important one (*The 30-Year Plan for Greater Adelaide*), but it is a notable omission from the Bill. To ignore open space is highlighted by AILA SA as an oversight. AILA SA questions how the legislation can consider the planning system without addressing *open space as a fundamental planning concept*? Without the appropriate recognition of open space in the Bill, AILA SA is concerned that open space as “a key component of a liveable city” (*Renewing Our Urban Future: Unlocking South Australia’s Potential*) be not be appropriately considered in the second legislation.

In recent years AILA SA and local government have invested much enquiry into the consideration of open space. It of itself was a key Reform item (*Reform 21*). To omit open space from the current Bill will deny the opportunity for the continued engagement with the profession and frustrate the energy which could be focussed on achieving reform implementation.

The urban tree Fund is also considered an opportunity to strengthen the existing provision within the Bill. In its current form, the fund has limited opportunity to capture payments and invest in significant tree planting programs. 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 billion. The Bill should commit all tiers of government to annually increase net tree canopy cover across urban areas, including streetscapes, parks and public spaces. Studies have indicated that shade trees can reduce surface temperature by up to 19°C and lower atmosphere temperature by 5-7°C.^{xiv}

Other Comments

AILA SA is currently involved in consultation with State Government regarding a new Climate Change Strategy for South Australia, including a Carbon Neutral Framework for Adelaide. The current Bill must be strengthened to embed climate change into the planning, development and infrastructure systems. The liveability of our cities, towns and suburbs directly links to how sustainable they are.

Climate change adaptation and mitigation measures must be included in the development of the planning and design code, and the Design Standards (including design manuals and guidelines). The Bill must drive a more sustainable built environment. The resilience of our cities, towns and suburbs to climate change will underpin their long term economic future.

Alignment between the Planning, Development and Infrastructure Bill and the Climate Change Strategy must be better facilitated to maximise the opportunity for change and unlock a better future for South Australia.

Conclusion

AILA SA appreciates the open invitation to contribute to the aspiration of reform for the State’s planning system. The Minister and his Department are to be lauded for the exhaustive consultation process and the formulation of recommendations, culminating in the report, *Our Ideas For Reform*. The breadth of the reform outlined in that report was ambitious, provocative and challenging. The imperative for change is compelling, where a planning system becomes “an engine of economic growth” (*Renewing Our Urban Future: Unlocking South Australia’s Potential*) and concepts like *vibrancy, creativity, place-making* are recognised as qualities of successful communities. The opportunities for these qualities to be expressed are in the spaces intrinsic to



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urban design; setting the physical spatial context, enunciating the relationship between the private built form and the public realm, defining open space.

AILA SA is available to the Minister and his department to further clarify any of the matters raised. AILA SA is willing to support the Minister in the next stages of the Bill (2016) and would be pleased to assist in the review of the Planning and Design Code, Design Standards and other outstanding information as they are developed.

Ben Willsmore

AILA SA President

ⁱ Block, A. Livesley, S., Williams, N. 'Responding to the Urban Heat Island: A Review of the Potential of Green Infrastructure' Available from: <http://www.vcccar.org.au/sites/default/files/publications/VCCCAR%20Urban%20Heat%20Island%20-WEB.pdf> [Accessed 19 March 2015]

ⁱⁱ Infrastructure.gov.au, (2015) *State of Australian Cities 2013* [online] Available from: http://www.infrastructure.gov.au/infrastructure/pab/soac/files/2013_00_INFRA1782_MCU_SOAC_CHAPTER_4_WEB_FA.pdf [Accessed 19 March 2015]

ⁱⁱⁱ toll, M., island, M. and identified, C. (2014). *Melbourne city centre a death trap as heat-island effect takes its toll*. [online] The Age. Available at: <http://www.theage.com.au/victoria/melbourne-city-centre-a-death-trap-as-heat-island-effect-takes-its-toll-20140116-30xt8.html> [Accessed 30 May 2015].

^{iv} AECOM, (2015). *Economic Assessment of the Urban Heat Island Effect*. [online] Melbourne: City of Melbourne. Available at: https://www.melbourne.vic.gov.au/Sustainability/AdaptingClimateChange/Documents/UHI_Report_AECOM.pdf [Accessed 10 Jun. 2015].

^v Globalcities.org, (2015). *A Practical Guide to Cool Roofs and Cool Pavements*. [online] Available at: http://www.coolrooftoolkit.org/wp-content/pdfs/CoolRoofToolkit_ExecSummary.pdf [Accessed 19 March 2015]

^{vi} ibid

^{vii} Lehmann, S. (2014). *Green Spaces Can Combat Urban Heat Stress - The Adelaide Review*. [online] The Adelaide Review. Available at: <http://adelaiderreview.com.au/form/green-spaces-can-combat-urban-heat-stress/> [Accessed 9 Jul. 2015]

^{viii} Blogs.flinders.edu.au, (2015). *Flinders News > Adelaide Urban Heat Island project*. [online] Available at: <http://blogs.flinders.edu.au/flinders-news/tag/adelaide-urban-heat-island-project/> [Accessed 9 Jul. 2015]

^{ix} Globalcities.org, (2015). *Cooler Cities: Global Cool Cities Alliance*. [online] Available at: www.globalcoolcities.org/cool-science/cooler-cities/ [Accessed 19 March 2015]

^x Value-landscapes.eu, (2015). *Study finds tree shade to be most effective at cooling our cities - VALUE - Valuing Attractive Landscapes in the Urban Economy*. [online] Available at: <http://www.value-landscapes.eu/news/12/Study+finds+tree+shade+to+be+most+effective+at+cooling+our+cities.html> [Accessed 19 Mar. 2015]

^{xi} EPA.gov, (2003) *Cooling Summertime Temperatures: Strategies to Reduce Urban Heat Islands*. [online] Available at: <http://www.epa.gov/heatislands/resources/pdf/HIRIbrochure.pdf> [Accessed 19 Mar. 2015]

^{xii} 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]

^{xiii} 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]

^{xiv} VALUE Value-landscapes.eu, (2015). *Study finds tree shade to be most effective at cooling our cities - VALUE - Valuing Attractive Landscapes in the Urban Economy*. [online] Available at: <http://www.value-landscapes.eu/news/12/Study+finds+tree+shade+to+be+most+effective+at+cooling+our+cities.html> [Accessed 19 Mar. 2015].