

21 September 2018

Planning Reform  
Mr Tim Anderson QC  
Chair, State Planning Commission  
GPO Box 1815  
ADELAIDE SA 5000

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Dear Mr Anderson

## **SOUTH AUSTRALIA'S STATE PLANNING POLICIES – RESILIENT EAST FEEDBACK**

The Resilient East Project Steering Committee (the Committee) welcomes the opportunity to provide feedback on the proposed State Planning Policies, dated July - September 2018. The Resilient East Project is a partnership between the Campbelltown City Council, the Cities of Adelaide, Burnside, Norwood Payneham & St Peters, Prospect, Tea Tree Gully, Unley and the Town of Walkerville and the South Australian Government, as detailed in Appendix 1. This submission follows initial feedback provided on the *Blueprint for SA's Planning and Design Code Introductory Paper* and *South Australia's Planning and Design Code – How Will it Work? Technical Discussion Paper*.

This input does not reflect formal Council consideration by any of the constituent Councils, which in most instances is being made formally by individual Councils.

The importance of the State Planning Policies as key instruments in the new planning system, requires the highest level of community input as recognised by the Community Engagement Charter. Professionals, community and environmental interest groups involved in developing and implementing South Australia's various regional Climate Change Adaptation Plans are key stakeholders in this engagement. The Committee is disappointed in the extent of community awareness provided in relation to the draft State Planning Policies, which was considered to be minimal and with no evidence of the environmental groups and climate change adaptation stakeholders that should have been strongly engaged through the process. The Committee has indicated in previous Planning Reforms submissions that it would like to be advised of any future consultation processes, however this did not occur. The Committee is concerned that if these key stakeholders groups are not made aware of the release of these new strategies and policies, the feedback received will be limited and will not represent the range of views of key stakeholders.

### **Purpose of Feedback**

The Committee shares the common objective of the State Planning Policies in mitigating against, and adapting to climate change and achieving sustainable outcomes including the planning target for urban green cover to be increased by 20% by 2045.

The key purpose of the Committee's feedback is to ensure that the State Planning Policies adequately align with the key priority actions outlined in the various South Australian Climate Change Adaptation Plans, including the Resilient East Regional Climate Change Adaptation Plan.

In order to achieve this, we suggest the relevant key priority actions that should be considered for integration into the State Planning Policies are as follows:



- **Increase planting across urban areas.**

*Rationale:* Increased planting is valued for the contribution it can make to cooling urban areas, thereby creating amenable and comfortable living environments for residents and visitors and improving human health.

- **Increase the area of open space in strategic locations.**

*Rationale:* Changing climate may require the reduction of maintenance of some open space, however it may also lead to greater investment in high value open space and green infrastructure in strategic locations. It will also necessitate reducing reliance on potable water for irrigation and instead utilising alternative water sources such as treated wastewater and recycled water.

- **Improve stormwater management to maximise amenity and water reuse.**

*Rationale:* Improving stormwater management recognises the value placed on mitigating floods to maintain residents' safety and prevent damage to property. It also recognises the benefits of the reuse of stormwater to maintain open space, vegetation and street trees.

- **Make asset management plans climate ready.**

*Rationale:* Asset management plans are required for Council owned infrastructure, yet the majority of current asset management plans do not consider climate impacts. This is a particular issue given that asset management plans often relate to infrastructure that has a long lifespan and therefore is likely to be impacted by changes in climate. Climate change considerations therefore should be embedded in asset management plans so that adaptation becomes part of everyday practices.

- **Prevent development in hazard prone areas.**

*Rationale:* Past residential and commercial developments have occurred in areas that are now understood to be subject to flood and fire risk. The Committee recognises the complexity of trying to balance people's desire to live and work in the foothills or along watercourses with the need to ensure the community is safe from risks such as bushfires and flooding. However, as the risk of climate hazards increases, it is important to consider, minimise and manage the potential future risks which may affect the property. In this respect, the primary objective should be to prevent development in hazard prone areas. Given the universal impacts of climate change, prevention and mitigation measures should be dealt with through a coordinated approach across the State.

- **Prepare and implement climate ready guidelines for public realm, green infrastructure and urban design.**

*Rationale:* Climate ready natural and built spaces and infrastructure are designed and constructed to take into account the anticipated impacts of climate change such as extreme heat, flooding and bushfire. Climate ready public realm, green infrastructure and urban design can play a significant role in creating an urban environment that is amenable and comfortable for residents and visitors and contribute to improving human health.

The Committee has a particular interest in ensuring the actions under the *30 Year Plan for Greater Adelaide Implementation Plan* are reinforced and further supported in the State Planning targets. These actions include:

A.63 *Pursue opportunities to plant urban green cover along arterial roads, rail corridors and medians where safe to do so.*

A.57 *Partner with local government through the Open Space grant program to plan and prioritise a series of projects which demonstrate opportunities to provide quality open space outcomes in higher density urban renewal areas.*

- A.9 *Deliver demonstration projects in the Park Lands that help create a liveable city, provide for a range of activities and link the city to the suburbs.*
- A.59 *Develop planning policies and provide guidance to assist in the delivery of green infrastructure.*
- A.62 *Develop a process to ensure consistency in how green canopies and other green infrastructure are measured.*

### General principles

The following general principles should be applied to the development and scope of all State Planning Policies:

- All levels of decision making in the planning system should incorporate processes to consider, adapt and mitigate against the impacts of climate change.
- The State Planning Policies should encourage decision making which is informed by the best available information, and considers the potential for multiple, cascading and cumulating climate impacts.
- Planning decisions should be made using evidence based technical advice.
- Identification of hazard prone land taking into account the anticipated changes of climate change and the potential change in interactions between human settlements, environment and biodiversity.
- Standards and guidelines for building design and construction which take future climates into account.
- Natural environmental landscapes and assets (including urban and non-urban biodiversity, coastal features, air, and water resources) are identified, valued and protected as far as possible from climate impacts and development.
- A planning system which applies a risk-based assessment approach to decisions that impact the environment and reduce the risk of hazards to people, property and environmental assets.
- High-level State Planning Policies are translated to the Planning Design Code with careful spatial application following further consultation, testing and investigation, resulting in effective policies and guidelines. Processes should be established to monitor outcomes, review and make changes where necessary.

The State Planning Policy on Climate Change in particular, should require the following:

- processes for the regular review of climate risk information and monitoring of changes to rural landscapes and urban areas, including demonstration (based on consistent measurement) of progress towards the urban tree canopy cover target;
- processes to prevent increasing vulnerability;
- improved mechanisms (particularly around post construction accountability and operation) to reduce energy use and emissions that exacerbate impacts of climate change; and
- development which makes the fullest contribution to the mitigation of climate change. It is typically more cost effective to incorporate good design when a development is first constructed, rather than to retrofit good design in existing buildings.

### Detailed Feedback on the Policies

Most of the State Planning Policies have some connection to climate change. Some of the language does not accurately capture the elements of social, economic and environmental needs relating to climate change, and there is a required for essential policy components to achieve desired outcomes, that are currently missing from the draft policies.

For this reason, we have provided some comments and suggested changes to wording as outlined below.



## STATE PLANNING POLICY 1: INTEGRATED PLANNING

The Integrated Planning Policy supporting text provides insufficient emphasis on sustainability by addressing social, economic and environmental needs of current and future South Australians.

In order to achieve the desired outcomes, it is critical to successfully integrate policies and policy objectives across all aspects of planning and to recognise some inherent conflicts between SPPs, through careful further investigation and spatial application through the Regional Plan and sub-regional plan preparation process. In the State Planning Policies (SPPs) there are only weak linkages between climate adaptation, greening and sustainability, and urban form. The suggested comments below seek to strengthen these links.

	Draft wording	Suggested Wording
para 1	Integrated planning brings together all dimensions of a policy question (economic, social and environmental) and balances these in an open and transparent way.	Integrated planning brings together all dimensions of <i>sustainability in planning decisions (economic, social and environmental needs) and addresses these</i> in an open and transparent way.
para 2	Integrated planning has the potential to contribute to how a city or region grows and evolves and will contribute to the economic performance, sustainability and liveability of our state.	Integrated planning has the potential to contribute to how a city or region grows and evolves and will contribute to the economic performance, <i>liveability, and healthy environment</i> of our state
para 5	Applying best analysis to planning policy, together with quality design solutions will help unlock opportunities, achieve more vibrant, sustainable and prosperous places and create quality development outcomes.	Applying best analysis to planning policy, together with quality design solutions, will help unlock opportunities, achieve more vibrant, <i>greener</i> and prosperous places and create quality development outcomes.
after last para	Add in after last paragraph 8	Integrated Planning also deals with the increasingly complex interactions of climate change and climate extreme risks (such as bushfire, heatwaves, storm and flooding events).
P7	As areas become more compact	As <i>urban</i> areas become more compact

Pg 21	Figure of rural to urban form	Needs recognition in middle and inner suburbs of the importance of low density areas, gardens and private green spaces and the contribution they make to liveability, canopy cover and water management.
Policy 5	...preserve opportunities for high value horticulture, tourism and landscape character areas	Broaden to include “ <i>landscape character and urban green spaces</i> ”

## STATE PLANNING POLICY 2: DESIGN QUALITY

To have meaning and influence through the Planning Design Code and layers, the principles must be introduced with a statement of intent, and be written with intent rather than commentary. The suggestions made under this policy are aimed at ensuring that there is a clear statement of intent to achieve good design outcomes.

	Draft wording	Suggested Wording
	<p><b>Principles of Good Design Context</b> Good design is contextual because it responds to the surrounding built and natural environment and contributes to the quality and character of a place.</p> <p><b>Inclusivity</b> Good design is inclusive because it creates places for everyone to use and enjoy by optimising social opportunity and equitable access.</p> <p><b>Durability</b> Good design is durable because it creates buildings and places that are fit for purpose, adaptable and long-lasting.</p> <p><b>Value</b> Good design adds value by creating desirable places that promote community and local investment, as well as enhancing social and cultural value.</p>	<p><b>Principles of Good Design Statement of intent</b> Good Design responds to the surrounding built and natural environment and contributes to the quality and character of a place. <i>The Planning and Design Code will support good design through adopting the following principles:</i></p> <p><b>Inclusivity</b> <i>Design that encourages inclusive places for everyone to use and enjoy by optimising social opportunity and equitable access.</i></p> <p><b>Durability</b> <i>Design that is durable to create buildings and places that are fit for purpose, adaptable and long-lasting.</i></p> <p><b>Value</b> <i>Design that adds value by creating desirable places that promote community and local investment, as well as enhancing social and cultural value.</i></p>

	Draft wording	Suggested Wording
	<p><b>Performance</b> Good design performs well because it realises the project's potential for the benefit of all users and the broader community.</p> <p><b>Sustainability</b> Good design is sustainable because it is environmentally responsible and supports long term economic productivity, health and wellbeing.</p>	<p><b>Performance</b> <i>Design that performs</i> well because it realises the project's potential for the benefit of all users and the broader community.</p> <p><b>Sustainability</b> <i>Design that supports social, economic and environmental needs including health and wellbeing, long-term economic productivity, amenity, heritage, canopy cover and biodiversity (including urban biodiversity).</i></p>
Policy 6	Provide high quality, functional public green spaces and streetscapes...	Provide high quality, functional <i>spaces on public and private land through appropriate policy</i> ....

## STATE PLANNING POLICY 3: ADAPTIVE REUSE

This policy should be more specific in describing assets that can be adaptively re-used.

**Policy 3** does not incorporate any safeguarding against unintended consequences of policy flexibility which could fully undermine objectives relating to climate change, green canopy, biodiversity needs, heritage and built form conservation. It is recommended that additional wording be incorporated to safeguard potentially competing objectives.

There is merit in the non-statutory guidance notes recognising that trees and gardens are natural assets which can be incorporated in adaptive re-use. These notes can also be applied to the biodiversity and climate change State Planning Policies.

	Draft wording	Suggested Wording
Para 1	The adaptive re-use of buildings, sites and places can have cultural, social, economic and environmental benefits. Retaining familiarity with the surrounding environment and links to the past can enhance a sense of place, history and belonging to a particular community.	The adaptive re-use of buildings, <i>natural assets</i> and places can have cultural, social, economic and environmental benefits. Retaining familiarity with the surrounding environment and links to the past can enhance a sense of place, history and belonging to a particular community.

	Draft wording	Suggested Wording
Para 3	Adaptive reuse enables the revitalisation of existing buildings and places to unlock new social, environmental and economic opportunities	Adaptive reuse enables the revitalisation of existing buildings <i>and enhancement of open space</i> to unlock new social, environmental and economic opportunities.
Para4	Insert new paragraph	<i>Towards achieving an increase in canopy cover in cities and urban areas, adaptive reuse includes preserving trees and gardens where possible and where these can be included in redevelopment and revitalisation processes through good design.</i>
Para 6	Adaptive reuse also retains the embodied energy of a building thereby reducing the need to rebuild and use more natural resources	Adaptive reuse also retains the embodied energy of a building thereby reducing the need to rebuild and <i>consumption of new materials</i>
	Objective The adaptive reuse of existing buildings accommodates new and diverse uses.	Objective The adaptive reuse of existing buildings <i>and places</i> accommodates new and diverse uses.
	<b>Add in a new policy (P3+)</b>	<b>Policies</b>  <b>Policy 3+</b> <i>Encourage the preservation, and revitalisation of natural assets and open space for social, amenity biodiversity and increasing urban green cover.</i>
	<b>Policy 6</b> Provide a range of planning and development incentives and bonus schemes to streamline decision-making processes, provide dispensation on prescriptive requirements that constrain opportunities, and capitalise on related regulatory or financial incentives outside of the planning system.	<b>Policy 6+</b> <i>Where the desired outcome and spatial application is resolved, provide a range of planning and development incentives and bonus schemes to streamline decision-making processes, provide dispensation on prescriptive requirements that constrain opportunities, and capitalise on related regulatory or financial incentives outside of the planning system <i>without compromising on good design that supports increasing urban canopy cover, local amenity and biodiversity habitat.</i></i>



	Draft wording	Suggested Wording
	<p><b>Non-statutory Guidance Notes</b></p> <p>Regional Plans should implement state policies by identifying buildings that contribute to the built and natural environment and/or character of an area and that have experienced continued dormant use or are vacant.</p>	<p><b>Non-statutory Guidance Notes</b></p> <p>Regional Plans should implement state policies by identifying buildings <i>and natural assets</i> that contribute to the built and natural environment and/or character of an area and that have experienced continued dormant use or are vacant.</p> <p><i>Planning policy incentives should not be made available for increased flexibility, until the Regional Plans define these buildings and assets.</i></p>
	Add in:	<p><i>Good design recognises that trees and gardens can also be preserved or adaptively reused. This will support biodiversity and contribute towards achieving increased canopy cover of 20% by 2045 in metropolitan Adelaide. See also the Biodiversity SPP.</i></p> <p><i>Trees and gardens provide environmental services towards climate adaptation and urban cooling including shade, cooling by evapotranspiration and amenity. See also the Climate Change SPP</i></p>
	Related SPPs	Related SPPs Include the Climate Change SPP in the list.

## STATE PLANNING POLICY 4: BIODIVERSITY

The SPP 4 objective should identify that biodiversity is not only important in natural ecosystems, but also in built urban areas. It also needs to recognise in the urban context that this includes connected-up areas of biodiversity along creeklines and open space corridors, but also equally importantly on private urban land through trees, vegetation and gardens. The policies as currently drafted appear to focus the scope on natural areas of biodiversity, without guidance on how to protect and enhance biodiversity in urban areas.

The policy is framed around avoiding loss of areas of natural biodiversity, but does not address the need to increase or enhance urban biodiversity (for example by preserving garden spaces and planting trees on development sites). The policy mainly references “areas” of biodiversity and does not address individual environment assets – e.g trees. Natural assets including trees and gardens need to be included as a key component of Biodiversity policy.



SPP 4 does not sufficiently recognise the State’s target of increasing green cover in urban spaces and how this will be achieved alongside increases in urban density and infill opportunities. In order to achieve increased canopy cover of 20% by 2045 in metropolitan Adelaide, there is a need to recognise that trees and gardens are natural assets, which provide environmental services including canopy cover, shade and cooling, amenity and biodiversity habitat which all contribute to the economic value of urban areas, amenity, comfort and well-being. The evidence compiled by Resilient East Councils contained in Appendix 2, is that tree canopy cover is declining. To arrest this decline without addressing tree policy and planting requirements on private land, will mean this target cannot be achieved. The role of Regulated and Significant Tree legislation in the planning framework should be addressed in this policy.

Without further expansion of this policy, developers and communities may continue to regard that their actions and design is not connected to the biodiversity mission of the State Government.

	Draft wording	Suggested Wording
Para 1	South Australia’s unique biodiversity contributes to our quality of life, supports our economy and provides life supporting functions such as clean air, water and arable land. Maintaining and enhancing a healthy, biologically diverse environment ensures greater resilience to climate change, increases productivity and supports a healthy lifestyle.	South Australia’s unique biodiversity contributes to our quality of life, supports our economy and provides life supporting functions such as clean air, water and arable land. Maintaining and enhancing a healthy, biologically diverse environment <i>within human settlements</i> ensures greater resilience to climate change, increases productivity and supports a healthy lifestyle.
Para3	Dot point 4 <ul style="list-style-type: none"> <li>recognising that modified landscapes can have environmental values</li> </ul>	Dot Point 4 <ul style="list-style-type: none"> <li>recognising that modified landscapes <i>such as built urban areas</i> have environmental assets and biodiversity, valued by communities</li> </ul>
Para 4	When environmental values are considered early in the planning process, development in environmentally sensitive areas can be avoided and cumulative impacts are able to be better managed.	When environmental <i>assets</i> are <i>identified and</i> considered early in the planning process, <i>inappropriate</i> development can be avoided and cumulative impacts are able to be better managed.
Para 4+	Add in paragraph to describe what happens in built up areas	<i>When environmental assets are identified early in the planning process, development in built up areas can preserve environmental assets, support urban biodiversity and prevent further cumulative impacts.</i>

	Draft wording	Suggested Wording
		<i>(Planning framework should identify the scope of environmental assets to include trees, waterways etc)</i>
	Objective  Biodiversity is valued and conserved, and its integrity within natural ecosystems protected.	Objective  Biodiversity is valued and conserved, and its integrity within natural ecosystems protected.  <i>Biodiversity in urban areas is identified, valued, conserved where possible and enhanced through good design.</i>
	Policy 3  Recognise that modified landscapes have environmental value and that development should be compatible with these values.	Policy 3  Recognise that modified landscapes, <i>including urban landscapes</i> , have environmental value and that development should be compatible with these values <i>and seek to conserve and enhance environmental assets where possible.</i>
	Policy 4  Encourage nature-based tourism and recreation that is compatible with, and at an appropriate scale for conserving the natural values of that landscape.	Policy 4  Encourage nature-based tourism and recreation <i>facilities</i> that are compatible with, and at an appropriate scale for conserving the natural <i>assets</i> of that landscape.
	Non-statutory Guidance Notes	Non-statutory Guidance Notes
Para2	The Planning and Design Code should implement state policies by providing a suite of zones that support the protection of areas of biodiversity value and guide the types of land uses envisaged in these areas.	<i>In rural, remote and wild places</i> , the Planning and Design Code should implement state policies by providing a suite of zones that support the protection of areas of biodiversity value and guide the types of land uses envisaged in these areas.

	Draft wording	Suggested Wording
Para2 +	Add in paragraph	<i>In urban and urban fringe areas, the Planning and Design Code should implement state policies which encourage the protection, rehabilitation (adaptive reuse) and enhancement of natural assets that contribute to urban amenity, health and wellbeing, biodiversity and climate adaptation. Policies and guidelines should be used to inform development proponents about how their impacts can be best managed.</i>
	Related Legislation and Instruments	Related Legislation and Instruments Add in: <i>Regulated Trees Development Plan Amendment (DPA)</i>
Refer ences	Insert a connecting reference to the 30 Year Plan for Greater Adelaide	See also the relevant targeted policies: in 30 Year Plan for Greater Adelaide including: <ul style="list-style-type: none"> <li>• <i>Policy 72</i></li> <li>• <i>Policy 93</i></li> </ul>

## STATE PLANNING POLICY 5: CLIMATE CHANGE

The Committee welcomes the inclusion of Climate Change as a mandated and high level policy, however the language used within the SPP document does not sufficiently reflect the urgency and significance of climate change. In particular, it needs to recognise that climate change is not just an issue that we will face in the future but that it is already causing impacts, which will escalate over time.

The Climate Change SPP must ensure a clear statement of intent to integrate climate adaptation in development. The policy also needs to address the identification of the effects on vulnerable members of the community and the specific adaptation measures that will be put in place.

The Climate Change SPP indicates that a compact urban form delivers a more carbon-efficient living environment, which is not necessarily the case. Although transport emissions may be reduced in compact urban areas, other features (such as increasing densities, multi-storey buildings and increased building footprints) can result in reduced energy efficiency, increased energy demand, reduced vegetation cooling opportunities, reduced water infiltration and increased water run-off.

	Draft wording	Suggested Wording
Para 1	Climate change will impact all areas of our society. Our future prosperity, the liveability of our cities and towns, the health and wellbeing of our communities and the resilience of our built and natural environment all depend on how well we adapt to and mitigate the impacts of climate change.	Climate change <i>is impacting</i> all areas of our society. Our future prosperity, the liveability of our cities and towns, the health and wellbeing of our communities and the resilience of our built and natural environment all depend on how well we <i>act to mitigate the causes of anthropogenic climate change and</i> adapt to the impacts of climate change.
Para 3	What we plan for and develop must take into account the best available climate science so that we can improve the resilience of our communities, economy, buildings and natural environment.	What we plan for and develop must take into account the best available climate science so that we can improve the resilience of our communities, economy, buildings and natural <i>assets</i> .
Para 4	The planning system provides a great opportunity to improve our resilience, promote mitigation, increase carbon sequestration and take advantage of the challenges climate change presents.	The planning system, <i>in supporting the conservation, adaptive reuse and enhancement of environmental assets and increased urban green cover</i> , provides a great opportunity to improve our resilience, promote mitigation, increase carbon sequestration and take advantage of the challenges climate change presents.
Para 5	Through the consideration of the future climate in our planning system, we will strengthen our ability to respond to the impacts of climate change and create a resilient economy, community and natural environment.	Through the consideration of the future climate in our planning system, we will strengthen our ability to respond to the impacts of climate change and create a resilient economy, community, natural <i>assets and biodiversity</i> .
Role of Planning 1	<p><b>Dot Point 2</b></p> <ul style="list-style-type: none"> <li>promoting active travel and walkability and increasing the use of public transport</li> </ul>	<p><b>Dot Point 2</b></p> <ul style="list-style-type: none"> <li><i>Adopting principles of good design</i> promoting <i>physically</i> active travel and walkability and increasing the use of public transport</li> </ul>

	Draft wording	Suggested Wording
Role of Planning 2	Minimise the need for future adaptation by considering the best available climate science to inform our decision making, including identifying areas likely to be subject to hazards such as coastal erosion, flooding and bushfire.	Minimise the need for future adaptation by considering the best available climate science to inform our decision making, including identifying areas <i>more</i> likely to be subject to hazards such as coastal erosion, flooding and bushfire.
Objective	Our greenhouse gas emissions are reduced and development that is climate-ready is promoted so that our economy, communities and environment will be more resilient to climate change impacts.	Our greenhouse gas emissions are reduced and development that is climate-ready is <i>required</i> so that our economy, communities and environment will be more resilient to climate change impacts.
	<p><b>Policy 1</b></p> <p>Create carbon-efficient living environments through a more compact urban form that supports active travel, walkability and the use of public transport.</p>	<p><b>Policy 1</b></p> <p>Create carbon-efficient living environments through a more compact urban form <i>in clearly identified locations with upgraded infrastructure that supports:</i></p> <ul style="list-style-type: none"> <li>● <i>safe walking</i></li> <li>● <i>safe cycling</i></li> <li>● <i>access to public transport.</i></li> </ul>
	<p><b>Policy 2</b></p> <p>Ensure the design of public places increases climate change resilience and future liveability.</p>	<p><b>Policy 2</b></p> <p>Ensure through <i>policy and design both public and private places increase</i> climate change resilience and future liveability, <i>including to support increased canopy cover for amenity, urban cooling and biodiversity.</i></p>
	<p><b>Policy 2</b></p> <p>Ensure the development of climate-smart buildings that reduce our demand for water and energy and mitigate the impacts of rising temperatures by encouraging water sensitive urban design, green infrastructure, urban greening and tree canopy enhancement.</p>	<p><b>Policy 2</b></p> <p>Ensure that the <i>planning and building rules reflect policy</i> for the development of climate-smart buildings that reduce our demand for water and energy and mitigate the impacts of rising temperatures by encouraging water sensitive urban design, green infrastructure, urban greening and tree canopy enhancement.</p>

	Draft wording	Suggested Wording
	<p><b>Policy 5</b></p> <p>Avoid development in hazard-prone areas, or where unavoidable, ensure risks to people and property are mitigated to an acceptable or tolerable level through cost-effective measures.</p>	<p><b>Policy 5</b></p> <p>Wording should be revised to remove “<i>where unavoidable</i>” and the necessity for mitigation measures to be “<i>cost effective</i>”.</p>
	<p><b>Policy 6</b></p> <p>Protect areas that provide biodiversity and maximise opportunities for carbon sequestration.</p>	<p><b>Policy 6</b></p> <p>Protect areas that provide biodiversity and maximise opportunities for carbon sequestration, <i>including gardens and landscaped areas in new development.</i></p>
	<p><b>New Policy</b></p>	<p><i>Use monitoring and climate science to target urban areas which are experiencing urban heat island effect, tree canopy loss, habitat loss, increased run-off, water and air quality decline with policy and programs to:</i></p> <ul style="list-style-type: none"> <li>● <i>extend planting and green spaces on private and public land</i></li> <li>● <i>reduce run-off and increase local water capture, storage and re-use</i></li> <li>● <i>limit building site coverage</i></li> <li>● <i>provide and link biodiversity assets</i></li> <li>● <i>increase local food security through productive trees</i></li> </ul>
NSGN2	<p><b>Non-statutory Guidance Notes</b></p> <p>The Planning and Design Code should implement state policies by including a range of Overlays that identify both the hazards that need to be considered when proposing new development and the features that should be protected due to their contribution to climate resilience, e.g. coastal dunes and natural environments that sequester carbon.</p>	<p><b>Non-statutory Guidance Notes</b></p> <p>The Planning and Design Code should implement state policies by including a range of Overlays that identify both the hazards that need to be considered when proposing new development and the <i>environmental assets</i> that should be protected due to their contribution to climate resilience, e.g. <i>urban trees and green cover</i>, coastal dunes and natural environments that sequester carbon.</p>

	Draft wording	Suggested Wording
	<b>Related Legislation and Instruments</b>	<b>Related Legislation and Instruments</b>  <b>Add in:</b> <ul style="list-style-type: none"> <li>• <i>Native Vegetation Act 1991</i></li> <li>• <i>Regulated Trees Development Plan Amendment (DPA)</i></li> </ul>
References	Insert a connecting reference to the 30 Year Plan for Greater Adelaide – policy and target.	See also the relevant targeted policies:  in 30 Year Plan for Greater Adelaide including: <ul style="list-style-type: none"> <li>• <i>Policy 49</i></li> <li>• <i>Policy 50</i></li> <li>• <i>Policy 51</i></li> <li>• <i>Policy 52</i></li> <li>• <i>Policy 53</i></li> <li>• <i>Policy 103</i></li> </ul>

## STATE PLANNING POLICY 6: HOUSING SUPPLY AND DIVERSITY

It is not clear what range of housing is envisaged and where existing constraints in urban areas (such as areas of built form or natural asset conservation) will impact on the delivery of increased housing diversity.

In many places of the world, efforts are being made to support more affordable housing such as tiny housing / community living. There appears to be no facilitation of this type of affordable housing in South Australia. Although not suitable in all places, tiny housing and other forms of “granny flat” housing should be considered as part of the range of dwelling options in South Australia (where it is suitable and where appropriate title and tenancy arrangements could be facilitated).

	Draft wording	Suggested Wording
Para 2	Providing land in the right places to be developed at the right time....	<i>Through the regional planning process further investigation, research and negotiation will occur to ensure the SA planning system is providing land in the right places to be developed at the right time, taking into account constraints to growth and infill as well as opportunities.</i>



	Draft wording	Suggested Wording
	<p><b>Objective</b></p> <p>A range of diverse, affordable, well-serviced and sustainable housing and land choices is provided as, where and when required.</p>	<p><b>Objective</b></p> <p>A range of diverse, affordable, well-serviced and sustainable housing and land choices <i>(from micro housing, to free standing residential housing to apartments)</i>, is provided <i>in identified appropriate locations</i> as, where and when required.</p>
	<p><b>Policy 4</b></p> <p>Promote residential mixed use development in centres and corridor catchments to achieve the densities required to support the economic viability of these locations and public transport services.</p>	<p><b>Policy 4</b></p> <p><i>Following investigation into and consultation on, suitable strategic locations for more intensive development, zone selected areas for residential mixed use development in centres and corridor catchments to achieve the densities required to support the economic viability of these locations and public transport services.</i></p>
	<p><b>Policy 5</b></p> <p>Provide a permissive and enabling policy environment for housing within residential zones, including the provision of small lot housing and aged care accommodation.</p>	<p><b>Policy 5</b></p> <p><i>Identify precincts which are suitable for a change of current residential zones, which may include provision of granny flats, laneway and small lot housing and housing for an ageing population, well supported by appropriate public transport, community facilities and open space.</i></p>
	<p><b>Policy 8</b></p> <p>Support the creation of healthy neighbourhoods that include diverse housing options; enable access to local shops, community facilities and infrastructure; promote active travel and public transport use; and provide quality open space, recreation and sporting facilities.</p>	<p><b>Policy 8</b></p> <p>Support the creation of healthy neighbourhoods that include diverse housing options; enable access to local shops, community facilities and infrastructure; promote <i>physically</i> active travel and public transport use; and provide quality open space, recreation and sporting facilities.</p>
NSG N 2+	<p><b>Non-statutory Guidance Notes</b></p> <p>Add in paragraph:</p>	<p><b>Non-statutory Guidance Notes</b></p> <p><i>Land supply in regional areas should take into account natural hazards and environments in order for good design to protect people and the environment.</i></p>

	Draft wording	Suggested Wording
	<p><b>Related legislation and instruments</b></p> <p>Add in:</p>	<p><b>Related legislation and instruments</b></p> <ul style="list-style-type: none"> <li>• <i>Fire and Emergency Services Act 2005</i></li> <li>• <i>Emergency Services Management Act 2004</i></li> </ul>

## STATE PLANNING POLICY 7: CULTURAL HERITAGE

This State Planning Policy misses the opportunity to demonstrate the value of heritage places and areas of historic significance with limited detail about the framework for identification and conservation of these places and areas. In addition to providing important cultural vitality and recognising our unique historic characteristics, the conservation of heritage places and built form supports the sustainable use of resources and materials, which is supported.

	Draft wording	Suggested Wording
	<p><b>Policies</b></p> <p>Add in a new Policy 1</p>	<p><b>New Policy 1</b></p> <p><i>Increase the value that heritage buildings and areas of historic significance bring to our built environment in terms of tourism, owner investment, business generation and employment through a planning framework which seeks to identify, retain, conserve and adapt these valued assets.</i></p>

## STATE PLANNING POLICY 8: PRIMARY INDUSTRY

	Draft wording	Suggested Wording
	<p><b>Policies</b></p> <p>Add in a new Policy 5</p>	<p><b>Policies</b></p> <p><i>Identifying and avoiding or minimising the impacts of land use change on environmental assets and biodiversity.</i></p>

## STATE PLANNING POLICY 9: EMPLOYMENT LANDS

	Draft wording	Suggested Wording
Para 6+	Add in a new paragraph after paragraph 6	The identification of climate risks and buffers is also critical to minimising future adaptation costs for business and industry. Spatial planning should take into account the future cost of climate adaptation, particularly in low lying riparian and coastal areas, and those at risk from bushfire.
	<p><b>Objective</b></p> <p>Employment lands are protected from encroachment by incompatible development and are supported by appropriate transport systems and infrastructure.</p> <p>Add in new paragraph:</p>	<p><b>Objective</b></p> <p>Employment lands are protected from encroachment by incompatible development and are supported by appropriate transport systems and infrastructure.</p> <p><i>Employment lands are placed appropriately within the landscape to be resilient to climate change impacts and to minimise impact on primary production, environment and biodiversity assets.</i></p>
	<p><b>Policies</b></p> <p>Add in:</p>	<p><b>Policies</b></p> <p><b>New Policy 6</b> <i>Consider climate resilience and interaction with other sensitive land uses when re-zoning/releasing new employment lands.</i></p>
	<p><b>Policy 7</b></p> <p>Support sustainable tourism where the social, cultural and natural values underpinning the tourism developments are protected to maximise economic growth.</p>	<p><b>Policy 7</b></p> <p>Support sustainable tourism development where <i>people can be safe without causing environmental harm and where the social, cultural and natural assets underpinning the tourism developments</i> are protected to maximise economic growth.</p>
	Add in:	<p><b>Related Guidance Note</b></p> <p><i>People in Parks Strategy 2013 (DEWNR)</i></p>

## STATE PLANNING POLICY 10: KEY RESOURCES



	Draft wording	Suggested Wording
	Policies Add in New policy 4	Policies <i>Ensure that legacy issues relating to mining closures are reduced towards adequate rehabilitation with productive new land use or biodiversity based post mining outcomes.</i>
	Related legislation and instruments Add in:	Related legislation and instruments: <ul style="list-style-type: none"> <li><i>Natural Resources Management Act</i></li> </ul>

## STATE PLANNING POLICY 11: STRATEGIC TRANSPORT INFRASTRUCTURE

	Draft wording	Suggested Wording
Para 4	Increased use of active transport can be achieved through a more compact urban form, mixed land uses and increased population density, supported by alternative transport options. This will maximise our investment in public transport services and walking and cycling networks, leading to more active, healthier community, a more efficient and vibrant urban form, and reduced traffic congestion.	Increased use of <i>physically</i> active transport can be achieved through a more compact urban form, mixed land uses and increased population density, supported by transport <i>infrastructure</i> . This will maximise our investment in public transport services and walking and cycling networks, leading to more active, healthier community, a more efficient and vibrant urban form, and reduced traffic congestion. <i>Increasingly, there is recognition that safer physically active transport will require more segregation of walkers and cyclists for efficiency and safety.</i>
	<b>Policy 6</b> Enable and encourage the increased use of a wider variety of transport modes including public transport, walking and cycling to facilitate a reduced reliance on private vehicle travel.	<b>Policy 6</b> Enable and encourage the increased use of a wider variety of transport <i>supporting infrastructure</i> including for public transport, <i>safer</i> walking and cycling <i>to facilitate</i> a reduced reliance on private vehicle travel.
NSG N 3+	<b>Non-statutory Guidance Notes</b> Add in:	<b>Non-statutory Guidance Notes</b> The Planning and Design Code should encourage regard to the efficiency and safety of physically active transport infrastructure, noting that increasing infill

	Draft wording	Suggested Wording
		growth will cause impacts in cyclist/pedestrian/child/animal collisions where crowded onto one pathway.

## STATE PLANNING POLICY 12: ENERGY

The planning, regulation and provision of a stable energy market and supply are the responsibility of the Australian Energy Market Operator, the Australian Energy Market Commission and the Australian Energy Regulator, rather than the responsibility of planning legislation. However, some additional planning considerations are suggested below:

	Draft wording	Suggested Wording
	<p><b>Policy 5</b></p> <p>Ensure renewable energy technologies support a stable energy market and continued supply and do not adversely affect the amenity of regional communities.</p>	<p><b>Policy 5</b></p> <p>Ensure renewable energy <i>infrastructure does not</i> adversely affect the amenity of regional communities.</p>
	New Policy: Add in	<i>Develop Planning and Design Code requirements for Deemed to Satisfy and Performance Based assessment pathways for inclusion of energy-efficient/ low carbon solutions.</i>
	New Policy: Add in	<i>Ensure domestic roof-top solar investment and effectiveness is not unduly impacted by overshadowing of new development and other impacts of a more compact and higher urban form.</i>

	Draft wording	Suggested Wording
	New Policy: Add in	<p><b>Distributed energy generation, storage and electric vehicle transition in urban areas.</b></p> <p><i>Encourage good design that supports and manages the transition to embedded renewable electricity generation, energy storage and electric vehicles as an integrated component of planning.</i></p>

## OUR RESILIENT COMMUNITIES AND ENVIRONMENT

	Draft wording	Suggested Wording
Para 1	South Australia comprises a diverse range of living environments within natural areas of coast, plains, hills and regions. These environments underpin our economy and quality of life through their provision of food, water and raw materials and their role in supporting recreation, tourism, health and wellbeing. Building the resilience of these environments requires a system-wide approach.	South Australia comprises a diverse range of living environments within natural areas of coast, plains, hills and <i>regions and urban environments that retain limited but valued biodiversity</i> . These environments underpin our economy and quality of life through their provision of food, water and raw materials and their role in supporting recreation, tourism, health and wellbeing. Building the resilience of these environments requires a system-wide approach.
Para	Other risks that require careful management include the storage and management of hazardous materials and contamination of land and water.	Other risks that require careful management include the <i>production, storage and collection of waste</i> and storage and management of hazardous materials and contamination of land and water.
Para 5	It is therefore vital for us to anticipate hazards and risk; plan for the protection of lives and the economy; increase the resilience of people, buildings and infrastructure; and reduce the infrastructure and social costs when incidents do occur.	It is therefore vital for us to anticipate hazards and risk; plan for the protection of lives, <i>property</i> , the economy <i>and environmental assets</i> ; <i>the Planning Policies and Design Code needs to</i> increase the resilience of people, buildings and infrastructure; and reduce the infrastructure and social costs when incidents do occur.

	Draft wording	Suggested Wording
Para 6	Land use planning must also help to reduce the growth in our greenhouse emissions; increase our resilience to natural hazards, including extreme weather events; secure our water and food supplies; and protect the environmental and ecological resources on which much of our prosperity relies.	Land use planning must also help to reduce the growth in our greenhouse emissions; increase our resilience to natural hazards, including extreme weather events; secure our water and food supplies; and protect the environmental and ecological <i>assets</i> on which much of our prosperity and <i>wellbeing</i> relies.
Refer ences	Insert connecting reference to the 30 Year Plan for Greater Adelaide	See also the relevant targeted policies in 30 Year Plan for Greater Adelaide including: <ul style="list-style-type: none"> <li>• <i>Policy 109</i></li> <li>• <i>Policy 110</i></li> </ul>

## STATE PLANNING POLICY 13: COASTAL ENVIRONMENT

When writing about sustainability, the word balance should not be used. Sustainability is about meeting needs in an integrated way. Balance is about trading one asset or outcome off against another. The challenge ahead is about how to meet planning and increased population needs whilst also achieving better environmental outcomes. The State Planning Policies and Planning Design code must address this challenge.

	Draft wording	Suggested Wording
	<b>Policy 1</b> Ensure development is not at risk from current and future coastal hazards (including coastal flooding, erosion, inundation, dune drift and acid sulphate soils) consistent with the hierarchy of avoid, accommodate and adapt.	<b>Policy 1</b> Ensure development is not at risk from current and future coastal hazards (including coastal flooding, erosion, inundation, dune drift, acid sulphate soils), <i>mangrove and wetland generated mosquito and midge hazards</i> consistent with the hierarchy of avoid, accommodate and adapt.
	<b>Policy 2</b> Balance social and economic development outcomes in coastal areas with the protection of the environment.	<b>Policy 2</b> <i>Encourage development outcomes that meet social, economic and environmental needs of communities</i> in coastal areas with the protection of the environment.

	Draft wording	Suggested Wording
	<p><b>Policy 4</b> Locate development in areas that are not subject to coastal hazards unless the development requires a coastal location and suitable hazard mitigation strategies are in place, taking into account projected sea level rise and coastal retreat</p>	<p><b>Policy 4</b> Locate development in areas that are not subject to coastal hazards unless the development requires a coastal location and suitable hazard mitigation strategies are in place, taking into account projected sea level rise, <i>coastal retreat, biodiversity needs and other risks including insect borne nuisance and disease.</i></p>
	<p><b>Policy 5</b> Facilitate sustainable development that requires a coastal site, including eco-tourism, aquaculture, marinas and ports, in areas adjoining the foreshore, where environmental impacts can be managed or mitigated.</p>	<p><b>Policy 5</b> <i>For essential infrastructure</i> that requires a coastal site, <i>develop suitable policy to ensure that</i> environmental impacts can be managed or mitigated.</p>
	<p><b>New Policy 9</b></p>	<p>Investigate, negotiate and develop appropriate Planning and Design Code zoning and policy for sensitive coastal areas, taking account of demand for eco-tourism, aquaculture and marinas.</p>
	<p><b>Non-statutory Guidance Notes</b> Regional Plans should implement state policies by identifying areas subject to coastal hazards such as sea level rise, flooding and storm surge. Areas where growth is envisaged should be identified as well as areas for conservation or of high landscape value.</p>	<p><b>Non-statutory Guidance Notes</b> Regional Plans should implement state policies by identifying areas subject to coastal hazards such as sea level rise, flooding, storm surge, <i>mangrove and wetland-based mosquito and midge issues.</i> Areas where growth is envisaged should be identified as well as areas for conservation or of high landscape value.</p>



## STATE PLANNING POLICY 14: WATER SECURITY AND QUALITY

	Draft wording	Suggested Wording
Para 1	Water is one of South Australia's most valuable natural resources. Access to a safe and reliable water supply supports healthy living, our premium food and wine industries, mining activity, and advanced manufacturing. It is therefore vital that we continue to ensure the security and quality of our water supplies, sources and ecosystems.	Water is one of South Australia's most valuable natural resources. Access to a safe and reliable water supply supports healthy living, <i>our ecosystems and riparian environments</i> , our premium food and wine industries, mining activity, and advanced manufacturing. It is therefore vital that we continue to ensure the security and quality of our water supplies, sources and ecosystems.
Para 2	Our evolving population and diversifying economy, combined with reducing rainfall and competition for traditional water supplies, requires us to continually plan for water security.	Our <i>increasing</i> population and diversifying economy, combined with reducing rainfall and competition for traditional water supplies, requires us to continually plan for water security.
Para 3	We also need to ensure that land use planning integrates current and future water availability into decision making.	We also need to ensure that land use planning integrates current and future water availability <i>and management</i> into decision making.
Para 4+	Add in new paragraph	<i>Downstream infrastructure for water management, wastewater treatment, recycling and safe re-release back into the environment are important planning considerations for the continued health of food production areas, environmental assets and biodiversity.</i>
Para 5+	We need to deliver a more integrated approach to water resources management so that issues and opportunities are planned holistically. This will assist in addressing flooding and water quality impacts.	We need to deliver a more integrated approach to water resources management so that issues and opportunities are planned holistically. This will assist in addressing flooding and water quality impacts <i>including waterlogging and irrigation salinity in food growing areas.</i>
	<b>Objective</b> South Australia's water supply is protected from the adverse impacts of development.	<b>Objectives</b> South Australia's water supply is protected from the adverse impacts of development. <i>The Planning Design Code supports whole of cycle water management to meet social, economic and environmental needs.</i>
	<b>Policy 3</b> Provide for infrastructure and land use policy that aims to decrease flood risk and improve water quality and urban amenity.	<b>Policy 3</b> Provide for infrastructure and land use policy that aims to decrease flood risk and improve water quality, <i>re-integrate water into the landscape</i> and to improve urban amenity.

	Draft wording	Suggested Wording
	<b>Policy 4</b> Ensure our water supply, stormwater and wastewater infrastructure meets the needs of a growing population and economy while balancing environmental outcomes.	<b>Policy 4</b> Ensure our water supply, stormwater and wastewater infrastructure meets the needs of a growing population, economy <i>and environmental outcomes</i> .
	<b>Add new Policy 5</b>	Develop policy in the Planning and Design Code to include measurable WSUD criteria for Deemed to Satisfy and Performance Assessed developments.
NSGN Para 2	<b>Non-statutory Guidance Notes</b> The Code should also promote water sensitive urban design and effective stormwater management.	<b>Non-statutory Guidance Notes</b> The Code should also promote water sensitive urban design and effective stormwater management <i>including the re-integration of water into the urban landscape to support green cover and canopy cover targets, environmental assets and biodiversity</i> .
	Related legislation and instruments Add in:	Related legislation and instruments <i>Environment Protection (Water Quality) Policy 2015 (the Water Quality Policy)</i>

## STATE PLANNING POLICY 15: NATURAL HAZARDS

The SPPs and Planning Design Code do not protect all developments from natural hazards. In areas where biodiversity is a priority, the environment should not be compromised. This matter needs to be addressed with the CFS and representatives of the State Bushfire Coordination Committee and Ecological Technical Working Group to settle on a realistic and transparent position.

	Draft wording	Suggested Wording
SPP 1	<b>Policy 1</b> Identify and minimise the risk to people, property and the environment from exposure to natural hazards including bushfire, terrestrial and coastal flooding, erosion, dune drift and acid sulphate soils.	<b>Policy 1</b> <i>In new multi dwelling precincts and existing settlements</i> , identify and minimise the risk to people, property and the environment from exposure to natural hazards including bushfire, terrestrial and coastal flooding, erosion, dune drift and acid sulphate soils.
PP1 +	Insert new policy:	<i>In rural, remote and wild locations, encourage development in safer places with adequate asset protection zones, buffer zones and safe access.</i>

	Draft wording	Suggested Wording
PP1 +	Insert new policy:	<i>In rural, remote and wild locations, areas identified as high risk cannot be made safe all of the time. It is important to identify that the developer/occupier acknowledge responsibility for their safety, acknowledge that their property may not be protected by others, is treated as replaceable and that occupiers have established their own safety and survival plans.</i>
PP2	Design and plan for development in accordance with a risk hierarchy of avoidance, adaptation and protection.	Design and plan for development in accordance with a risk hierarchy of avoidance, adaptation and protection, <i>or planned evacuation.</i>
PP4	Mitigate the impact of extreme heat events by designing public spaces and developments to create cooler micro-climates through the use of green infrastructure.	Mitigate the impact of extreme heat events by designing spaces and developments in public <i>and private ownership</i> to create cooler micro-climates through the use of green infrastructure, including vegetation planting.
PP5 +	Insert new policy:	<i>Protect the environment (native vegetation, trees, parks and other environmental assets), from poorly planned and located built infrastructure (including land divisions and tourism facilities) which then require further vegetation clearance, asset protection zones and buffer zones that were not identified in the original application for development approval.</i>
	<p><b>Non-statutory Guidance Notes</b> The Planning and Design Code should implement state policies through inclusion of policy that mitigates the adverse impacts from natural hazards, particularly flood and fire. Overlays will be used to identify risks relating to bushfire, flooding etc.</p>	<p><b>Non-statutory Guidance Notes</b> The Planning and Design Code should implement state policies through inclusion of policy that mitigates the adverse impacts from natural hazards <i>as far as practicable</i>, particularly flood and fire. Overlays will be used to identify risks relating to bushfire, flooding etc.</p>

## STATE PLANNING POLICY 16: EMISSIONS AND HAZARDOUS ACTIVITIES

	Draft wording	Suggested Wording
PP1	<p><b>P4 Dot Point 1</b></p> <ul style="list-style-type: none"> <li>appropriate separation between emission sources and/or hazardous activities and sensitive land uses</li> </ul>	<p><b>P4 Dot Point 1</b></p> <ul style="list-style-type: none"> <li>appropriate separation between emission sources and/or hazardous activities, sensitive land uses <i>and residential areas</i>.</li> </ul>
	Add new Policy 1D	<p><b>Policy 1 D</b></p> <p><i>Incorporating mechanisms to ensure that the intended outcomes of development approval are achieved, and that there are pathways for remedial action if not achieved.</i></p>

The Committee seeks inclusion of these additional considerations in the developing of the State Planning Policies.

Yours sincerely



Tim Kelly

**Resilient East Project Coordinator**

## Appendix 1 Resilient East Project Steering Group (July 2018)

Council/ Department	Project Steering Group Member	Proxy
City of Adelaide	<b>CHAIR - Michelle English</b> Associate Director Sustainability [REDACTED] [REDACTED]	<b>Bec Taylor</b> Sustainability Coordinator [REDACTED] [REDACTED]
Town of Walkerville	<b>DEPUTY CHAIR</b> <b>Mark Kwiatkowski</b> Manager Planning and Environment [REDACTED] [REDACTED]	<b>Sonia DeNicola</b> Manager Communications & Marketing [REDACTED] [REDACTED]
City of Campbelltown	<b>Kevin Lowe</b> General Manager Urban Planning and Leisure Services [REDACTED] [REDACTED] [REDACTED]	<b>Rachael Hamilton</b> Coordinator Environment and Sustainability [REDACTED] [REDACTED]
City of Norwood Payneham & St Peters	<b>Eleanor Walters</b> Manager Urban Planning and Sustainability [REDACTED] [REDACTED]	<b>Mary-Anne Siebert</b> Sustainability Officer [REDACTED] [REDACTED]
City of Prospect	<b>Simon Bradley</b> Director - Infrastructure and Environment [REDACTED] [REDACTED]	<b>Vacant</b>
City of Tea Tree Gully	<b>Jon Herd</b> Environmental Sustainability Co-ordinator City of Tea Tree Gully [REDACTED] [REDACTED]	<b>James Kelly</b> Team Leader Civil Assets City of Tea Tree Gully [REDACTED] [REDACTED]
City of Unley	<b>Aaron Wood</b> Manager Strategic Assets City of Unley [REDACTED] [REDACTED]	<b>Kat Ryan</b> Coordinator Environmental Projects & Strategy [REDACTED] [REDACTED]
City of Burnside	<b>Ben Seamark</b> Coordinator Open Space Recreation and Environment [REDACTED] [REDACTED]	<b>Mark Ellis</b> [REDACTED]

<p>Natural Resources AMLR</p>	<p><b>Zafi Bachar</b> Climate Applications Coordinator [Redacted] [Redacted]</p>	<p><b>Sam Phillips</b> Water Projects Engineer [Redacted] [Redacted]</p>
<p>DEWNR Climate Change</p>	<p><b>Rhiannon Niven</b> a/Senior Policy Officer DEWNR Climate Change Branch [Redacted] [Redacted]</p>	<p><b>Lauren Burton</b> Senior Policy Officer, Adaptation and Infrastructure [Redacted] [Redacted]</p> <p><b>Christopher Wright</b> Manager, Adaptation and Infrastructure [Redacted] [Redacted]</p>
<p>Coordinator</p>	<p><b>Tim Kelly</b> Resilient East Project Coordinator Email: [Redacted] [Redacted]</p>	

## Appendix 2 -Tree Canopy Loss Measured by Councils – Examples

The Resilient East Councils are increasing their data on canopy cover and how this is changing over time.

Interpreted Data available to date includes:

- In 2014, 2020 Vision published the [Where Are All The Trees?](#) report based on research undertaken by the Institute of Sustainable Futures at the UTS Sydney. This was the first time that urban canopy had been benchmarked nationally. The councils used this data as a broad benchmark, subject to developing better analysis and data sets.
- In 2017, RMIT and CAUL Hub researchers published a follow-up report called, [Where Should All The Trees Go?](#), which compares canopy levels, overlays urban heat and socio-economic (SEIFA) data, and provides an overall vulnerability indicator. The findings were released in state based reports and for individual council areas.

More detailed efforts are being undertaken across councils to improve on the way that canopy cover is assessed and to better target analysis. It is expected that when complete, many areas of Resilient East will show that canopy cover is being lost at a faster rate, particularly on private land due to urban consolidation in established areas. Should this trend be confirmed across the councils, the task of increasing canopy cover overall will be unachievable unless there is a change to the way that urban consolidation is being undertaken.

Whilst the decline of canopy cover is evident across many council areas there are some council areas that have not yet shown a decline. This highlights the need for better assessment and continued monitoring over time.

Three councils have now completed additional canopy cover assessments showing similar trends of canopy loss.

### Canopy Cover Loss - City of Unley

The City of Unley has undertaken a canopy cover assessment across the city which identifies the change in tree canopy and other land surface types, across public and private land tenure over a period of 40 years. The report reveals that overall tree canopy cover across the City is declining, with the removal of trees on private land being a key driver of this trend.

Tree cover on public land gradually increased following Council street tree planting initiatives of the late 1970s and early 1980s. However, the most recent decade has recorded a decrease in tree cover on public land. This is likely due to a combination of the street tree replacement program (short-term canopy reduction from replacement planting with younger tree canopy), and loss of street trees when additional crossovers are installed to accommodate increased urban infill.

The City of Unley has been losing tree cover across private land at an increasing rate of loss since 1997 (see Figure 1). Since private land represents 80% of the total area, this is of significant concern to future neighbourhood character and urban heat impacts. The loss on private land can be directly correlated with an increase in building cover (see Figure 2).



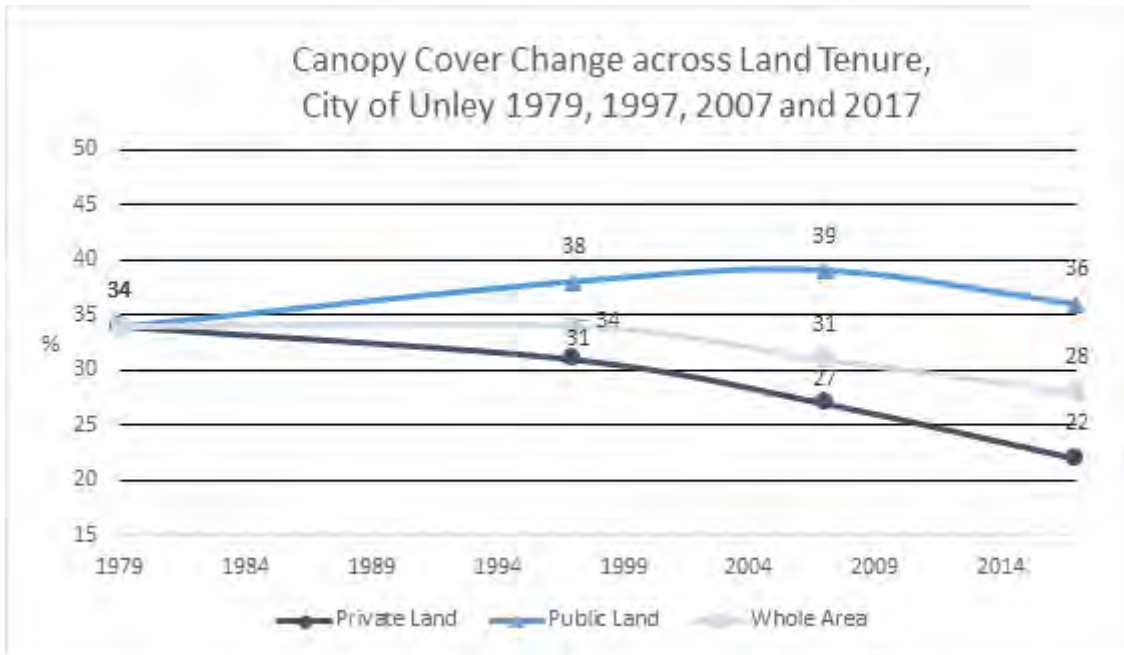


Figure 1: Canopy Cover Change across Land Tenure, City of Unley 1979-2017

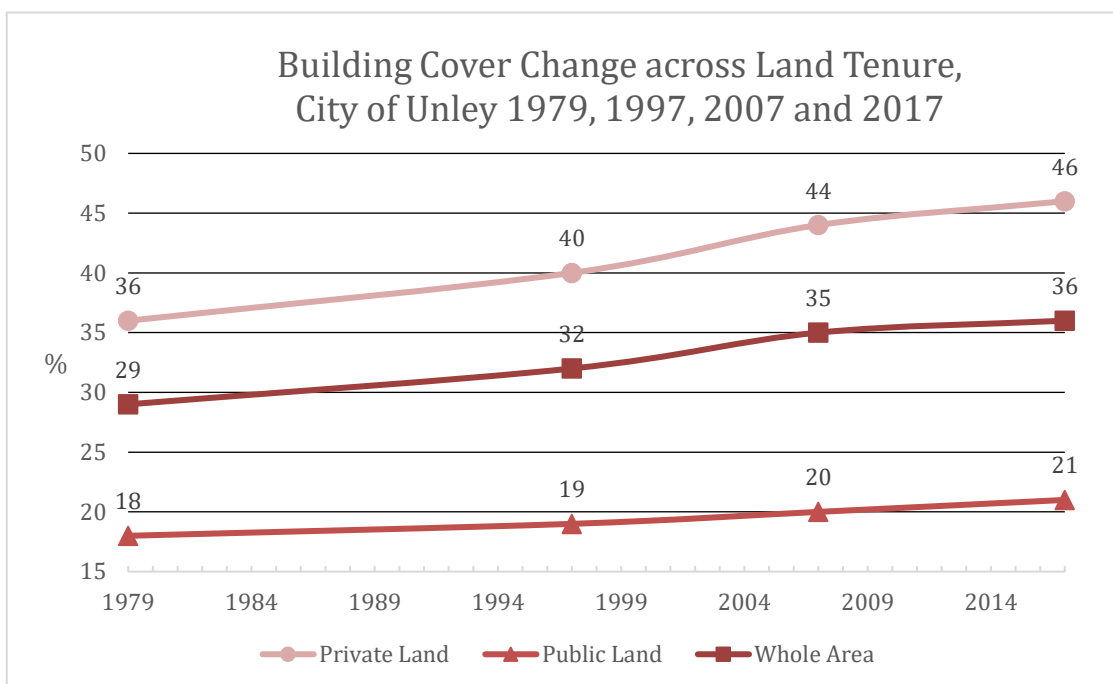


Figure 2: Building Cover Change across Land Tenure, City of Unley 1979-2017

Graphs compiled from data in technical report; Martinez and Bachar, *City of Unley Tree Canopy Cover Change, 1979 – 2017 i-Tree Canopy Analysis*. Unpublished Report, 2018.



## Canopy Cover Loss - City of Burnside

Seed Consulting Services (Seed) was contracted by the City of Burnside (Council) to undertake an assessment of land cover within the City's 28 suburbs using the i-Tree Canopy software. In addition, three suburbs were selected by Council to investigate historical land cover and assess trends in land cover change over time, these included Burnside, Glenside and Magill. The assessment aimed to establish canopy cover benchmarks which may be used to monitor future change over time and provide information to underpin decision-making regarding green infrastructure.

Key findings from the assessment were:

- the current estimated canopy cover of 31.28% across the city is slightly higher than the 30.2% reported in the National Benchmarking Report 1 for the year 2013;
- Canopy cover across all three suburbs declined by 9.87% between 2010 and 2015. The greatest decline occurred in Burnside (5.7%), and was driven primarily by a decline in canopy cover over pervious surfaces. Magill and Glenside both showed a 2.1% decline in canopy cover. In Magill, this was driven by a loss of canopy over pervious surfaces, whereas canopy loss over pervious and impervious surfaces occurred equally in Glenside.

## Canopy Loss City of Campbelltown

### *Campbelltown Canopy Cover Report*

A historical assessment to compare canopy cover levels between 2006 and 2016 using the i-Tree Canopy free software tool and aerial imagery was recently completed. Additional information was also collected to understand existing trends in planning and development, to use this monitoring to inform future planning and focus resources and efforts for the most beneficial outcome.

To ensure consistency with other Councils and provide more in-depth information, specific categories including pervious and impervious surfaces, grass, tree cover, and 'plantable space' were assessed over these two periods. The information was collected for each suburb and analysed for public and private land. It should be noted that 'plantable space' is overstated as it can be hard to assess whether a point is truly plantable from this process, however it does give an indication (ie a bare allotment or verge area may not practically enable a tree to be planted).

Further work would be required to work out what the exact practical amount of plantable space is in Campbelltown City Council. The full report is available from the City of Campbelltown. An excerpt of the key findings is provided below.

The figure below shows the percentage of tree (canopy), impervious, and plantable space cover for each time period relative to the whole city area, private land area, and public land area (stars indicate a statistically significant change over time).



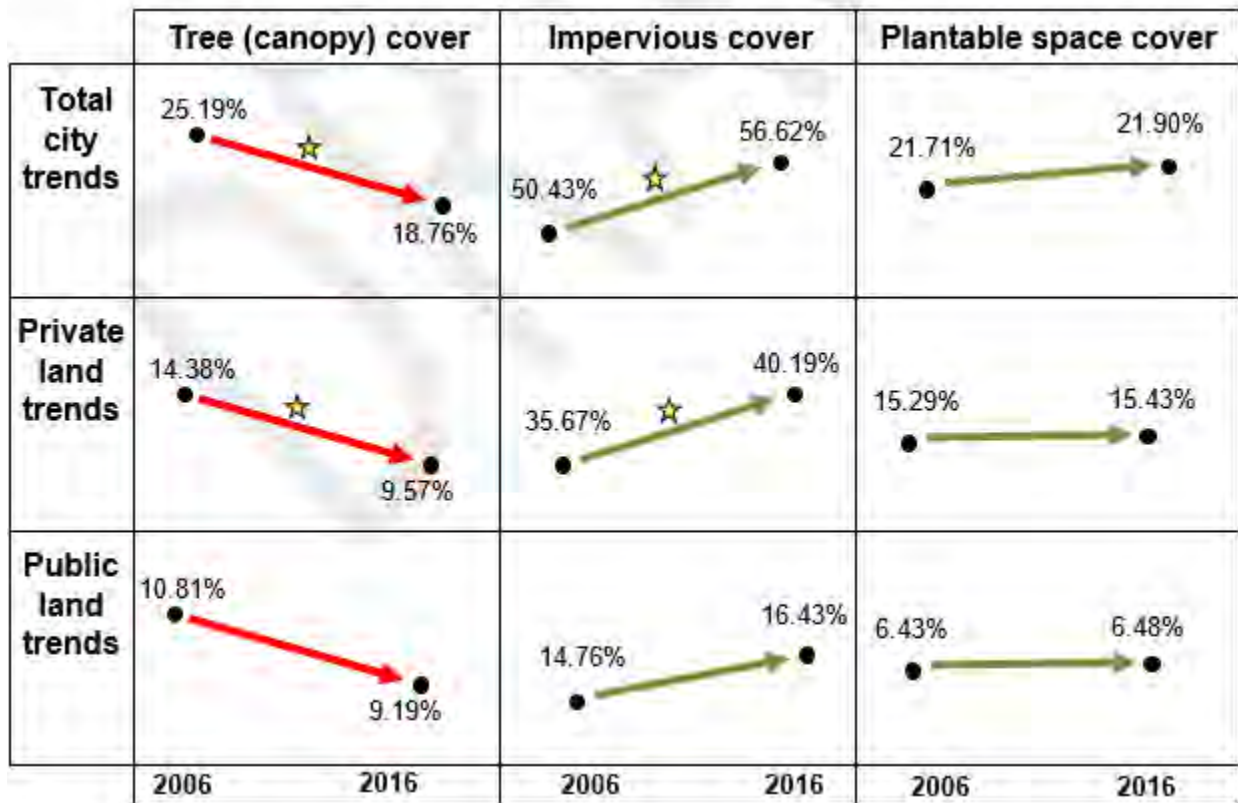


Figure 3: Changes in tree canopy cover, impervious cover and plantable space cover 2006-2016

As demonstrated in Figure 3, this highlights the key trends in land cover between 2006 and 2016. Across the city as a whole, tree canopy decreased by 6.4%, the majority of which is from private land, however a downward trend was also observed on public land. Similarly, impervious cover (buildings, roads, other impervious surfaces) increased across the city by 6.19%, which interestingly is almost the same percentage of canopy cover decrease. A significant increase was observed on private land and whilst not statistically significant, an upward trend of almost 2% was observed on public land.

Figure 4 shows the total percent of land cover types, proportion of public vs private land and significant changes.

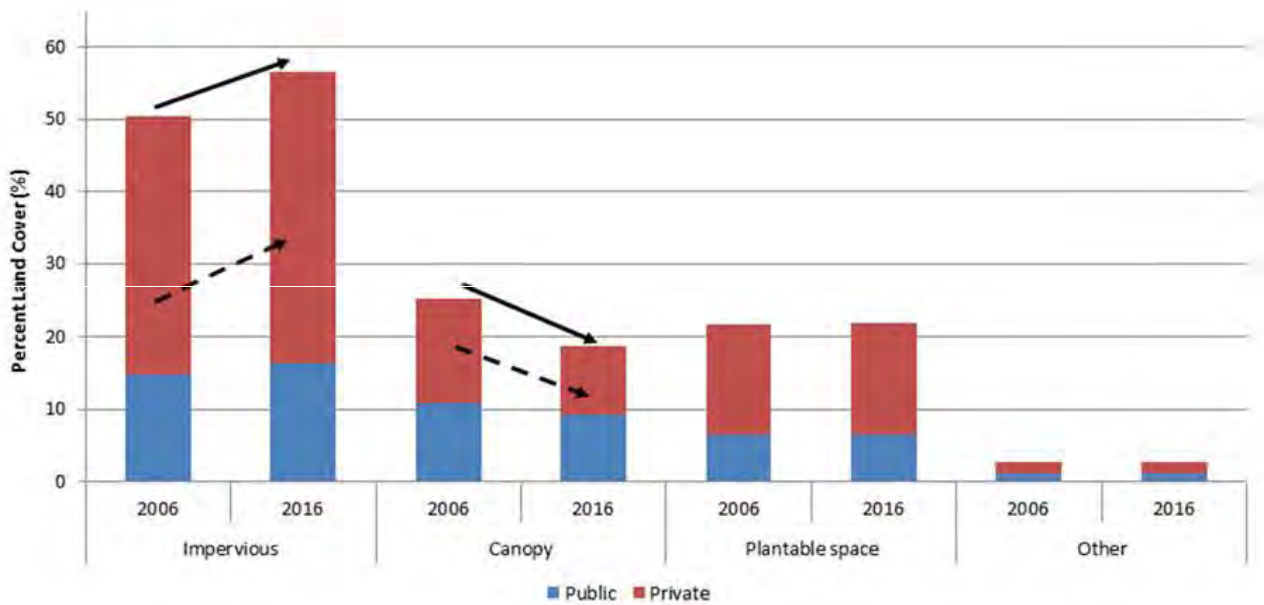


Figure 4. Percent land cover on public and private land across the Campbelltown City Council in 2006 and 2016.

Arrows indicate direction of statistically significant changes over time either for broad land cover categories (solid line) and/or composite land cover types (dotted line). Land cover categories: Impervious = road (ImpRd), building (ImpBld), other (ImpOth); Tree canopy = over impervious surface (TrImp), over pervious surface (TrPer); Plantable space = bare ground (BG), non-sporting grass (GrOth); Other = sports grass (GrSpt), wetland vegetation (WV), water (W).