Government of South Australia
Premier's Climate Change Council

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Mr John Stimson
Presiding Member
Expert Panel
Planning System Implementation Review

c/o: DTI.PlanningReview@sa.gov.au

Dear Mr Stimson

I am pleased to provide you with the Premier's Climate Change Council's submission to the Expert Panel for the Planning System Implementation Review.

The Council is established under *South Australia's Climate Change and Greenhouse Emissions Reduction Act 2007*. The Council is the State Government's key advisory body on matters associated with reducing greenhouse gas emissions, mitigating and adapting to climate change.

The Council considers that there is significant opportunity to strengthen the South Australia's land use planning system's role in promoting development and urban form that is resilient to the future climate, reduces climate related disaster risk and minimises greenhouse gas emissions.

Please contact the Premier's Climate Change Council Executive Officer, via pccc@sa.gov.au if you have any queries or wish to discuss this matter further.

Yours sincerely

[redacted]

Martin Haese MBA
Chair
Premier's Climate Change Council, South Australia

Premier's Climate Change Council

Submission to Expert Panel for the Planning System Implementation Review

Introduction to our submission

The Premier's Climate Change Council (PCCC) welcomes the independent review of the *Planning, Development and Infrastructure Act 2016 (*PDI Act) and the Planning and Design Code.

We note the terms of reference include review by the Expert Panel of the PDI Act (seven key areas for review) and the Planning and Design Code as it relates to infill policy, trees, character, heritage and car parking.

The scientific evidence is clear on the need to accelerate action to reduce greenhouse gas emissions and adapt to the changing climate. The PCCC consider that the land use planning system is fundamental to promoting development that is resilient to the future climate, reduces disaster risk, and minimises greenhouse gas emissions.

While the PDI Act, infill policy, trees and car parking can contribute to resilient, low-emissions development, the PCCC considers there are related opportunities the Expert Panel should also consider.

This submission includes the PCCC's response to a number of the discussion questions as well as recommendations for further review or investigation for the planning system. We would welcome the opportunity to discuss any matters raised in this submission.

Response to questions on *Planning, Development and Infrastructure Act 2016* reform options

Impact Assessed Development

What are the implications of the determination of an Impact Assessed (Declared) Development being subject to a whole-of-Government process?

The PCCC supports Impact Assessed Development returning to a whole of Government process. Requiring Cabinet support for an impact assessed development ensures all Ministers are aware of the development application which can provide greater scrutiny of the proposed development.

Response to questions on Planning and Design Code reform options

Trees

Native Vegetation

5. What are the issues being experienced in the interface between the removal of regulated trees and native vegetation?

6. Are there any other issues connecting native vegetation and planning policy?

The PCCC is aware of concerns that blanket allowances for removal of vegetation for bushfire protection are resulting in unnecessary removal. There are few checks and balances in place to ensure that appropriate clearance is occurring for bushfire protection and in order to maintain a fuel break, particularly in peri-urban areas.

The Conservation Council SA have prepared a report *Tree Preservation and Bushfire Prevention: A Comparison of Australia's Bushfire Clearance Exemptions*, incorporating feedback from the CFS and Native Vegetation Branch which has taken a deeper look at the issues in this area and proposed

solutions to prevent the unnecessary loss of trees in bushfire prone areas. This includes the role of larger trees in reducing ember attacks and slowing fires.

The PCCC recommends reviewing current policies and potential loopholes allowing for unnecessary removal of trees; and to consider policies to improve protections for large native trees (regardless of whether planted or not) within 10 and 20 metres of a building or dwelling or 5 metres of a fenceline in bushfire prone areas (where it is safe to do so).

In addition, opportunities to address the removal of native vegetation before subdivision or building approval is given and encouraging retention as an expectation, not an exception should be considered.

Climate change will increase and exacerbate threats to native vegetation and biodiversity. More frequent and intense extreme weather events, sea level rise and bushfires will increase disturbance to biodiversity, potentially limiting opportunities for natural regeneration and creating climate conditions unsuitable for some species and communities. Protecting our existing native vegetation is critical to make our natural environment more resilient to the impacts of climate change.

Tree Canopy

7. What are the implications of master planned/greenfield development areas also being required to ensure at least one (1) tree is planted per new dwelling, in addition to the existing provision of public reserves/parks?

The PCCC strongly support a requirement to ensure at least 1 tree is planted per new dwelling. This is a positive way to improve canopy cover and urban cooling in a changing climate. The PCCC request that consideration is given to how the policy is developed to ensure benefits for cooling of dwellings can be optimised. It is noted that newer estates are often in the hotter parts of Adelaide with lower tree canopy cover, and tools such as LiDAR could assist measuring current vs future canopy cover.

Provision of water to irrigate and maintain trees is critical for their growth and health. Consideration to how water can be retained in the environment for plant growth, through WSUD features such as rain gardens, swales and small kerb-side inlets should be considered concurrently.

Increasing urban biodiversity is also critical in master planned/greenfield areas, and the planting of at least one tree will assist achieving improved habitat and biodiversity.

8. If this policy was introduced, what are your thoughts relating to the potential requirement to plant a tree to the rear of a dwelling site as an option?

Planting location can influence the benefits available from trees planted on residential parcels. Shading from tree canopies can cool buildings and reduce air conditioning requirements and the amenity and biodiversity values of trees are well acknowledged.

The PCCC consider that tree planting on dwelling sites should be located where it will have the greatest potential to grow to maturity and deliver benefits to the household and broader neighbourhood. The ideal location will depend on where the dwelling is sited on the allotment and the presence of existing trees on the allotment, neighbouring allotments or road corridor.

Tree Protections

9. What are the implications of reducing the minimum circumference for regulated and significant tree protections?

The PCCC strongly support a revision of the minimum trunk circumference for regulated trees.

Achieving tree canopy targets requires the protection of more than just our largest trees. There are significant numbers of species which never grow to the size where they receive protection under the 2 metre "rule", either because they are very slow growing or simply because this does not fit their growth pattern. This would enable us to protect these species and would provide protection for younger and smaller trees that over time will make a substantial contribution to urban green cover.

However to be truly effective consideration may need to be given to more sophisticated approaches than just circumference (see below).

The PCCC considers that increasing the clarity between the current significant and regulated tree requirements and the PDI Act could improve tree protection in South Australia, and help change understanding of the benefits of retaining trees in private development.

10. What are the implications of introducing a height protection threshold, to assist in meeting canopy targets?

11. What are the implications of introducing a crown spread protection, to assist in meeting canopy targets?

The PCCC support the exploration of a height protection threshold and/or crown spread protection. It is understood that interstate, a number of councils use a height-based protection rather than trunk circumference. To improve cooling, canopy cover is required. It makes sense to explore these as potential criteria for protection.

12. What are the implications of introducing species-based tree protections?

The PCCC understand the need to balance an urban greening response to climate change with biodiversity protection and habitat improvement. The value of species-based tree protections would need thorough investigation as some non-native species may be just as effective as native species in providing canopy and habitat. In addition we may also need to understand better what trees will be most resilient in a changing climate. There are opportunities for continuing collaboration with service authorities such as SA Water and South Australia Power Networks for trees in our streets, easements and over/near service locations.

Distance from Development

13. Currently you can remove a protected tree (excluding Agonis flexuosa (Willow Myrtle) or Eucalyptus (any tree of the genus) if it is within ten (10) metres of a dwelling or swimming pool. What are the implications of reducing this distance?

The PCCC support reducing the distance from development where protected tree removal is permitted. This is an opportunity to make a significant change with potential to substantially benefit tree canopy cover, especially given the reducing residential allotment sizes across Adelaide.

Site-based assessments could be considered under some circumstances to avoid blanket removal of existing vegetation particularly where the prevailing landscape character and suburban biodiversity networks are significantly adversely impacted.

14. What are the implications of revising the circumstances when it would be permissible to permit a protected tree to be removed (i.e. not only when it is within the proximity of a major structure, and/or poses a threat to safety and/or infrastructure)?

The PCCC does not support any revision to permissible protected tree removal. All feasible options to retain protected trees should be promoted.

Urban Tree Canopy Off-Set Scheme

15. What are the implications of increasing the fee for payment into the Off-set scheme?

The PCCC supports the exploration of increasing fees for payment to the Off-set scheme. Sufficiently high increases should see removal of trees become a less attractive option. Increasing the fee alone however may not be sufficient and the Expert Panel should consider the effectiveness of current compliance arrangements over the long term.

If the fee is increased, more compliance work may be needed to ensure the off-sets are delivered appropriately. It is understood that checks and balances to make sure that trees planted to meet the requirements of the Urban Tree Canopy overlay are retained or actually grow into trees are limited.

Consideration should also be given to unintended consequences. Increases in the offset fee could push more retention or, alternatively, developers may simply continue to pay the offset and pass on the costs.

The City of Melbourne (link) has developed a tree evaluation tool which is used to determine the social, environmental and economic values of trees.

The PCCC suggests that alternatives to the offset scheme could be explored that give greater priority to the planting and maintenance of trees on development sites as well as improving retention of large and established trees.

16.If the fee was increased, what are your thoughts about aligning the fee with the actual cost to a council of delivering (and maintaining) a tree, noting that this would result in differing costs in different locations?

The PCCC consider the fee should reflect the value lost over the lifetime of the tree e.g. canopy and cooling provision and habitat and biodiversity value not just the cost of delivering and maintaining a new planting. This also needs to reflect that trees are appreciating assets and their value increases over time.

17. What are the implications of increasing the off-set fees for the removal or regulated or significant trees?

Offset fees should provide a disincentive for removal. In developing the policy, consideration should be given to the likelihood of perverse or unintended consequences.

The PCCC recommend that the Expert Panel should investigate further the effectiveness of the Urban Tree Canopy Off-set Scheme, in particular the impact on habitat and biodiversity.

The Expert Panel have indicated that it wishes to ensure that the costs of payments into the scheme instead of planting or retaining a tree are higher to reflect the actual costs to local government for planting and maintaining a replacement tree. This is a good start and sufficiently high increases should see removal of trees become a less attractive option. However this does not consider the impacts (and costs) of the loss of the habitat and biodiversity value; as well as the canopy value of an older and larger tree.

Given that trees are usually of a significant age (e.g. 80 to 100 years) before they form tree hollows for nesting, removal and offset via planting a new tree will be inadequate in providing habitat equivalent to the tree-bearing hollows that were lost because of the development.

Some options to consider include:

- Identifying significant habitat trees and protecting from removal unless exceptional circumstances.
- Innovative funding options to encourage the planting of more substantial native trees that will make a significant impact on the future urban tree canopy.
- Taking into account loss of habitat and biodiversity value in costing tree removal.
- Any economic analysis should consider all the externality costs of tree removal (e.g. heat island effect, habitat value) and ensure the benefits of tree retention are included.

Public Realm Tree Planting

18.Should the criteria within the Planning and Development Fund application assessment process give greater weighting to the provision of increased tree canopy?

The PCCC consider that investment in open space and public realm projects should be evaluated against criteria that give more weight to providing increased tree canopy.

The PCCC propose the Expert Panel consider the addition of criteria that could achieve more resilient outcomes, for example:

- WSUD features that retain water in the landscape.
- Species choice that considers the future climate and current and future habitat needs.
- Irrigation from sustainable water sources (e.g. Managed Aquifer Recharge; alternative water supplies).

Infill

Design Guidelines

19. Do you think the existing design guidelines for infill development are sufficient? Why or why not?

The PCCC considers while many of the General Development Policies for Design in Urban Areas in the Planning and Design Code refer to design that will be resilient to the future climate, there is no articulated requirement to consider future conditions. In the absence of Deemed to Satisfy (DTS) Criteria there is no clear mechanism to determine if the desired outcomes will be achieved by the proposed development.

Preparing for, and mitigating climate change means we need climate-smart buildings that are designed for the future climate, maximise water and energy efficiency and minimise greenhouse gas emissions associated with construction and operation. Climate-smart buildings need to be part of an urban landscape that includes trees and green spaces to provide amenity, shading, cooling, and improved air quality. Infill development can often leave little space for landscaping and space for tree planting and the new planning system has aimed to address this, however there is opportunity to provide additional guidance or criteria against which to assess development.

Specific examples are provided below:

Design in Urban Areas Performance Outcome (PO) PO3.1 states 'Landscaped (including trees), permeable open spaces incorporated to: (a) minimise heat absorption and reflection (b) maximise shade and shelter …'.

There is no related DTS provision however guidelines could be developed to describe how to achieve and assess against this PO. There are a number of existing guidelines including Designing for a cool city – Guidelines for passively irrigated landscapes (CRC for Water Sensitive Cities, 2020), Trees for a

Cool City: Guidelines for optimised tree placement (CRC for Water Sensitive Cities 2017) and the draft Design Guidelines (ODASA, 2017) that could provide reference.

Design in Urban Areas Performance Outcome PO4.1 states 'buildings sited, oriented and designed to maximise natural sunlight access and ventilation to main activity areas, habitable rooms, common areas and open spaces', however there is no related DTS provision.

There are a number of guideline documents including the Land division - how Best Practice Land Division can contribute to Household Energy Efficiency (DPLG, 2010) and Your Home (AG, 2017) which contain guidance on floor plans and locating living areas to maximise north access that could be used to develop a guideline to achieve this PO.

Design in Urban Areas Performance Outcome PO4.2 states 'Buildings sited and designed to maximise passive environmental performance and minimise energy consumption and reliance on mechanical systems, such as heating and cooling' however there are no related DTS provisions.

It is suggested that guidelines and associated standards could be prepared to assess achievement of this PO. This may refer to building performance and reference ratings tools such as Green Star, NaTHERS and NABERS. The Moreland Sustainable Design standard factsheets for energy performance (Moreland City Council, 2015) provides a key reference for this guideline.

Performance Outcome PO4.3 states 'buildings incorporate climate responsive techniques and features such as building and window orientation, use of eaves, verandahs and shading structures, water harvesting, at ground landscaping, green walls, green roofs and photovoltaic cells' however there are no related DTS provisions.

It is suggested that guidelines to achieve this could reference the Moreland Sustainable Design standard factsheets (Moreland City Council, 2015), the draft Design Guidelines (ODASA, 2017), YourHome (AG, 2017) and for apartments, the Apartment Design Guidelines for Victoria (Department of Environment, Land, Water & Planning 2017).

20. Do you think there would be benefit in exploring alternative forms of infill development? If not, why not? If yes, what types of infill development do you think would be suitable in South Australia?

The PCCC supports the exploration of alternative forms of infill development, particularly those that seek to achieve sustainable development, that support sharing of facilities, or provide enhanced community connection and community resilience.

For example, small-scale, low multi storey development, i.e. three-storey apartments, could be an effective way to increase housing supply and allow space on small blocks for greening and WSUD. Using plot-ratio as an analogy, the trade-off between increased height can then enable greater green space on the ground level. However, the greening elements must be unequivocal and enforceable.

Strategic Planning

21. What are the best mechanisms for ensuring good strategic alignment between regional plans and how the policies of the Code are applied spatially?

Progress toward Regional Plans goals such as green/tree cover or a desire for climate resilient development, will only occur when these goals align with Code policies that drive concrete climate resilient and low emissions building and neighbourhood design and materials including tree planting, tree protection or the use of climate responsive techniques.

Part of the development of each Regional Plan should include identifying where changes to the Code may further the progress of the goals, and relevant Code amendment processes initiated.

Car Parking

Code Policy

24. Should car parking rates be spatially applied based on proximity to the CBD, employment centres and/or public transport corridors? If not, why not? If yes, how do you think this could be effectively applied?

25. Should the Code offer greater car parking rate dispensation based on proximity to public transport or employment centres? If not, why not? If yes, what level of dispensation do you think is appropriate?

Car parking rates should be designed to encourage active travel and public transport use. For such policy to be effective, it needs to be supported by the provision of public transport that meets user needs and active travel infrastructure (cycle and walking paths) and end of trip facilities.

Design Guidelines

28. What are the implications of developing a design guideline or fact sheet related to off-street car parking?

The PCCC would like to see opportunities for WSUD (e.g. permeable paving) and EV charging facilities promoted in any guideline prepared relating to car parking.

Impermeable surfaces capture and store heat, and tend to cool off slowly. Permeable paving can allow an area to cool off more quickly. It can also allow water to drain through naturally, cooling the pavement. As absorbed water evaporates back up through the voids in the paving, this can further cool the surrounding air and paving.

Electric Vehicles

29. EV charging stations are not specifically identified as a form of development in the PDI Act. Should this change, or should the installation of EV charging stations remain unregulated, thereby allowing installation in any location?

The PCCC would not support any policy change that created an impediment or disincentive for the installation of EV charging infrastructure. However there will be a significant increase in the installation of charging infrastructure in coming years and this needs to be undertaken in an orderly and planned manner so that infrastructure is installed where it is needed.

30. If EV charging stations became a form a development, there are currently no dedicated policies within the Code that seek to guide the design of residential or commercial car parking arrangements in relation to EV charging infrastructure. Should dedicated policies be developed to guide the design of EV charging infrastructure?

The PCCC supports the development of policies and guidelines to promote EV charging infrastructure that is appropriately designed, sited and promoted (e.g. signage). These policies should be appropriately designed so they support EV charging infrastructure and do not create an impediment.

Commission Prepared Design Standards

33. Do you think there would be benefit from the Commission preparing local road Design Standards?

The PCCC would support the preparation of local road Design Standards that promote the installation of WUSD features such as permeable paving and rain gardens, promote the provision of cycle lanes, and promote design that includes space for tree planting.

Additional items for review by the Expert Panel

The following section describes other opportunities the PCCC would like the Expert Panel to consider to promote climate resilient, low-emissions development through the planning system.

Changes to the Planning, Development and Infrastructure Act 2016

- Include a definition of sustainability that includes reference to climate change.
- Include additions to principles of good planning and state planning policies to promote mitigation and adaptation.

The PCCC recommends the Expert Panel consider potential changes to the Planning, Development and Infrastructure Act 2016 (PDI Act) to strengthen requirements to consider climate change in land use planning decisions.

The PDI Act states that the object is to support and enhance the State's liveability and prosperity in ways that are 'ecologically sustainable', by creating a planning system that promotes development consistent with the planning principles and policies. Ecologically sustainable is not defined and it may not be explicit that this should consider adapting to and mitigating climate change.

Consideration could also be given to updating section 14 E(ii) to state that policies and practices should actively promote emissions reduction and mitigation and adaptation to climate change. The current clause only focuses heavily on energy efficiency and does not have sufficient reference to the need to decarbonise and avoid as well as adapt to the implications of climate change.

Section 62 of the PDI Act that specifies objectives for the state planning principle on climate change could be similarly amended to support development decisions capable of promoting development that is not merely resilient to climate change, but that have a *positive* effect on climate adaptation and mitigation.

Impact assessed development

- Include requirement to quantify whole of life emissions and climate risks to development in Environmental Impact Statements.

Impact assessed developments subject to an Environmental Impact Statement (EIS) requires analysis of a range of environmental, social or economic affects.

The PCCC suggest the Expert Panel consider the opportunity to require EISs to report on associated whole of life greenhouse gas emissions, opportunities to mitigate the adverse impacts of climate change, and design that considers the future climate and facilitates opportunities to build resilience and adapt. For example including requirements for a climate risk assessment and greenhouse gas emissions assessment to be undertaken for all major projects.

State Planning Policies and their implementation

- Review SPP 5 to place greater emphasis on low or zero emissions development.
- Provide guidance on how the Regional Plans and the Planning and Design Code (PDC) relate to, and support SPP 5 and communicating this publicly.
- Invest in a systematic review on gaps in the Code and its implementation on relation to addressing climate related risk and reducing emissions.

State Planning Policy 5 (SPP 5) contains a range of policies regarding climate ready development. The PCCC consider that there is scope for some revision to place a greater emphasis on supporting low or net zero emissions development beyond the current focus on compact urban form and clean energy. This recognises the need to address other sectors, beyond energy, including embodied emissions in construction and buildings.

The PCCC would be well placed to assist the State Planning Commission and Planning and Land Use Services (PLUS) to update these policies.

In addition, one of the questions that has been raised is the extent to which the current policies regarding climate change are being effectively implemented.

The PCCC considers there would be value in:

- Preparing guidance on how the Regional Plans and the Planning and Design Code (PDC) currently relate to and support SPP 5 and communicating this publicly;
- Undertaking a systematic review of gaps in the PDC and its implementation in relation to supporting development that is adapted for future climate conditions; and encouraging net zero emissions development. This review could inform development of a well evidenced, strategic roadmap for future reform.

Climate ready land use planning roadmap

One of the best practice principles for climate resilience is to take both a systematic and strategic approach to planning combined with issues specific responses. This requires systematic analysis of the risks and issues as well as understanding the gaps in the current response. Development of a strategic roadmap could also provide a basis to secure additional resourcing as well as build partnerships with local government.

We are aware that PLUS has prepared a preliminary road map for better integrating climate change into the planning system and would welcome the opportunity to discuss this and how the PCCC could contribute to its implementation; and further development.

As one example of this approach, Victoria has an *Environmentally Sustainable Development of Buildings and Subdivisions Roadmap* that is driving changes which will require planning permits to demonstrate how their proposal has considered ESD principles. Such considerations include siting and design measures to support more sustainable water and energy management, low emission transport choices, reduction of urban heat, waste reduction and measures to minimise exposure to air and noise pollution.

Hazard overlays and hazard risk reduction

- Include urban heat hazard overlay with policy to promote urban cooling.
- Refer to climate change and increasing frequency and intensity of hazard events (bushfire, flood and extreme heat) in hazard overlay policies.
- Develop policies for materials for new building development to reduce the hazard of heat.

Climate projections for South Australia include more frequent and intense extreme weather events, resulting in more natural disasters. A 2021 report[1] by Deloitte Access Economics estimates that, under a low emissions scenario[2], the total economic cost of natural disasters across Australia will reach $63 billion per year by 2050. This estimate includes the $9 billion in cost associated with climate change.

CSIRO has estimated that $1 investment in climate adaptation or disaster risk reduction saves between $2 and $11 in post-disaster recovery and reconstruction [3]. There is clearly a case for investing in action that will contribute to reducing the impacts of extreme weather events.

The planning system can maximise its contribution to hazard management by restricting development in hazard prone areas and acknowledging that climate change will change the frequency and intensity of hazard events.

The accumulation of heat, through heat island effects in urban settings, contributes significantly to increased risks associated with public health, amenity, and liveability, particularly in vulnerable communities. More hard surfaces which absorb and radiate heat make urban areas hotter.

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[1] https://documents.uow.edu.au/content/groups/public/@web/@gc/documents/doc/uow270728.pdf
[2] Low emissions defined where net carbon dioxide emissions start to decline by 2020 and fall to zero by 2100.
[3] https://www.csiro.au/en/news/news-releases/2021/facing-the-future-of-disaster-resilience

In addition, as a general rule dark coloured surfaces tend to absorb a great deal more heat energy than do light coloured. There are several options to address this issue – requiring lighter colours is one option. The other option is paints that reflect heat without reflecting visible light, so they look like a darker surface but perform thermally like a lighter one. These paints come in a range of colours from white to almost black.

Some key issues for further consideration include:

- Investigate integrating heat mapping data as a planning overlay with an associated policy requiring developers to show how their development will mitigate any urban heat island effect.
- Explore the Cool Suburbs Rating Tool[1] (NSW) developed by the Western Sydney Regional of Councils (WSROC) as a good example of a voluntary assessment tool and framework that can be used by developers and councils.
- Develop policies regarding materials selected for new building development to reduce the impact of the hazard of heat, for example limiting non-reflective surfaces within planning and building standards; restrictions on use of synthetic surfaces. This would increase the liveability of homes through an overall reduction in heat, and ultimately make homes more efficient to cool.

Planning for future hazards

The PCCC recommends a proactive approach to planning for and managing future hazards integrated with all instruments of the planning system. Key considerations for the Expert Panel include:

- Developing a risk-based approach that considers current and future risks to development in hazard prone areas.
- Investigating how managed retreat could be identified in the Planning and Design Code.
- Investigating how the planning system could encourage "betterment" – that is development that is more resilient than historic development.

Building and neighbourhood assessment (emissions and resilience)

The PCCC recommends investigating integration of building and neighbourhood emissions and climate resilience assessment tools into the planning system.

Examples from interstate could be examined as models as well as current voluntary tools such as the Green Star rating tool. For example:

- Climate Active certification for Carbon Neutral Buildings.
- NABERS (National Australian Built Environment Rating System) which can be used as a pathway to Climate Active Carbon Neutral certification.
- Since 2004, NSW has operated the Building Sustainability Index (BASIX) integrated with the planning system. BASIX measures the sustainability of buildings.
- The WA Town of Bassendean introduced a 'Sustainable Development' Local Planning Policy in 2022 for new housing4. This policy measures the sustainability of new housing through:
    - 'efficiency points' achieved by particular building design or
    - features such as energy efficiency above the building code, roof solar absorption, solar systems and electric vehicle charging.
- At a precinct level, the Green Star Communities rating tool is used nationally and within SA on several Renewal SA precincts.
- NSW has developed a cool suburbs rating tool and Victoria is trialling a sustainable residential subdivisions tool for lots from three to 250+.

[1] https://coolsuburbs.com.au/

4 bassendean.wa.gov.au/news/council-adopts-new-sustainability-policy/798 accessed 11 October 2022

Capacity building for planning practitioners and developers

The PCCC recommends that the Expert Panel consider the need to build capacity for planning practitioners and developers.

Progressing resilient, low emissions development requires new ways of working and many new technical concepts. Building the capacity of planning practitioners and developers is critical and the PCCC has identified a number of priorities for capacity building:

- Education about the likely impacts of climate change on our communities, buildings, open spaces, infrastructure and natural environment.
- Education about the changing nature of hazards in a warmer and more variable climate.
- Education about features to make buildings of all types and locations more resilient.
- Education about the importance of water capture and water management.
- Benefits of more resilient buildings.
- Opportunities within the current planning system to encourage climate resilient and low carbon development (e.g. through the policy contained within the Design in Urban Areas General Development Policies).
- Contribution of buildings to greenhouse gas emissions.
- Benefits to whole of life costs of resilient, low carbon buildings.
- Education on embedded emissions in the building and development sectors and how these can be managed to reduce the contribution to climate change e.g. low emissions concrete products.