

GBCA submission in response to the *Draft State Planning Policies for South Australia*

The Green Building Council of Australia welcomes the opportunity to provide input to the consultation process for the *Draft State Planning Policies for South Australia* (the Draft SPPs). We congratulate the Department of Planning, Transport and Infrastructure on their work and contribution to the SPP framework, an instrument which is critical to informing the planning policy across South Australia.

The Draft SPPs cover a comprehensive range of considerations and demonstrates a commitment by the SA Government to meeting the challenges of a changing climate while driving prosperity now and into the future. It is critical that the SPPs remain apolitical and are supported across all parties and sectors of the community if they are to successfully guide planning in SA over the long term. Community engagement must remain a central element in developing, refining, implementing and reviewing the SPPs over time.

The GBCA is Australia's authority on sustainable buildings and communities and as such believes in developing best practice policy to ensure that government, industry and the community have the guidance, benchmarks and safeguards in place to ensure that all development meets the economic, social and environmental needs of the state and its people. The GBCA welcomes the opportunity to share our sustainability expertise and resources with the SA Government, gained over more than a decade of engagement with the best practitioners of sustainable development in Australia and from around the world.

The GBCA believes that the Draft SPPs are on the way to becoming an important resource to guide development and planning towards better outcomes for all South Australians. Whilst we support the draft SPPs, there are some aspects of the policies which we believe require more thought and work. We urge the State Government to consider the document's useability and certainty of outcomes as its utmost priorities.

Our comments are presented as follows:

The Planning Vision

- The Draft SPPs do not articulate a clear, overarching planning vision for SA. There is plenty of good content and detail within each SPP about what the SA Government would like to achieve at an operational level. However, without state wide policy statements which describe what SA should ultimately become, targets are harder to set (and less meaningful) and there is no shared vision that brings all stakeholders together to work towards the same goals.
- The integration of regional and metropolitan priorities may lead to a confused approach. Each of the principles contains important state-wide issues that are relevant to the regions, and in most cases there won't be a clear delineation between regional/local/metropolitan issues. The GBCA encourages the SA Government to ensure that the policies relate only to matters for the state as a whole and are not complicated with a regional or local response.
- The Draft SPPS must consider cumulative impacts of all government policies for the long term. SA has some of Australia's strongest policies and targets for emissions reductions, climate

change, renewable energy, and building a knowledge economy. These policies, goals and targets (as well as any others that will shape the growth and development of the state) should be integrated and referenced within the SPPs.

- A practical way to help users of the Draft SPPs to understand how to use and apply the SPPs, would be group them together in a diagram so it can be seen at a glance how they integrate and interact.
- Community engagement is critical and could be considered as an SPP in its own right.
- Sustainability is mentioned throughout the policies, but there is a lack of detail and guidance which will make it hard for stakeholders to understand what is expected of them and to deliver outcomes at a high standard. Integrating and referencing existing government policies (as discussed above) as well as nationally and internationally-accepted frameworks such as the UN Sustainable Development Goals, the National Cities Performance Framework and Green Star will provide a suite of accepted best practice goals and benchmarks as well as guidance for achieving them.

Framework for implementation

While there are some targets included in the SPP document, we have concerns with respect to the lack of key performance indicators and/or comprehensive framework for measuring progress associated with the policies. A lack of KPIs and method of measurement will lead to significant problems in determining and guiding progress. Without KPIs, there will be no shared understanding of what success looks like and this will inevitably impact on the delivery of the SPPs. The measurement framework for the SPPs must be further developed to ensure robustness.

The targets and policies must also focus on regional SA as well as the metropolitan area of Adelaide. It appears that remote communities are not well covered by the SPPs, though they have many issues such as housing supply and employment, as well as strengths such as diversity and rich cultural heritage.

There is currently no mechanism within the planning system to resolve conflicts between SPPs. Should a conflict occur, there is currently no guidance over what policy will take precedence. A transparent, apolitical and fair resolution process will be required. With such a comprehensive suite of policies – 16, plus sub-policies under each – it will also be difficult to avoid ‘cherry-picking’ without building in some form of prioritisation.

Green Star could be used to assist in developing a robust set of KPIs and framework for measuring progress. The Green Star rating tools have been developed to guide and rate the design, construction and operation of sustainable buildings and communities. All of the rating tools include a range of categories (nine for buildings, five for communities) with credits under each. The credits include best-practice benchmarks that have been developed in consultation with industry, community and government experts. The Green Star certification process seeks commitment from all project stakeholders to deliver (and to prove they have delivered) a project that is designed and constructed to meet best practice benchmarks for sustainability and efficiency across the board. While engaging in the certification process may not be practical for every project that will fall under the direction of the SPPs, referencing the benchmarks will provide guidance for achieving best practice. Encouraging certification where possible will drive the best possible outcomes, such as the Australian-leading example at Bowden (case study included later in this submission).

The GBCA invites the SA Government to consider how the Green Star rating system, credits and benchmarks could be used to inform the development of robust KPIs and a framework for measurement. Further information about Green Star's relevance to each SPP is captured in more detail later in this submission and the GBCA would welcome further consultation with the SA Government at any time.

Legislated State Planning Policies

1. Integrated planning

The GBCA encourages the SA Government to consider how environmental and social issues may be given more weight within the Integrated Planning policy. While the policy identifies that economic, social and environmental factors must all be considered for a truly integrated approach, the policy does not offer much practical guidance for how this can be achieved.

Green Star is designed to support the integrated planning of projects. As a holistic rating system which includes a range of categories and credits, it can provide guidance for how sustainability features should be considered, integrated and delivered. Green Star – Communities, for example, covers economic, environmental and social benchmarks and encourages their integration from the earliest stages of planning.

2. Design quality

The Design Quality policy recognises that good design must incorporate the principles of context, inclusivity, durability, value, performance and sustainability. Few people would disagree that these are important to include in any planning and/or development, but many would not know what best practice looks like or how to achieve it. The SPPs must provide guidance on this and also a framework for how this will be assessed.

Green Star is an internationally-recognised, trusted mark of quality for the design, construction and operation of sustainable buildings, fitouts and communities. Green Star ensures design quality through providing a set of best-practice benchmarks that have been developed in consultation with industry, community and government experts. Using Green Star benchmarks to provide guidance alongside the SPPs will help stakeholders to understand the level of quality that is desired. Encouraging Green Star certification where appropriate will ensure that best practice benchmarks are achieved.

Through recent consultation with members and stakeholders, the GBCA has captured feedback that Independent Design Review panels can provide significant value to the planning process, providing guidance and ensuring that development meets high quality or best practice outcomes. It would be useful to reference the Office for Design and Architecture SA within this policy.

3. Adaptive reuse

The adaptive reuse of buildings is an important part of smart planning to minimise construction waste and resources, address urban sprawl and maintain heritage and cultural value. Upgrading existing buildings, sites and places presents an enormous opportunity to reduce energy and water consumption as older construction is often less efficient with sub-standard insulation and ventilation older technology.

Through its Carbon Neutral Adelaide policy, the SA Government is encouraging upgrades to existing assets. This initiative should be extended beyond the Adelaide city centre to the wider metropolitan area and regional communities across the state.

While it is a challenge, there are a range of ways in which under-performing buildings can be encouraged to do better. Green Star – Performance is a key performance metric for analysing the adaptation, retrofit and refurbishment of existing buildings. The built environment including industrial and mid-tier assets are responsible for more than 40% of global emissions and thus adaptive reuse and adaptation is integral to the mission of net zero by 2050.

Green Star - Design & As Built rewards projects that choose to develop sites that have limited ecological value, that reuse previously developed land, and that remediate contaminated land. By encouraging the use of Green Star principles on all urban renewal projects, the SA Government can ensure consistency in remediation and assurance that no sites of ecological value are being harmed. This links directly to the Biodiversity SPP as positive biodiversity can be achieved through the remediation of contaminated land and use of previously developed sites.

Another factor to consider within this policy is the circular economy. How the SA Government encourages and requires developers and other stakeholders to deal with waste and key resources could open further economic opportunities for SA and be another way in which the state can show leadership.

Case study – Tonsley

Tonsley is Australia's first mixed-use urban redevelopment to be awarded the prestigious 6 Star Green Star – Communities certification.

When Tonsley's masterplan was being developed back in 2012, the South Australian Government set a clear brief for the site. The former manufacturing park was to become a sustainable centre for innovation and productivity, drawing workers, developing high-value industries and contributing to the state's economic success. To achieve these goals, Tonsley needed to incorporate the right mix of uses, and to facilitate connections between people, businesses and educational institutions. Adaptive reuse of existing infrastructure is helping to do this by creating a central hub of activity for the community and plenty of opportunities for social and commercial interaction.

The former Mitsubishi Main Assembly Building (MAB) has been retained as the central town square. Once complete, MAB will incorporate retail outlets, eateries, meeting areas and education spaces. Flexible, modular and pod tenancies will also attract small and medium businesses.

In addition to providing an activated hub at the heart of the community, retaining the MAB ensures Tonsley is a world-leader in emissions reduction. Around 90,000 tonnes of embodied carbon emissions have been saved – the equivalent of removing 25,000 cars from the road for a year. Within the MAB, internal forests will provide beautiful natural spaces for members of the community to enjoy, while at the same time capturing carbon and purifying the air.

The environmental benefits don't stop at carbon capture, with the MAB's expansive roof providing the perfect infrastructure to support an extensive 3MW photovoltaic array. Tonsley's public spaces are being created using water-sensitive urban design principles, while walking and cycle paths provide easy access to public transport and connectivity across the precinct.

4. Biodiversity

The Green Star rating tools include credits which provide guidance for land use and focus on protecting and enhancing the local ecology. The GBCA is currently undertaking a review to ensure that the opportunities to enhance biodiversity can be captured and we welcome the opportunity to work with key stakeholders, such as the SA Government, to further develop this policy.

The GBCA has released a discussion paper which includes five key principles identified to underpin the approach to biodiversity and ecology for the built environment. These are:

1. Protect ecological value, by encouraging development on land of limited value.
2. Minimise ecological impact, by minimising the impact on on-site ecology and biodiversity during and after construction.
3. Enhance ecological value and biodiversity, by improving the site as a first priority, and only then consider off-site ecology. This is the key principle that will achieve gains in ecological value.
4. Connect ecological networks, by linking or maintaining connections, between native or built landscape corridors.
5. Create and manage on-site and off-site natural spaces, by constructing new natural environments within the built environment and encouraging the maintenance of enhancements on-site and off-site.

These principles should be considered when finalising SPP 4 and the Green Star *Land Use and Ecology* category should be used to inform a framework that will guide stakeholders in protecting and positively influencing biodiversity. Green Star projects are rewarded for ecological value when:

- They demonstrate that at the date of site purchase or option contract, no critically endangered, endangered or vulnerable species or ecological communities were present at the site.
- The ecological value of the site is improved by the project (determined by the Ecological Value Calculator, based on a comparison of the condition of the site before and after design/construction.)

Green Star projects are also rewarded when they choose to develop sites that have limited ecological value, that reuse previously developed land, and that remediate contaminated land. This is subject to the conditional requirements listed below which could be usefully adopted into SPP 4. The conditional requirement is met when, at the date of site purchase or option contract, the project site did not:

- Include old growth forest
- Include prime agricultural land
- Include a wetland of 'High National Importance'
- Impact on 'Matters of National Significance'

Other recommendations identified in the discussion paper include:

- Encourage the actions of homeowners, leaseholders and property developers- these actions are often overlooked, but can have significant cumulative effect in the landscape.
- The GBCA supports the NSW Government's new [Biodiversity Assessment](#) Method and believe a similar method would be effective in South Australia.

5. Climate change

Climate change is inevitable and will significantly impact the prosperity, liveability, health and wellbeing of our cities and communities. Mitigation and prevention are critical and forward planning for how buildings and cities are constructed will significantly improve the state's climate readiness and its ability to adapt to climate change.

South Australian Climate Change policy currently targets the [Climate Change and Greenhouse Emissions Reduction Act 2007](#) which made SA the first Australian state to legislate targets to reduce greenhouse emissions.

The legislation sets out three targets:

1. reduce greenhouse gas emissions within the state by at least 60% to an amount that is equal to or less than 40% of 1990 levels by 31 December 2050 as part of a national and international response to climate change
2. increase the proportion of renewable electricity generated so it comprises at least 20% of electricity generated in the state by 31 December 2014
3. increase the proportion of renewable electricity consumed so that it comprises at least 20% of electricity consumed in the state by 31 December 2014.

Carbon Neutral Adelaide is targeting net zero by 2050 and the GBCA supports the SA Government in leading the shift to low carbon energy sources. The GBCA is proud to be one of the founding partners in this initiative. As mentioned in our response to SPP 3, we believe that these targets should be extended beyond Adelaide to the rest of South Australia and specific emission reduction goals should be set to ensure the outcomes are measurable.

We propose this reduction goal should be net zero by 2050 state-wide and key performance indicators (KPIs) should be set in five-year increments. This will ensure accountability and clearly outline the State's contribution to climate change in a way that can be tracked and reported.

An internationally recognised sustainability benchmark such as Green Star should be used in conjunction with these KPIs to guide new and existing development. The GBCA's [Carbon Positive Roadmap](#), released earlier this year, outlines a clear framework for implementation and the rating tools ensure that carbon-efficient, climate smart buildings are being delivered. It calls for:

- a forward trajectory of upgrades to energy efficiency requirements in the national construction code
- an expansion of requirements for the mandatory disclosure of energy efficiency in buildings and fitouts
- broader reforms in the energy sector
- practical incentives to support building upgrades and retrofits
- the development of carbon neutral products and services.

This roadmap is designed to limit warming to 1.5 degrees, substantially reducing the forecast effects of climate change. The above points should be integrated into policy objectives and some KPIs to be considered include:

- Emissions to air
- Emissions to water
- Access to public transport
- Resource use

6. Housing supply and diversity

The GBCA's vision for healthier, resilient and positive places for people, is all about supporting better cities, suburbs and communities, and within these, great homes. It is a vision that depends on industry and government working in partnership to lead, innovate and collaborate for a better future for all Australians.

The GBCA believes that Australia needs a clear, unified vision for housing for the future and that to create improvements, housing performance must be measured.

Within the *Economic Prosperity* category of Green Star – Communities is a credit focused on the provision of affordable housing. We have already seen excellent examples in SA of how this credit has been used to deliver excellent, affordable homes for South Australian families such as Bowden and The Prince's Terrace. We encourage the SA Government to include provision in the SPPs for similar initiatives across the state.

Case study – Bowden

Renewal SA's Bowden development, situated on the western edge of the Adelaide City Parklands, is redefining sustainable living in South Australia. Each and every building delivered on the 16.3 hectare site must achieve a 5 Star Green Star rating – or above. Renewal SA has raised the bar even higher, by also committing to achieve a Green Star – Communities rating for the entire precinct.

Rivergum Homes' Terraces on Sixth, comprising three stunning six-storey terraces, is just one inspiring example. The first terraces in Australia to receive a 5 Star Green Star rating were designed to be energy-efficient. North-facing orientation, cross-ventilation and high-performance glazing control heat gain and loss, while maximising natural light. According to Rivergum Homes' General Manager – Property, Robert Alvaro, "each terrace comes with a raft of sustainability features we believe go beyond what's considered to be the norm."

All water fixtures and fittings were selected to minimise water consumption and are complemented by 2,050-litre rainwater tanks installed in the grounds of each dwelling. A third pipe system provides recycled water to all toilets. A 1.5kW solar photovoltaic panel system generates renewable energy for each dwelling.

"We wanted to ensure that what we did was environmentally friendly while, at the same time, enhancing the comfort levels for occupants," Robert says. Working with the Green Star framework "demanded a fundamental shift in thinking from the traditional approach, not to mention the acquisition of new and greener skills among our designers," Robert adds.

Because the requirement for Green Star certification was new to most of the designers and contractors working on projects in the Bowden Development, Renewal SA worked with local Green Star Accredited Professionals and the GBCA to upskill those involved in the projects and streamline the certification process. This has led to better outcomes for Bowden, as well as helping the local industry to embrace sustainable practices.

Case study – The Prince’s Terrace

The first residential project in Australia to achieve a 6 Star Green Star rating – each home within The Prince’s Terrace Adelaide will use 50 per cent less energy and 50 per cent less potable water than a typical urban dwelling.

The result of a unique collaboration between The Prince’s Foundation for Building Community, Prince’s Charities Australia, Renewal SA and Defence Housing Australia, The Prince’s Terrace Adelaide demonstrates how accessible low-carbon living can be achieved without compromising quality, affordability or finish.

The philosophy behind the design was to blend rich, local heritage with contemporary living. Local, low-carbon building materials are also a hallmark of The Prince’s Terrace project. The Prince’s Terrace Adelaide project has been designed to be extremely climate responsive and ensure comfort for residents.

Starting with sustainable design basics, each dwelling has been orientated to maximise natural daylight and to passively heat and cool throughout the year. Shading devices and balconies have also been optimised to allow the sun in during the winter and block it in the summer. All dwellings have also been designed to promote natural cross ventilation for cooling in the summer as well as ensuring healthy air flow.

The building fabric – walls and roofs – will be well insulated to ensure comfortable internal temperatures as well as efficiency of air conditioning systems. Double glazed windows are also specified throughout for energy efficiency and acoustic comfort. The project will use mainly low energy heating and cooling systems, like ceiling fans in summer and fire places in winter. While the need for air conditioning has been reduced, highly-efficient zoned systems can be switched on during peak Adelaide temperatures.

Each dwelling will also have a 1.5kW photovoltaic array installed on the roof, helping to reduce energy use during the day.

The result? A building that uses 50 per cent less energy and produces fewer greenhouse gas emissions than a standard Australian residential dwelling.

The GBCA plans to do more to progress sustainable homes in Australia. With the support of industry, from developers to volume builders, and from finance to product suppliers, we plan on delivering the following outcomes:

- A thought leadership paper describing current market conditions and the potential for better homes in Australia.
- A series of pilot projects in the residential sector, aimed at delivering case studies for certified housing in a consumer-centric manner.
- A common standard and vision for homes that can define the energy, comfort, quality, and liveability requirements for homes in the future.

We plan a collaborative approach and will work closely with our industry and government partners to align with other programs. We would welcome the opportunity to continue to work with the SA Government on leadership projects and policy which set a high benchmark for Australia.

7. Cultural heritage

Green Star actively encourages projects to celebrate and invest in the cultural heritage of the project site and local area. A *Culture, heritage and identity* credit is included in Green Star – Communities and is also rewarded in the Green Star building rating tools. The credit encourages the adaptive reuse of heritage buildings and the promotion and celebration of local heritage and culture for people visiting, using or living in the community or buildings. SA has a rich indigenous and post-settler heritage and culture which if celebrated, promoted and treasured, will bring a range of benefits to the community.

8. Primary industry

Not addressed.

9. Employment lands

The GBCA commends the inclusion of an employment focus within the SPPs. Providing well-connected spaces for employment and economic opportunities is important for all communities across the state. However, we are concerned that the focus is solely on city areas and active encouragement of these provisions in rural or regional areas is missing from the SPPs.

The Green Star – Communities *Economic Prosperity* category provides guidance and benchmarks to encourage employment and economic opportunities. This is strongly linked with providing transport options, housing options and encouraging infrastructure to support the digital economy. These are all policy areas in which the SA Government has invested and which should be integrated into the approach of SPPs.

10. Key resources

While it is realistic that petroleum industries including natural gas will continue to support the state's economy and ensure the reliability and affordability of South Australian power supply in the immediate future – there should be a strong commitment from the SA Government to set a horizon on this sector of the economy. We believe that SA should be setting stronger renewable energy targets and beginning the transition away from fossil fuels.

If this SPP is considered in conjunction with climate change, biodiversity and natural hazards it is clear that diversifying from fossil fuel-based resources will be beneficial to the state, and to the nation.

With adequate planning now, SA can maintain reliable energy supplies at peak surge times whilst meeting environmental targets. SA currently represents 37% of Australia's total installed wind capacity and is a key target for investors in low carbon energy generation and electricity production through resources such as wind power, solar, geothermal and wave energy. This position as a leader in renewables should be bolstered and elevated above the quest for finite fossil fuel resources given Australia's national and international commitments to reducing greenhouse gases.

The SA Climate Strategy for 2015-2050 is ambitious and sets SA on the leading edge of an economy transitioning to low and zero carbon. This ambition should be greater reflected throughout the

SPPs. The Climate Strategy vision sees a climate-ready SA that is harnessing the abundant supply of renewable energy sources to become a net exporter of low carbon energy to the rest of Australia and abroad.

This strategy also presents the research to demonstrate that the vision is possible. The *Climate Change and Greenhouse Emissions Reduction Act 2007* sets the target to reduce greenhouse gas emissions by at least 60% on 1990 levels. At the time of the paper, it was reported that emissions were 9% below 1990 levels in 2012-13 and the Australian Government Department of the Environment reports that for 2015-16, the South Australian net greenhouse gas emissions were 20.1% lower than the 1990 baseline¹. This was during a period that saw GSP increase by more than 60%, and in the period since, growth has been consistent. Economic development can continue without accessing undeveloped resources and we recommend that the SA Government align their regulatory framework in support of renewable ventures through feed-in tariffs and licences. Innovation and energy storage solutions should be a main source of investment as well as the upskilling of workers to compete in the renewable energy market.

11. Strategic transport infrastructure

The GBCA believes that this policy should include all transport alternatives and be clear about how it can integrate with and support all relevant policies.

All Green Star rating tools recognise the importance of connecting people with places and opportunities. Planning for and providing a range of safe, efficient and affordable transport modes is a critical function of any state government, working in partnership with local government and the community.

The GBCA is also thinking ahead about how our cities and communities will plan for emerging technologies such as electric vehicles and driverless cars. Green Star projects all across the country are already contributing to the network of electric vehicle charging stations and we have developed thought leadership pieces on driverless vehicles. The Innovation categories within the Green Star rating tools encourage projects to consider how new technologies can be encouraged and embraced when planning our buildings and communities for the future. The GBCA encourages the SA Government to consider how it may reference Green Star benchmarks for encouraging and planning for alternative modes of transport in its policy, as well as making provision to encourage emerging technologies.

12. Energy

If SA is to move away from emissions-intensive energy production and future-proof itself against increasing pressure on the grid during peak demand, support and promotion of alternative sources of energy supply at the neighbourhood level is critical.

The GBCA has been actively encouraging and rewarding alternative energy sources and use of renewable energy technology in buildings and communities for many years.

¹Department of Water and Environment (2017) <https://www.environment.sa.gov.au/topics/climate-change/south-australias-greenhouse-gas-emissions>

Case study – Alkimos Beach

Many sustainability initiatives helped Alkimos Beach win its coveted 6 Star Green Star rating – and the Australian-first community energy storage trial now underway is among the most exciting.

In a program funded part funded by the Australian Renewable Energy Agency, led by with Western Australian energy provider, Synergy and in partnership with Lendlease and LandCorp, more than 50 homes across the community are now connected virtually to an innovative 1.1MWh solar energy storage system.

“It’s kind of the same as having your own battery on site but for \$11 per month we get to have the benefit without the cost,” says resident Mike Gjestland.

In addition to reducing peak demand locally, the trial is providing valuable insight into how renewable generation and energy storage can be integrated with traditional network infrastructure.

Households participating in the trial are not the only ones to benefit from energy initiatives at Alkimos Beach. Solar panels and gas-boosted solar hot water systems are mandatory for all homes, while the capital cost to residents of energy-efficient appliances is offset by a range of financial incentive packages of up to \$6,000.

Together, these initiatives are expected to reduce home energy bills by up to 50 per cent.

The GBCA’s *Carbon positive roadmap for the built environment* paper notes that the interaction between the built environment and the grid is an aspect that will need to be explored over the next few years. The roadmap expects that buildings will become dynamic and responsive components of local, regional, and national energy systems. The roadmap aims to have buildings use clean energy and to consider the state of the grid when consuming it. In other words, we expect buildings to be more aware of how clean, or dirty, the grid is and manage appropriately.

Specific examples of measures to support decarbonisation of the energy grid – which could be explored by the SPPs – include a mix of on-site or offsite procurement of renewable electricity combined with demand response systems, energy storage, smart peak management controls, and other similar solutions.

13. Coastal Environment

Ensuring that development meets sustainability benchmarks is of particular importance in areas of high ecological value or fragility, such as coastal areas or wetlands. As outlined in the response to SPP 4, Green Star has strict eligibility criteria for projects which must all demonstrate that their proposed site does not fall within an area of high ecological value.

If we are to preserve our environment and fragile coastal eco-systems (and all eco-systems), government must take a similar approach to planning. Where development is approved, projects must plan and deliver ways in which they can contribute positively to the local ecology, and retain and improve biodiversity. Green Star encourages this through setting high benchmarks for emissions such as stormwater and light, as well as features such as landscaping and planting.

14. Water Security and Quality

The GBCA suggests reframing this policy as simply 'Water'. The policy itself should address the planning and provision of water infrastructure, as well as security, quality, supply and environmental issues.

Green Star rating tools have a strong focus on reducing potable water use and ensuring that water quality (both water used within projects and water leaving project sites) is of high quality. Green Star – Communities has a credit focused on the *Integrated Water Cycle* of a community which can provide useful benchmarks for this policy.

15. Natural Hazards

Australia's climate and landscapes mean that natural hazards such as cyclones, heavy rain events, flooding, inundation, bushfires, extreme heat events and drought can have catastrophic impacts on our communities.

The state government plays a critical, and sometimes controversial role in ensuring that development takes these natural hazards into account and does not allow development in areas that put people and property at unacceptably high risk.

While it is not the role of Green Star to prescribe criteria for sites beyond their ecological value, the rating tools actively encourage planning and building for resilience in buildings and communities. The Green Star – Communities rating tool includes an *Adaptation & Resilience* credit, and adaptation and resilience measures are also rewarded in the Green Star building rating tools. *Heat Island Effect* credits within the rating tools may also be of interest to the SA Government for inclusion within the SPPs.

As the SPPs are interconnected, the GBCA notes that natural hazards should not only be viewed as a threat to human life and property. For example, an increase in natural hazards will have significant impact on biodiversity and the ability of nature to bounce back following disaster events. Healthy ecosystems are integral for supporting all life forms and thus clear targets must be set to ensure a reduction of current emissions and significant effort towards the prevention of climate change.

Prevention should be targeted ahead of mitigation, and climate change prevention should be viewed as a key strategy in the prevention of natural hazard and their impacts. Whilst drought is not always considered a natural hazard, the inability to predict when a drought is likely to begin or end as well as changing drought patterns means that it should be considered in future settlement and development plans. Additionally, the reliance of the South Australian food bowl on consistent water supply means that food supply should be considered in this category and mitigated accordingly.

If and when disaster does strike, the GBCA is an advocate of the 'Build It Back Green' movement. Build It Back Green (BIBG) first began in Greensburg, Kansas, after a tornado levelled 95 per cent of the town and killed 11 people in May 2007. Despite the terrible physical, emotional and financial impacts of the tornado, the community seized the opportunity to rebuild their town 'green'.

Following the Victorian bushfires in 2009, Green Cross Australia started its own BIBG movement in Australia. BIBG recognises that scientific predictions of more intense, severe weather are becoming a reality and that damaging events offer the opportunity to break the greenhouse emissions cycle if a reduced carbon footprint is prioritised in rebuilding. The goal of BIBG is to make communities aware of the lowest cost green rebuilding techniques, focusing on energy efficiency, water savings and indoor air quality. Ideally, homes, buildings and infrastructure are rebuilt to the highest sustainability

ratings possible and communities aim to embrace renewable energy solutions. More information can be found at www.greencrossaustralia.org.

16. Emissions and Hazardous Activities

Many of the industries that generate significant economic value for the state also generate significant emissions to the air, land and water and generate hazardous material. While maintaining industrial capacity and employment levels are important, communities and the environment must be protected from exposure to harmful emissions and contamination.

It is not just heavy industry that generates emissions, as the built environment is responsible for almost a quarter of our national greenhouse gas emissions. [The Value of Green Star: A decade of environmental benefits \(2013\)](#) found that, on average, Green Star certified buildings produce 62% fewer emissions than average Australian buildings.

Within Green Star, the Greenhouse Gas Emissions credit awards up to 20 points for the reduction of GHG emissions associated with the use of energy in building operations. This credit leverages the NABERs Energy Commitment Agreement, NatHERS and BASIX Certificate to demonstrate reductions. Additionally, third party assessment gives assurance to industry and government that their development will reach emissions targets through best practice design.

About the GBCA

Established in 2002, the Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings, communities and cities. Our vision is to create healthy, resilient and positive places for people. Our purpose is to lead the sustainable transformation of Australia's built environment. To do this, we:

- Rate the sustainability of buildings and communities through Australia's only national, voluntary, holistic rating system – Green Star.
- Educate industry and government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations.
- Advocate policies and programs that support our vision and purpose.

The GBCA represents more than 650 individual companies with a collective annual turnover of more than \$40 billion. Our membership reflects the diversity of Australian business, with over 500 small to medium enterprises through to 75 companies with annual turnover of more than \$100 million and 24 companies now listed in the ASX 200, with a combined market capitalisation of more than \$620 billion. Members include major developers, professional services firms, government departments and local councils, banks, superannuation funds, product manufacturers and suppliers.

The GBCA appreciates the opportunity to participate in the Community Participation & Sustainability Advisory Committee. The GBCA agrees in principle with the recommendations of the Committee and looks forward to further engagement with the SA Government as part of the Committee as well as in our own right.

About Green Star

Green Star is an internationally-recognised, independent, third-party certification system which assesses the sustainable design, construction and operation of buildings, fitouts and communities. Choosing Green Star can help you save money, create a healthy place for people, minimise your environmental footprint and build a better future for us all.

Green Star certification is awarded for projects which achieve 4 Star (Best Practice), 5 Star (Australian Excellence), or 6 Star (World Leadership) benchmarks. Green Star – Performance also recognises 0-3 Star achievements to assist facilities to benchmark and identify opportunities for improvement. The Green Star rating tools for buildings assess sustainability across nine impact categories:

- Management
- Indoor Environment Quality (IEQ)
- Energy
- Transport
- Water
- Materials
- Land Use & Ecology
- Emissions
- Innovation

The Green Star – Communities rating tool assesses sustainability across five impact categories:

- Governance
- Liveability
- Economic Prosperity
- Environment
- Innovation

