



STATE  
PLANNING  
COMMISSION



# NATURAL RESOURCES AND ENVIRONMENT

POLICY  
DISCUSSION  
PAPER

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Government of South Australia

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Transport and Infrastructure

[saplanningcommission.sa.gov.au](http://saplanningcommission.sa.gov.au)

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- Primary Industries and Regions SA
- Coast Protection Board
- Green Building Council of Australia
- Local government, agency, industry and community attendees of the State Planning Commission workshop held on 17 May 2018

We look forward to receiving further contributions as we move into the consultation phase of this paper.

### **Further Information**

For a full description of the key research and investigations, evidence, facts, figures and references that support the statements and recommendations contained within this Policy Discussion Paper, please refer to the *Natural Resources and Environment Background Paper*. A copy of the paper can be downloaded from the SA Planning Portal.

Photos used throughout this document are courtesy of the Department of Planning, Transport and Infrastructure, the South Australian Tourism Commission, Renewal SA, Water Sensitive SA and City of Adelaide and professional photographers contracted to these organisations.



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## A future vision for our natural resources and environment.

Our vision is to support an urban form that is more efficient, liveable and resilient to a changing climate and helps to preserve the ecosystems that help safeguard the prosperity, vitality and sustainability of our state. We acknowledge that many South Australians value the relationship they have with our natural environments. Whether it be their ability to live in close proximity to our pristine coastline, along the River Murray or amongst the trees in the Adelaide Hills, or working to produce our globally renowned food and wine, we value the opportunities and lifestyle this state provides.



# INTRODUCTION

Land-use planning and development in South Australia is changing. In response to these changes, the *Planning, Development and Infrastructure Act 2016* (the Act) is being progressively introduced to replace the Development Act 1993 to enable a more efficient, responsive and effective planning system. The new system will support and enhance the state's liveability and prosperity in ways that are ecologically sustainable and meet the needs and expectations, and reflect the diversity, of its communities.

The Act provides for the creation of the Planning and Design Code (the Code) – a single planning rulebook for assessing all development applications across the state – that will become the foundation of our new planning system. The Code will replace the complex and at times inconsistent planning rules found within the 72 Development Plans currently in use.

In establishing the Code, we have been presented with an opportunity to harness those aspects of our current system that are working well and use them to form the foundation for the future.

Generally, we are doing a pretty good job of it, although there is always room for improvement.

The South Australian Planning Policy Library (SAPPL) has provided us with an excellent base from which to begin and we recognise that many councils and communities have a strong sense of ownership over policies that apply to their area.

However, we are aware the Code also presents us with the opportunity to improve and streamline areas where our current policies aren't quite up to scratch – where there may be conflict, duplication or deficiencies – and to develop new policies where gaps exist.

This needs to be done with the understanding that we may not be able to tackle all these issues in the first generation of the Code, which will be operational by July 2020. However, this process allows us to start a series of conversations with the industry and the South Australian public about the kind of future we want. This will enable us to provide effective planning to help realise these aspirations while proactively addressing the challenges we will face along the way.

In doing this, it is also important to recognise that planning is just one element of a much bigger system that works together to create liveable, competitive and sustainable places and spaces. Other levers outside the planning system also need to be pulled to achieve success and we must recognise their relationship to the development of the Code and its policy content.

At its heart, planning plays a significant role in balancing competing priorities and resolving tensions across these areas, in order to realise what our communities want when it comes to how we live, how we move about, where we work and how we protect our environment.

To this end, this paper focuses on the key issues and opportunities associated with protecting and enhancing South Australia's natural assets as we move into our new planning system. In particular, it focuses on the role our system can play in reducing the risks from natural and man-made disasters as well as preserving and protecting our natural assets and fertile lands from the encroachment of inappropriate development, particularly in the face of rising urbanisation and climate change.

We look forward to hearing your views on the recommendations we've put forward in this paper as well as continuing to work together to build a successful new planning system we can all be proud of.

# PURPOSE

In March 2018 the State Planning Commission (the Commission) released its *Blueprint for South Australia's Planning and Design Code* (Figure 1), which introduced:

- A series of policy discussion papers designed to stimulate thought around the policy direction for the Code
- A series of technical discussion papers to establish the operational framework and content requirements for the Code. The first technical paper – *Planning and Design Code: How will it*

*work?* – is now available on the SA Planning Portal.

- A series of key policy conversations the Commission would like to have with the industry and the community in relation to those areas it anticipates will require a greater level of reform. Each Policy Discussion Paper will be closely aligned to at least one of these dedicated Conversation Areas.

In the case of this paper, the associated conversation will focus on **Green Infrastructure**,

## Water Sensitive SA and Environmental Resilience.

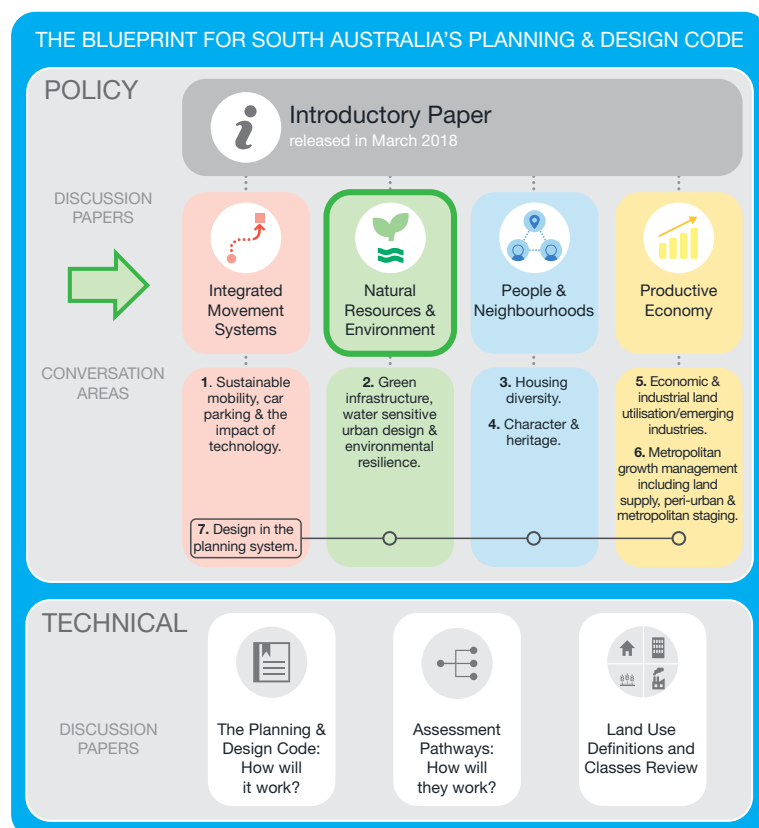
This Natural Resources and Environment Policy Discussion Paper is one of a series of four papers that explore land use policies in South Australia. The other papers consider:

- Integrated Movement Systems
- People and Neighbourhoods
- Productive Economy.

(Refer to Figure 2)



**Figure 1:** The Introductory Paper can be downloaded from the SA Planning Portal at: [www.saplanningportal.sa.gov.au](http://www.saplanningportal.sa.gov.au)



**Figure 2:** Context of this discussion paper against elements of the Blueprint.



The Policy Discussion Papers are intended to be read and considered as a ‘family’ and will assist the Commission to establish the planning rules that will ultimately govern our new system. Each has been developed through an extensive investigation and peer review process which has incorporated the following:

- a review of the South Australian Planning Policy Library (SAPPL)
- investigation of case studies and best practice policy examples from Australia and the world
- workshops with state agencies, councils and special interest groups
- Commission-led policy workshops
- a review of South Australia’s Development Plans in partnership with local government
- a peer review process with thought leaders and key stakeholders such as planning reform advisory groups and government agencies.

This discussion paper draws on the results of these investigations to:

- highlight key emerging trends that may require a planning policy response
- identify gaps or deficiencies in existing policies of the SAPPL that need to be addressed to ensure alignment with government strategic directions (such as State Planning Policies). (See Figure 3)
- identify opportunities to consolidate duplicated policy
- highlight investigations and research undertaken or identified to inform proposed policy directions.

Ultimately, this intent of this paper is to recommend policy directions for the Code, including identifying:

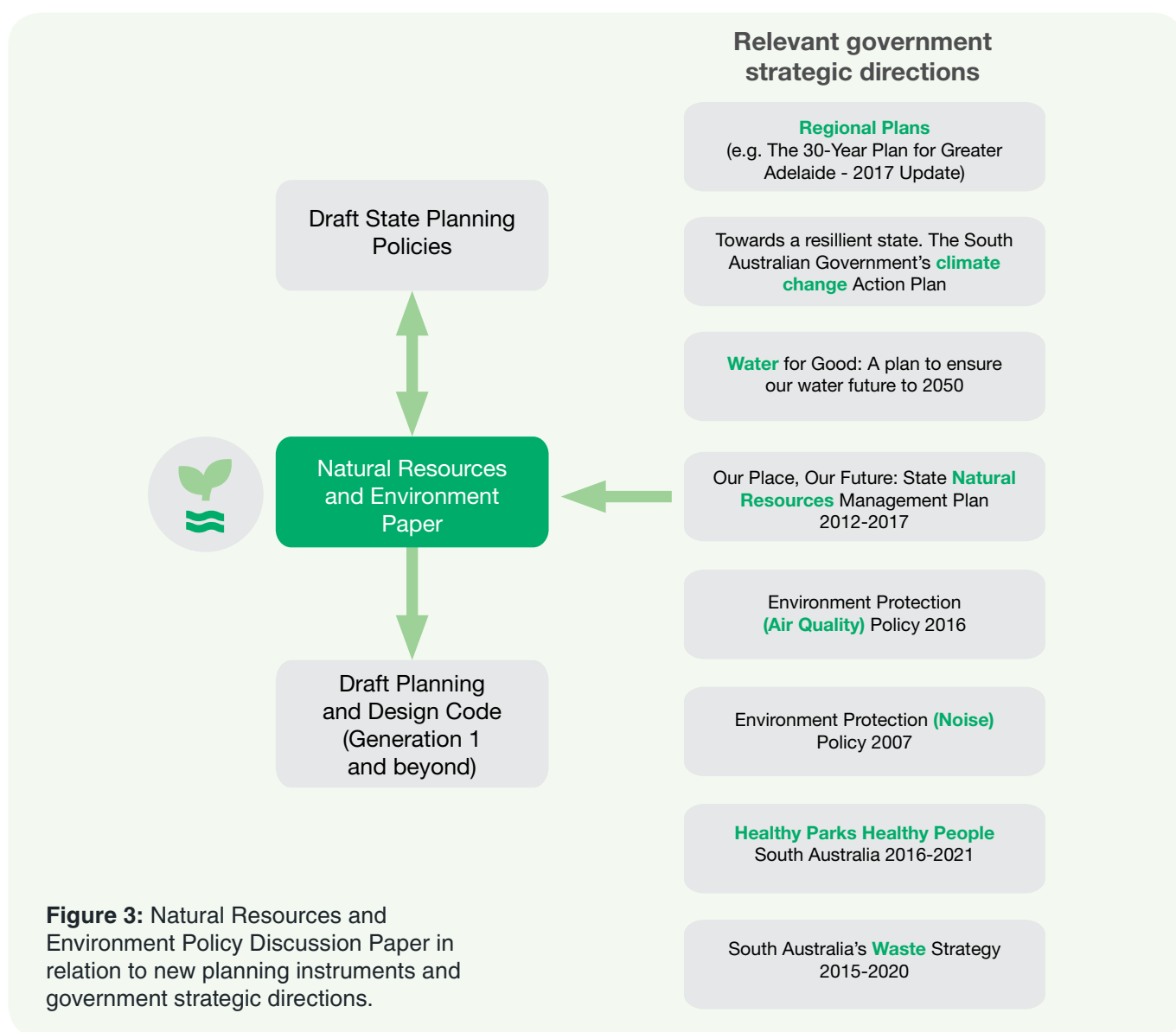
- where existing policy is likely to be transitioned to the Code (‘Transition ready’)
- areas where further investigations or reform are necessary (‘Reform Gen 1 or Reform Gen 2 and beyond’).

These recommendations are offered in line with the following policy themes which play a key in the protection and enhancement of our natural resources and environment in our new system:

- Sustainable and Liveable Urban Environments
- Water Security and Quality
- Biodiversity
- Coastal Environments
- Natural Hazards
- Environment Protection and Public Health.

To access this full evidence base on which is discussion paper has been written, please view the supporting **Natural Resources and Environment Background Paper**.

In recognition of the importance of collaboration in building a successful new planning system, discussion questions have been included as a means to promote thought and seek guidance on the policy recommendations contained within this paper. Please consider them when providing any feedback.



**Figure 3:** Natural Resources and Environment Policy Discussion Paper in relation to new planning instruments and government strategic directions.

**NOTES:**

*The draft State Planning Policies are on consultation from 16 July to 7 September 2018.*

The State Planning Commission is mindful of the recent change of Government, and that current strategic directions may evolve as the new Government continues to progress its agenda.





# WHY ARE NATURAL RESOURCES AND THE ENVIRONMENT IMPORTANT?

Natural resources and the environment underpin South Australia's economic prosperity and social wellbeing. They provide us with water, food, fuel and fibre, and support industries and communities as well as our quality of life. They are also responsible for climate regulation; air and water filtration; natural pest control; and economic, cultural, spiritual and recreational benefits. It stands to reason that managing our resources and environment is integral to how we develop our cities, suburbs and regions.

As our climate changes, we become particularly vulnerable to the risks associated with extreme weather patterns, which will significantly impact where we live and the infrastructure we will need to sustain our way of life. Indeed, what we build now and into the future will need to respond to these anticipated impacts to

avoid increased operation and maintenance costs, particularly in coastal settlements and areas near bushfire hazard zones.

Our increasing desire to live in urbanised areas has also made it more important to protect our natural resources, enhance our environment and biodiversity, manage constraints and mitigate against hazards. Ensuring we find ways to remain connected to nature in these built up areas, particularly through our green infrastructure networks, will become increasingly important for our health, happiness and wellbeing.

We recognise that past decisions have changed our natural environment and now more than ever we need to protect it so it can continue to support our communities. The planning system has a key role to play in this.

In particular it will be important to:

- mitigate and adapt to climate change
- facilitate green infrastructure and water sensitive urban design to respond to our changing urban form
- protect and secure our water resources
- value and enhance biodiversity
- build resilience to hazards.

## Key benefits of protecting and enhancing our natural resources and environment

The following section discusses some of the key benefits of protecting and enhancing our natural resources and environment, along with some of the key trends that will affect our future.



## Climate change mitigation and adaptation

South Australia is vulnerable to changes in the temperature, extreme weather events, sea level rise and associated storm surges. The state's future prosperity and liveability will depend on how effectively we address and respond to the impacts of climate change.

South Australia has exposure risks to several natural hazards including bushfires, floods, landslides, earthquakes and extreme heat. These are likely to increase in regularity and severity with the changing global climate. We are also exposed to other hazards including the storage and management of hazardous materials and contamination of land.

Many of South Australia's urban areas, regional towns and critical infrastructure are located along the coast. The continued increase in sea level and storm surges poses risk to these assets.

Designing climate-smart development is also important to reduce emissions, support green industries and green infrastructure, and enable the better management of water.

The greening and cooling effect that soft landscaping (green infrastructure) has on residential and commercial areas will also be a key adaptation response to the increase in frequent extreme temperatures and the urban heat island effect.

Protecting and re-establishing biodiversity is important to restoring and maintaining our functioning ecosystems in special areas of the state, and making our environment more resilient to the anticipated impacts of climate change.



Adelaide's average number of hot days above 30° is predicted to increase by up to 47 days per year by 2017



Despite our hot, dry climate, we can mitigate the urban heat island effect by growing our urban tree canopy and retaining water in urban landscapes.



## Key trends—what are we seeing?

### A warmer and drier climate with more extreme weather events

Climate projections<sup>1</sup> indicate there will be:

- Warming temperatures in all seasons across South Australia. By 2100 it is projected that average temperatures will increase by up to 3°C.
- Reduced annual rainfall and more time spent in drought. By 2100 it is projected that winter and spring rainfall will decrease by between 10% and 45%.
- Sea level rise and an increase in coastal erosion. By 2100 it is projected that South Australian mean sea level will rise by up to 80cm and there will be an increase in storm surge events and coastal erosion.
- Increasing bushfire risk. By 2100 it is projected the number of days of very high or extreme fire danger index will increase across South Australia by between 25% and 120%.

### The cost of dealing with natural hazards is increasing significantly

The total cost of natural disasters in Australia is forecast to more than double in real terms to \$39 billion per year by 2050<sup>2</sup>.

### South Australia is getting smarter about water

- The diversity of water sources in South Australia has increased, including wastewater recycling, stormwater reuse and desalination<sup>3</sup>.
- South Australia has the highest percentage of households with rainwater tanks in Australia<sup>3</sup>.

**Note:** Please refer to the Natural Resources and Environment Background Paper for references.



## Liveability, wellbeing and inclusion

Contact with nature enriches our physical, psychological, social and spiritual health and wellbeing. These links between the natural environment and our own wellbeing have been understood for a long time.

Access to high-quality public space is a key ingredient of healthy, liveable cities. Quality green spaces can provide a focus for social interaction between neighbours and help support, safe, healthy and connected communities. There is substantial evidence that people with access to high quality open space are more likely to walk and undertake physical activity.

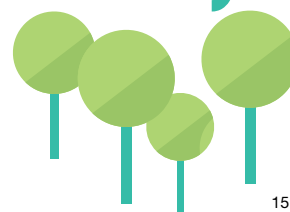
Parks and other areas of public open space provide: local opportunities for people to walk, cycle and be active; exposure to

nature, which can be restorative; and positive mental health benefits and places for social interaction, which are critical for creating and maintaining community cohesion and building social capital.

The benefits of green infrastructure (such as public green space) also include improved air quality, less noise pollution and reduced risks from flooding and heatwaves.

South Australia has a strong history of prioritising the conservation of our natural environment with the parks system covering more than 21% of the state. Protecting and conserving these areas of natural environment and improving the connectivity between biodiversity corridors will be increasingly more important for continuing health, wellbeing and enjoyment (see Box 1).

People who live in neighbourhoods with higher density of trees on their streets perceive themselves to be significantly healthier and have fewer cardio-metabolic conditions.



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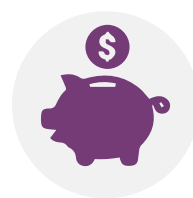
Cooler urban areas



Healthier, happier and more productive people



Improved air quality



Boosted economy



Water management

Trees and plants make a good city great!

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## Key trends—what are we seeing?

### Reduced private open space

- Infill development, increased dwelling density and a trend to larger houses on smaller allotments are reducing private open space in urban areas.

### Loss of tree canopies in metropolitan Adelaide

- Recent data indicates that most metropolitan Adelaide councils have experienced a decline in canopy cover and an increase in hard surfaces such as roads. For example, a recent report found that 17 of the 19 councils had a loss of green cover over the period 2013 to 2016<sup>4</sup>.

### Connection with nature improves health and wellbeing

- Contact with nature has been associated with a number of health benefits for everyone, particularly children who demonstrate improved cognitive function, increased creativity and reduced rates of aggressive behaviour<sup>5</sup>.

### Declining biodiversity

- The number of threatened species is growing and today 63% of the state's mammals, 29% of birds and 23% of vascular plants are considered threatened<sup>6</sup>.

**Note:** Please refer to the Natural Resources and Environment Background Paper for references.



## BENEFITS TO PEOPLE RESIDING IN CITIES DERIVED FROM CONNECTING WITH WILDLIFE

Nature in the city - the greatest benefit is enjoyment. There are few families who have never fed ducks in the local park – and wildlife can sometimes even become part of the family. For instance, in Australia many people feed resident magpies, kookaburras and even possums.

The local animal becomes a type of ‘wild pet’ and may even be given a name. Moreover, urban wildlife is often the primary means through which children connect with and experience nature, helping them develop positive attitudes towards the environment.

Also, understanding and connecting with animals forces us to consider bigger issues, causing us to question the environmental needs of animals and how, as humans, we impact on their ability to survive and what we should be doing to help.

Ultimately, caring for local wildlife opens the door to understanding the broader needs of the planet.

The successful incorporation of biodiversity must be considered at all stages of urban development. It should be constantly revised as conditions change. If a community is to

be constructed on a greenfield site, the retention of natural bushland and large trees is necessary to support those species that would otherwise find it impossible to survive.

In developed communities, local parks should be redesigned to offer food and shelter to wildlife. In high-density communities, tree-lined streets, median strips and roof gardens can all make a big difference to the retention and preservation of wildlife.

*Professor Chris Daniels,  
Professor of Biology,  
University of South Australia*





## Economic competitiveness

Adelaide’s location, climate, nature and resources provide us with premium food and wine for exporting, clean air and water, building materials, recreational opportunities and increased tourism markets<sup>7</sup>.

Therefore, maintaining and enhancing our healthy, biologically diverse environment will help make South Australia a better and more productive place to live.

Sustainability is also a vital component of our competitiveness as it helps to eliminate waste, promote efficiency and drive innovation<sup>8</sup>.

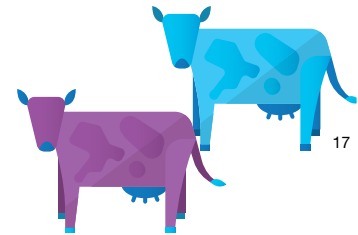
Water security underpins sustainable economic development, population growth, primary production, food security and a healthy urban ecology.

There are also high economic costs associated with climate change if it is not adequately mitigated and adapted to.

Attractive natural environments and accessibility to green infrastructure are crucial to the character, amenity and overall appeal of an area. This appeal can have a direct impact on the property value of a suburb, particularly those with ‘leafy green streets’. Indeed, studies show people are willing to pay more for good views of distance, water and large trees.

Commercial properties with exposure to a healthier, greener environment have also been proven to deliver significant health benefits for staff and increase productivity for businesses in the way of reduced absenteeism, more rapid recovery from stress, increased patience and overall satisfaction in the workplace<sup>9</sup>.

Investment in a low carbon, circular economy also presents us with an opportunity to unlock the full value of our resources, form global connections, and boost our premium food and wine sector<sup>10</sup>.



IN 2013-14 THE AGRICULTURE, FOOD AND WINE INDUSTRIES CONTRIBUTED **\$17.1 BILLION** TO STATE ECONOMY, EMPLOYED **1 IN 5 WORKERS** AND ACCOUNTED FOR MORE THAN 40% OF OUR MERCHANDISE EXPORTS

PROPERTY VALUE IN LEAFY STREETS CAN BE UP TO **20% HIGHER** THAN SIMILAR PROPERTIES IN TREELESS STREETS



## Key trends—what are we seeing?

### Green public realm = higher property prices

- Research is finding that across Australia, people are willing to put a dollar value on green spaces and trees, including:
  - A 2016 research report by the University of Queensland which found that in 2010, Brisbane's street trees generated property value benefits of \$29 million – more than twice the cost of planting and maintaining them<sup>11</sup>.
  - A 2013 report from Melbourne property research and buyers' advocacy firm Secret Agent which found that property with direct park land views out-performed most other properties in a given suburb<sup>12</sup>.

### Natural views attributed to reduced absenteeism

- A 2011 University of Oregon study found that 10% of employee absences could be attributed to architectural elements that did not connect with nature<sup>9</sup>.
- The study found that workers with a view of trees and landscape took 57 hours of sick leave per year, compared with 68 hours per year for those who didn't. Based on this, features like green roofs can provide excellent views to nature even in commercial, urban settings<sup>9</sup>.

### Soil and water quality key to our economy

- Having a clean and green environment has increasing economic value as the world demand for safe and healthy products increases. Nearly 40% of South Australia's exports are agricultural products reliant on healthy soils and adequate water<sup>3</sup>.

### Waste management = \$1 billion for SA economy

- The waste management and resource recovery industry in South Australia has an annual turnover of around \$1 billion, contributes \$500 million annually to Gross State Product and employs around 4800 people. South Australia also has the highest per capita recycling rate in Australia – nearly 80% of total waste generated is recovered<sup>13</sup>.

### Reduced emissions no effect on GSP

- According to the greenhouse accounting data from the Australian Government, the state's net emissions in 2012/13 were 9% below 1990 levels. During this time, our Gross State Product (GSP) increased by more than 60%, demonstrating that economic growth can be decoupled from growth in greenhouse gas emissions<sup>3</sup>.

**Note:** Please refer to the Natural Resources and Environment Background Paper for references.







## WHAT ROLE DOES PLANNING PLAY?

Urban and regional planning has always played an essential role in protecting and enhancing our natural resources and environment, including:

- protecting areas of environmental significance
- protecting and enhancing areas that attract tourism and are value to the community
- maximising the use of our natural resources
- Optimising the use and maximising the benefit of our natural resources.

With the introduction of our new planning system, we have an opportunity to lead by example in protecting the natural environment, contributing to tourism opportunities and increasing liveability.

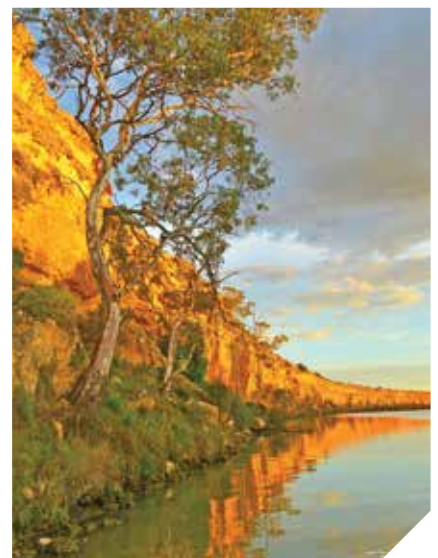
The principles of protecting and enhancing the state's natural resources and environment are well reflected in South Australian planning policy, including:

- the **draft State Planning Policies**, which provide direction in relation to biodiversity; climate change; design quality; coastal environment; water security and quality; natural hazards; and emissions and hazardous activities.

- the current **Planning Strategies** for South Australia (which will serve as the state's **interim Regional Plans**) provide direction in relation to climate change; water; biodiversity; emergency management and hazard avoidance; infrastructure; and design quality. For example, recognising and protecting environmental assets; ensuring the efficient use of water and energy; protecting people, property and the environment from exposure to hazards; sustainably managing waste, wastewater and stormwater; creating conditions to become resilient to the impacts of climate change; and fostering sustainable alternative energy and water supply industries. **The 30-Year Plan for Greater Adelaide 2017 Update** also includes measurable targets to facilitate increased urban green cover (trees and shrubs) while creating a walkable compact urban form (Targets 1 and 5).
- the **South Australian Planning Policy Library (SAPPL)**, which contains a suite of general policy modules as well as a series of maps and a suite of zones that focus on specific environmental areas (e.g. Coastal Conservation

Zone, Coastal Open Space Zone, Coastal Settlement Zone, Coastal Marina Zone, Conservation Zone, Open space Zone, River Murray Flood Zone, Water Protection Zone, Nature Resources Management Module and Watershed Protection [Mount Lofty Ranges] Zone). Refer to the Background Paper for a complete list of relevant SAPPL zones and general modules.

- There are also a number of existing variations to SAPPL policy relating to natural resources and environment policies, as well as within the Development Plans that have not yet been converted to SAPPL policy. The recently undertaken **review of current Development Plans** provides an understanding of these policy variations in order to establish a common ground to achieve the required level of policy consistency across the state via the Code.



**Strategic framework guiding the Code**

The preparation of the Code needs to consider how we can further protect and enhance our natural resources and environment through planning policy. It will also need to directly reflect the policy direction contained within key government strategic documents, in particular the State Planning Policies and Regional Plans.

State Planning Policies identify matters of state interest that should be considered in the Code. In a number of cases these will be addressed through overlays. The Code will include zones, subzones and overlays. Overlays can change the level of assessment required and trigger a referral.

Refer to Figure 4 for an example of how the new planning system’s strategic framework will guide the Code.

Refer to *The Planning and Design Code – How Will It Work? Technical Discussion Paper* for further information.

**Working with other levers**

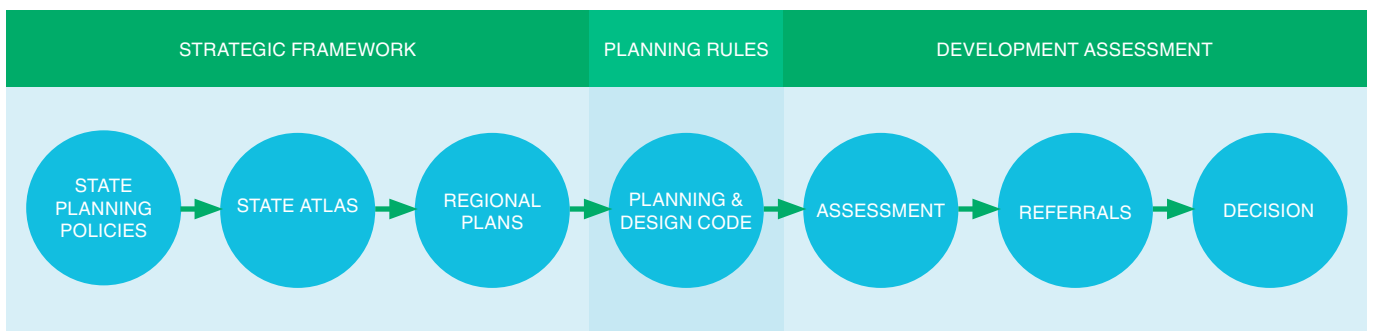
Protecting our natural resources and environment also requires input from other parties such as the state government, councils and private land holders. It is therefore critical that other programs and ‘levers’ outside of the planning system are also used to ensure strategic directions are achieved. Examples of other levers include:

- The National Construction Code
- Water allocation plans, permits and licences
- Building upgrade finance mechanisms which help homeowners and businesses with energy, water and environmental efficiency improvements
- Carbon off-set programs for regional areas, incorporating native vegetation
- Council investment in water sensitive urban design and green infrastructure (e.g. rain gardens, swales and street trees)

- Educational programs and regional climate change adaptation forums.

There are also a number of Acts that work together with the PDI Act to protect and enhance natural resources and the environment. Refer to the background paper for further detail.

- The suite of other legislative measures to protect our environment and natural resources.



**Figure 4:** An example of how the new planning system’s strategic framework will guide the Planning and Design Code



## How will our new system protect and enhance our natural resources and environment?

Based on the outcomes of the research and investigations conducted in the preparation of this paper, the following themes emerged as the main policy areas that are critical to the protection and enhancement of our natural resources and environment.

### THEME 1: Sustainable and Liveable Urban Environments

Enabling the delivery of urban environments that are more liveable and adaptable to a changing climate is critical to a sustainable future. This includes planning for the delivery of green infrastructure and water sensitive urban design, energy efficient design and effective waste management.

#### 1.1 Green Infrastructure and water sensitive urban design

Green infrastructure (GI) describes a network of green spaces, street trees, water systems and other urban vegetation that can deliver multiple environmental, economic and social values to urban settlements. Water Sensitive Urban Design (WSUD) brings components of the water cycle together, including supply and demand, mains water, wastewater, rainfall, runoff and groundwater, and contributes to the local character, environment and community.

There is increasing awareness of the importance of, and opportunities to better facilitate, GI and WSUD in urban environments to assist with urban cooling, reduce building energy use and improve biodiversity.

The Code will have an important role to play in including policy that encourages the increased uptake of WSUD performance measures related to water conservation, stormwater quality improvements and flooding control (e.g. rain gardens, swale and permeable paving).

Planning policies for GI are relatively new in South Australia and include measures such as green roofs and green walls and deep soil zones for large trees. Green infrastructure can also be delivered at the micro and macro level, from living walls, roof gardens and along pathways to parks and reserves, transport corridors and in watercourses and wetlands.

Such is the importance of GI and WSUD policies to creating greener, more sustainable communities, the Commission has identified this as one of the seven priority Policy Conversation Areas it will lead in the course of developing the Code. As part of this process, the Commission and the Department of Planning, Transport and Infrastructure will meet with industry groups and the broader community during the consultation phase of a GI and WSUD policy discussion/position paper produced by Water Sensitive SA (refer to Box 2 for further details).

## 1.2 Energy efficient design

The National Construction Code is an important tool in achieving energy efficient buildings. Our new planning system will work with it to play a significant role in setting policy for design tools such as allotment creation at land division stage and building orientation to ensure solar and natural light access for habitable buildings.

Energy efficient design can include building orientation and design, window placement, eave width, solar access and infrastructure and materials selection.

A sustainably designed development plays a fundamental role in creating sustainable and liveable urban environments. Promoting renewable energy sources and neighbourhood level alternative energy supply and storage options in new developments to reduce energy costs and carbon footprint is vital. However, the upfront costs of these need to be considered and planning controls cannot override the National Construction Code.



## 1.3 Waste Management

The waste management hierarchy (Figure 5) is recognised internationally as an aspirational framework for sustainability and underpins South Australia's Waste Strategy 2015-2020. Recognising there are instances where waste cannot be avoided, the hierarchy provides a framework to maximise the useful life of materials. Planning policy has an important role to play to ensure waste collection methods, required infrastructure and access/timing for collection are appropriately considered.

At the smaller scale, with our changing denser urban form, consideration needs to be given in the Code about how we collect and relocate waste and recyclables.

The effective management of effluent disposal and waste minimisation is also essential to protect public health and minimise environmental impacts and will be addressed in the Code. This is particularly relevant in regional areas where public infrastructure is sometimes limited.

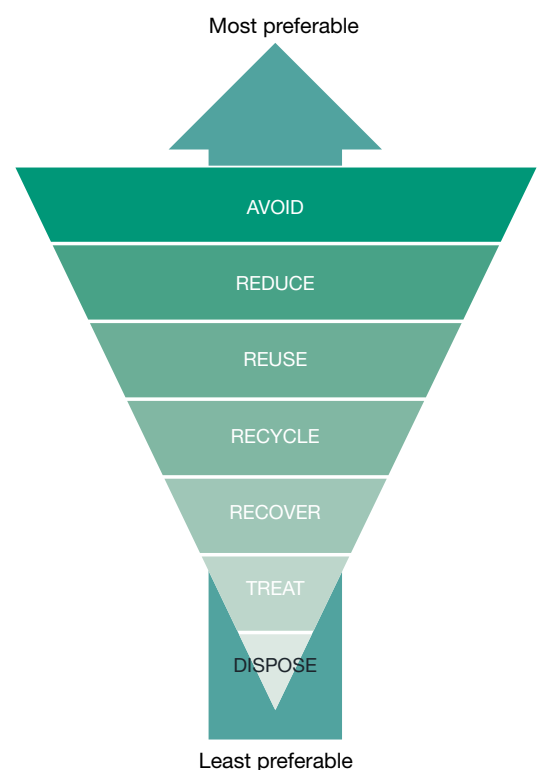


Figure 5: Waste Management Hierarchy



## THEME 2: Water Security and Quality

Water quality and security are fundamental to the sustainability of settlements and industry in South Australia, particularly in relation to the Mount Lofty Ranges Watershed Protection Area, Prescribed and Non-prescribed Water Resources and the River Murray.

### 2.1 Mount Lofty Ranges Watershed Protection Area

Protecting Greater Adelaide's water supply catchment areas from inappropriate development is critical to ensuring our long-term water security.

It is therefore crucial to protect and secure water resources in the Mount Lofty Ranges Watershed. Unlike other states of Australia where water catchment areas are almost entirely publicly owned, the Mount Lofty Ranges Watershed Protection Area has a high level of private ownership. A further challenge in getting the right planning policy balance is that it is also an important area for primary production, is populated and has significance as a tourist destination. The Code provides an opportunity to provide a consistent policy approach through the introduction of an Overlay as well as greater guidance for emerging land uses.

### 2.2. Other Watershed Protection Areas

Prescribed surface and groundwater resources are managed under the provisions of the Natural Resources Management Act 2004<sup>1</sup> through a system of Water Allocation Plans, permits and licences. The role of planning policy is to support this process by protecting these areas from inappropriate development to protect water supplies. There is potential for the Code to achieve this through the introduction of an overlay. This overlay could draw from the learnings of the recent Rural City of Murray Bridge Regional Integrated Water Management DPA (refer to the Background Paper for more information).

Non-prescribed water is a particularly important resource within regional areas where water supply from the River Murray is not available and where water is obtained through direct extraction from groundwater or natural watercourses, rainwater collection, stormwater harvesting and wastewater reuse systems. Planning policy within the Code should seek to ensure that these resources are protected e.g. by giving clarity for when dams are considered development and require planning approval.

### 2.3 River Murray

The River Murray is the life-blood of the state, providing essential water for irrigation, industry, domestic and recreational use and our precious wetlands and floodplains. The river is a critical water supply source for towns and metropolitan Adelaide, is used for primary production, and is also a popular tourism and recreation destination.

Policy for land-use activities and intensity clearly has an impact on water resources, their ongoing availability and quality. In SA's regional towns and communities, the combined supply of wastewater from SA Water Wastewater Treatment Plants and Local Government Community Wastewater Management Schemes, together with stormwater capture and reuse, are all becoming increasingly important to meet water demand and reduce environmental impact.

All of these often-competing demands need to be considered in the policy framework for the Code, both in its first iteration and the generations to follow. There is also an opportunity to develop a regional approach to deal with policy inconsistencies between different council areas. The River Murray has been recognised as an integral water supply catchment in the draft State Planning Policies and will trigger a referral to the appropriate agency through an overlay (where required).

1. The Natural Resources Management Act will be repealed and replaced with the Landscape South Australia Act over the next 12 months.

### THEME 3: Biodiversity

Biodiversity is the foundation of a healthy ecosystem which sustains regional industries and communities. Landscapes that hold less biodiversity (due to human impact) become less productive, which is evidenced by a decline in soil structure and fertility, decreased water quality and lost agricultural production.

Re-establishing biodiversity throughout urban areas is also important for restoring functioning ecosystems as well as mitigating species loss and the effects of climate change.

It is important that planning policy supports the protection of areas with significant environmental values; protects landscape health; and improves development certainty and transparency.

Urban biodiversity can also be supported through a diverse and connected network of green infrastructure.



### THEME 4: Coastal Environments

South Australia contains 5067 kilometres of coastline (the majority of which is covered by the Coastal Conservation Zone) and contains settlements, primary production land and the edge of the Metropolitan Adelaide area. Coastal areas support important ecological systems and environments and also play a key role in the state's economy through aquaculture, recreation and tourism, transport and industry.

It is important to have planning policies in place to protect:

- habitats that are highly sensitive to the direct impacts of development
- important geological and/or natural features of scientific, educational or cultural importance
- landscapes of very high scenic quality.

The Code will also provide an opportunity to consolidate existing policy to create more consistency and ease of use.

The coastal environment has been identified as a state interest in the draft State Planning Policies and will trigger a referral to the Coastal Protection Board through an overlay (where required).

### THEME 5: Natural Hazards

Inappropriately located or designed development and land uses can increase the exposure to and impact of hazards such as terrestrial and coastal flooding, bushfires, drought, extreme heat, erosion, acid sulphate soils, storms and dust events, riverbank collapse and cliff erosion. Planning policy plays a key role in minimising the potential impact of hazards.

It is important to minimise risk to people, property and the environment from exposure to hazards by designing and planning for development in accordance with the risk hierarchy of:

- avoid
- accommodate.

The Code provides an opportunity to better understand the spatial application of natural hazards and consolidate existing policy.



## THEME 6: Environment Protection and Environment Health

To sustainably maintain our population and economic activity, it is essential to effectively manage the impacts of pollution and waste created by human activities. This includes ensuring an appropriate policy response to:

- site contamination
- interface (including noise and air emissions).

### 6.1 Site contamination

A number of land parcels in South Australia have some form of site contamination, most often within the layers of soil below the surface. Certain contaminants left behind by previous land uses can cause problems for human health if they are present in high enough concentrations.

Contamination does not only occur in soil but also in surface and ground water, causing ongoing issues for land uses. It is important

to ensure the risks posed by known or potential contamination of sites are adequately managed to enable appropriate development and safe use of land.

Increasing urban infill puts pressure on using land once occupied by activities that may have left contaminants. Locating residential areas within close proximity to existing and ongoing industrial uses therefore needs careful consideration when developing planning policies.

### 6.2 Interface (including noise and air emissions)

Effective management of air and noise emissions at the interface between activities and people or sensitive environments is important to ensure that communities are adequately protected from potential impacts. This is increasingly important to manage as our population grows, urban densification increases and mixed-use areas become more common.

Within regional and remote areas, rural populations may be exposed to a range of hazards such as those associated with intensive animal keeping facilities, mining operations, logging and timber activities, agricultural activities, landfills and sewage treatment facilities. All of these need careful management and appropriate planning policies to minimise any interface issues.



# POLICY CONVERSATION AREA – GREEN INFRASTRUCTURE AND WATER SENSITIVE URBAN DESIGN

In response to the opportunity provided by the Planning and Design Code, Water Sensitive SA (WSSA) has partnered with a number of key stakeholders (including DPTI) to develop a contemporary, workable suite of planning policies for WSUD and GI. Investigations and research were combined with practitioner workshops and input from industry leaders, including developers, engineers, landscapers, health workers and planners to inform its development.

This work has culminated in the development of the *Performance Based Planning Provisions and Assessment Framework for Green Infrastructure and Water Sensitive Urban Design Background Paper*. The paper seeks to inform and support the development of:

- high level objectives and principles for GI and WSUD under the PDI Act

- performance-based planning provisions for GI and WSUD for the Code, Standards and Guidelines
- a framework to enable the assessment of green infrastructure and WSUD elements of a development against the performance criteria.

The paper recommends performance-based measures for GI and WSUD. The proposed policies are intended to be flexible, transparent, measurable and applicable to all scales of development. Draft provisions cover policy issues including canopy cover, flood control, water conservation and stormwater quality improvements. The paper also recommends other assessment tools including:

- the development of a green cover performance measure, which could be assessed through calculation of a green

cover score based on a range of landscaping features such as trees, shrubs, irrigated turf and vertical gardens

- an online stormwater assessment tool to enable simple assessment of WSUD requirements for small-scale applications, for example for developments on allotments of less than 2500 m<sup>2</sup> for residential development and 5000m<sup>2</sup> for commercial developments.

This report is available at: **[www.watersensitivesa.com](http://www.watersensitivesa.com)** and will undergo further industry and community consultation separately and in parallel to this discussion paper.





## HOW CAN OFFSET SCHEMES SUPPORT DELIVERY OF GI AND WSUD?

A planning system that supports sustainable on-site green cover and stormwater management targets while offering mechanisms for off-site solutions where appropriate, may provide the most efficient and affordable model for delivering urban green cover and tree canopy targets in the 30-Year Plan and state WSUD objectives.

Examples of existing models for voluntary offsets or in-lieu schemes for stormwater management include the City of Kingston (Victoria) and Blacktown City Council (New

South Wales). Both these councils have developed a WSUD strategy that sets out preferred precinct or catchment scale solutions as opposed to smaller on-site measures.

The Seattle Green Factor, an international model for enhanced urban greening on private allotments, is a score-based assessment framework that provides for improved quality and increased areas of landscaping in new developments. This model has the potential to be adapted to cater for a voluntary urban green cover

offset scheme, should a council deem that an offsite solution provides the greatest benefit to the community.

The Water Sensitive SA In-Site stormwater assessment tool for small-scale development, currently in testing, could be readily adapted to support an offset scheme.



# TRANSITIONING TO THE PLANNING AND DESIGN CODE

The following section details the policy direction recommendations for the establishment of the Code that have been formed based on the investigation and review undertaken in the development of this Policy Discussion Paper. For further detail on the information that has led to these recommendations, please refer to the Natural Resources and Environment Background Paper.

The recommendations have been prepared in line with the six major policy themes and criteria outlined in the table below:

1. **Sustainable and Liveable Urban Environments**, including:

- Green infrastructure and water sensitive urban design
- Energy efficient design
- Waste management

2. **Water Security and Quality**, including:

- Mount Lofty Ranges Watershed Protection Area
- Other Water Protection Areas
- River Murray.

3. **Biodiversity**

4. **Coastal Environments**

5. **Natural Hazards**

6. **Environment Protection and Public Health**, including:

- Site contamination
- Interface including noise and air emissions.

The below table outlines the three types of recommendations and associated timing.



<b>Transition ready</b>	<b>Current policy that requires minimal change</b> and will be transitioned into the first generation (July 2020) of the Code Policy Library (Transitional)
<b>Reform (Gen 1)</b>	<b>Current policy that is recommended for improvement</b> before it is transitioned into the first generation (July 2020) of the Code Policy Library (Reform which is minor based on research and engagement which is already well progressed or underway)
<b>Reform (Gen 2 and beyond)</b>	<b>Gaps within existing policy that require further research and discussion</b> before they can be considered for inclusion (Second generation and beyond) of the Code Policy Library (reform in a new area)

**Discussion questions** relating to each of the major policy themes have been included for consideration when reviewing the recommended policy directions. These questions are intended to provoke thought and seek guidance on the recommendations and we ask that you please consider them when providing feedback to this document.

**Note:** Refer to the **Background Paper** for information about where other system tools and levers play a role in assisting in the delivery of the policy outcomes for a particular theme.




## THEME 1: Sustainable and Liveable Urban Environments

Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>1.1 Green Infrastructure and Water Sensitive Urban Design</b>			
1A	Councils that have converted to the SAPPL have introduced provisions that support the inclusion of WSUD principles in urban areas, including stormwater management. It is important to review and transition these to the Code.	Review, refine and transition existing SAPPL WSUD policy where appropriate.	<b>Transition ready</b> 
1B	There is increasing recognition of the value of GI in creating cooler, more liveable and economically viable neighbourhoods.  To this end, GI policies were introduced in 2017 to some higher density mixed use zones in Development Plans in metropolitan Adelaide. There is an opportunity to transition these over to the Code, where appropriate.	Review and transition existing SAPPL GI policy <sup>1</sup> where appropriate.	<b>Transition ready</b> 
1C	There is inconsistent policy across some Development Plans to manage stormwater volume and, in some cases, WSUD policy is applied inconsistently. Currently some WSUD policy is applicable only to master planned/ large scale developments and not to small scale in-fill, which is an increasing percentage of new development. Policy is therefore needed that is scalable to cater for all development types.	Develop new 'Deemed to Satisfy' and 'performance outcomes' policy for WSUD and GI <sup>1</sup> .	<b>Reform (Gen 1)</b>
1D	In infill areas, where there is limited private land, there may be an opportunity to consider off-site GI and WSUD solutions where appropriate. This may provide an efficient and affordable model for delivering urban green cover and tree canopy targets in line with The 30-Year Plan for Greater Adelaide and state WSUD objectives.	Explore policy that connects the ability of road reserves to accommodate tree planting or other suitable GI in lieu of provision on private allotments.	<b>Reform (Gen 2 and beyond)</b>

### Discussion Question:

- Should existing WSUD and GI policies also apply to regional areas and for all development scales and types?

1. Consider in the context of the consultation (to be undertaken) on the Green Infrastructure and Water Sensitive Urban Design Background Report and the Policy Conversation Area (Green Infrastructure, WSUD and Environmental Resilience).


Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>1.2 Energy Efficient Design</b>			
1E	These policies are relatively sound and are ready for transition.	Review existing SAPPL energy efficiency policies and undertake consolidation and minor refinement where necessary.	<b>Transition ready</b> 
1F	There is an opportunity to better apply energy efficiency policies to non-residential buildings such as consulting rooms, offices, educational establishments, retail and community, where there is a high level of human use.	Review energy efficient policies relating to non-residential building types <sup>2</sup> .	<b>Reform (Gen 1)</b>
1G	There is a need to give better consideration to sustainable design outcomes including overshadowing of solar panels and solar hot water services. On the neighbourhood scale, policies could encourage consideration of community or shared energy-saving facilities.	Review and draft new policies to achieve better sustainable design outcomes and ensure the appropriate application of sustainable design policy to all relevant development/land use types.	<b>Reform (Gen 1)</b>

**Discussion Questions:**

- *What role should the planning system play regarding preservation of sunlight to solar panels from adjacent development?*
- *Should the Code introduce incentives for developments that can incorporate passive solar design (siting) techniques, green infrastructure and WSUD?*
- *How can planning policy contribute to reduced carbon emissions from the built environment sector?*

2. Note: Any planning policy amendments must not contradict the National Construction Code.



Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>1.3 Waste Management</b>			
1H	These policies are relatively sound and are ready for transition.	Review existing SAPPL policies and consider minor refinement where necessary.	<b>Transition ready</b> 
1I	Some buildings (particularly high-rise) have inadequate space to store and/or sort the refuse and recycling generated by them. This needs to be considered as part of the development from the beginning. Policy also needs to provide enough flexibility to respond to new technologies (for example smaller/more adaptable waste relocation vehicles).	Review existing SAPPL policies, consider best practice council policies that focus on dealing with waste in a higher density environment and identify opportunities for improvement.	<b>Reform (Gen 1)</b>

**Discussion Question:**

- *How do we plan for current waste removal practices and technologies and provide flexibility for innovative future solutions?*

## THEME 2: Water Security and Quality

Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>2.1 Mount Lofty Ranges Watershed Protection Area</b>			
2A	<p>From consultation to date with relevant councils and agencies, the following issues have been identified:</p> <ul style="list-style-type: none"> <li>inconsistencies with referrals resulting from changes to non-complying forms of development across planning authorities</li> <li>emerging land uses with similar impacts not being subject to the same requirements (e.g. breweries and cideries versus wineries)</li> <li>the lack of policy guidance for other emerging land uses, including value-adding activities</li> <li>some known high impact land uses are currently unrestricted whilst other low impact uses are restricted.</li> </ul>	<p>Develop an Overlay across the MLRWPA based on the recent Mount Barker Watershed Overlay and apply consistently across all nine councils. This will include, where relevant<sup>3</sup>:</p> <ul style="list-style-type: none"> <li>adopting relevant policy amendments derived from the EPA's 'Hierarchy of acceptable effects' to water run-off in the MLRWPA</li> <li>applying a spatial overlay to all affected areas.</li> </ul>	<b>Reform (Gen 1)</b>
<b>2.2 Other Water Protection Areas</b>			
2B	<p>Opportunity exists to consider the learnings from the recent Rural City of Murray Bridge Regional Integrated Water Management DPA in the development of a future overlay for all Prescribed Water Resources Areas under the Natural Resources Management Act 2004. This would help ensure the sustainable use of non-prescribed water resources.</p>	<p>Develop an Overlay to create consistent policy for the other water protection (Development Plan) zoned areas located outside the MLRWPA.</p>	<b>Reform (Gen 1)</b>
2C	<p>Knowledge of the quantity and quality of non-prescribed water resources is limited, hindering their effective management and potential development. Ongoing research and monitoring is being undertaken by DEW in order to better understand the capacity of the resources and the potential impact of increased demand and changes in land use and climate.</p>	<p>Consider extending the spatial application of this Overlay to other water protection areas that are currently not captured in existing Development Plans.</p>	<b>Reform (Gen 2 and beyond)</b>
<p><b>Discussion Question:</b></p> <ul style="list-style-type: none"> <li><i>Should dams be assessed as development in the planning system?</i></li> </ul>			



Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>2.3 River Murray</b>			
2D	<p>A regional approach to deal with policy inconsistencies between River Murray council areas is needed. For example, a consistent approach to river structures and moorings on the river.</p> <p>There is a need to retain and consolidate key policies and zones relating to the protection of important natural environments, water bodies, biodiversity and conservation areas.</p>	<p>Review relevant SAPPL and existing Development Plan Zones to determine new Code Zone(s) and review the following policies<sup>4</sup>:</p> <ul style="list-style-type: none"> <li>• Envisaged land uses</li> <li>• Moorings and structures</li> <li>• Shacks and waste water management</li> <li>• General environment protection</li> <li>• Excavation and filling in any future marina zoning</li> <li>• Farming, tourist accommodation and workers accommodation</li> <li>• Consistent enclosed ground level area requirements.</li> </ul>	<b>Reform (Gen 1)</b>
2E	The intensification of land use in close proximity to the river, wetlands and conservation areas through the creation of additional allotments needs to be addressed.	Review existing SAPPL and Development Plan land division policies in areas adjacent to the river.	<b>Reform (Gen 2 and beyond)</b>
2F	There is potential to introduce a River Murray Water Protection Area to facilitate a coordinated regional approach to the implementation of planning policies.	Develop an Overlay which aligns with the River Murray Water Protection Area.	<b>Reform (Gen 2 and beyond)</b>


**Discussion Questions:**

- *Should we instead use the 1956 flood data as an indicator of risk in the future?*
- *Should sheds be made an exemption from the requirement to refer notice under the River Murray Act 2003?*

3. A working group with nine councils, EPA, DEW, PIRSA and SATC will explore the policy content of this overlay.

4. Working group with eight relevant councils and the EPA, DEW, PIRSA and SATC.

### THEME 3: Biodiversity

Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
3A	The transition to the Code creates an opportunity to refine policies in order to minimise different interpretations.	Review SAPPL policies in Coastal Areas, Infrastructure, Land Division (Design and Layout), Metropolitan Open Space System, Natural Resources, Open Space and Recreation and Siting and Visibility general modules and identify opportunities for refinement.	<b>Transition ready</b> 
3B	There is an opportunity to reduce duplication of policy (currently in separate zones and general modules).	Consider one conservation zone, with spatial overlays (such as coast) that apply where required to trigger referrals and reflect state interests.	<b>Reform (Gen 1)</b>
3C	There can be an issue at the interface between different land uses. For example, planting olives or vineyards in close proximity to the edge of a protected area. The transition to the Code presents an opportunity to incorporate policy that helps manage the interface between protected areas and adjoining land uses.	Strengthen policies for the interface between protected areas and adjoining land uses (from existing Natural Resources general module policy).	<b>Reform (Gen 1)</b>
3D	The impact of adjacent land uses on biodiversity can be substantial. The development of the Code allows adjacent impacts to be considered at a consistent and appropriate level.	Ensure appropriate spatial application of policy (to land adjacent to nature protection areas).	<b>Reform (Gen 1)</b>
3E	It is important to delineate and maintain areas with significant environmental values; protect landscape health; preserve biodiversity; and improve development certainty and transparency. There is an opportunity to improve the associated mapping and incorporate it into future generations of the Code.	Develop policies and maps of the environmental and character values associated with specific nature protection and complementary developed areas.	<b>Reform (Gen 2 and beyond)</b>



#### Discussion Questions:

- *Can the Code protect biodiversity in areas not identified as native vegetation and in modified landscapes with biodiversity values?*
- *Can planning policy assess the cumulative impact of development on biodiversity?*
- *Can planning policy play a role in protecting and encouraging backyard biodiversity?*
- *Do we need a policy to protect and encourage development of roadside vegetation?*





## THEME 4: Coastal Environments

Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
4A	The transition to the Code creates an opportunity to refine policies in order to minimise different interpretations.	Review and consolidate existing variations to Coastal Areas, Coastal Conservation, Coastal Open Space and Coastal Settlement SAPPL general and zone modules and ensure appropriate and consistent site and floor level requirements.	<b>Transition ready</b> 
4B	There is an overlap between the 'High Water Mark' and 'Low Water Mark' in Development Plans and there is an opportunity to deal with this as part of the transition to the Code.	Resolve the 'High Water Mark' and 'Low Water Mark' overlap between Land Not Within A Council Area (Coastal Waters) and other Development Plans.	<b>Transition ready</b> 
4C	There is an opportunity to make coastal policies more consistent by consolidating existing policies. This could be achieved by developing an overlay(s). Currently investigations are underway about whether to have one or more overlays. Using an overlay would also provide the necessary mechanism to trigger relevant referrals.	Develop a Coastal Areas Overlay (or two: one for metropolitan and one for non-metropolitan areas).	<b>Reform (Gen 1)</b>
4D	The increasing impacts of climate change are reinforcing the need for policies to better protect, preserve and provide space for migration of coastal features and habitats adapting to sea level rise (e.g. the migration of dune systems and mangroves).	Ensure policy requires adequate consideration of climate change risks, including provision of space for migration of coastal features such as beaches, dunes and mangroves where appropriate.	<b>Reform (Gen 1)</b>
4E	Existing policy needs to have more clarity about what land-use activities are envisioned for these areas.	Resolve policy to apply to Land Not Within A Council Area (Coastal Waters), including providing clearer guidance regarding envisaged uses (such as aquaculture, tourism and recreation).	<b>Reform (Gen 1)</b>
4F	With rising sea levels, the risk of inundation increases. Therefore the spatial application of where this risk applies needs reviewing and updating.	Ensure policy requires soakage trenches associated with waste water disposal to be located appropriately in relation to potential inundation.	<b>Reform (Gen 1)</b>




Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
4G	There is potential to improve aquaculture policies, in particular in the area of waste water, buffer widths and on-shore support facilities.	Ensure appropriate policy for waste water, buffer widths and on-shore facilities in aquaculture zones.	<b>Reform (Gen 2 and beyond)</b>
4H	Climate change is likely to create increased hazard levels and therefore it will be important to ensure that mapping is regularly reviewed and updated.	Work with relevant parties to review and update hazard mapping in coastal areas.	<b>Reform (Gen 2 and beyond)</b>

**Discussion Questions:**

- *What level of development (including accommodation) is appropriate for a Coastal Conservation Zone?*
- *Does current planning policy adequately address the risk of new development from climate change impacts (coastal retreat, sea level rise and storm surges, etc.) for at-risk coastal settlements?*



## THEME 5: Natural Hazards



Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
5A	Hazard policy needs to be reviewed, consolidated and best practice policy applied.	Consolidate and transition relevant SAPPL Hazards, Coastal Areas and Land Division general modules policy to the Code.	<b>Transition ready</b> 
5B	<p>Flooding mapping needs to be consistent across and within different jurisdictions (including the mapping methodology) and be linked with the new Code. Consistency of terminology for flood-related policy is also needed.</p> <p>Acid sulphate soil areas could be applied as an overlay (using mapped areas in existing Development Plans), subject to consistency of data.</p> <p>Bushfire mapping, methodology and possibly policy need updating (with reference to recent changes to Victorian and New South Wales policy). Introducing overlays will provide a mechanism to ensure hazard mapping is regularly kept up to date.</p>	<p>Review and refine the mapping of hazards in current development plans and transition into spatial layers with associated overlays, including:</p> <ul style="list-style-type: none"> <li>• Mapped flood areas as a new Flood Risk Overlay</li> <li>• a Bushfire Risk Overlay</li> <li>• other hazards currently mapped such as coastal hazards and acid sulphate soils.</li> </ul>	<b>Reform (Gen 1)</b>
5C	The Code provides an opportunity to review current hazard policy and update it with best practices where appropriate, including nuanced policy that reflects the level of risk.	Update flooding policy in the Hazards general module to reflect best practice policy where appropriate.	<b>Reform (Gen 1)</b>
5D	<p>There is an opportunity to improve flood mapping by:</p> <ul style="list-style-type: none"> <li>• updating the mapping of all flood-prone areas using a consistent methodology</li> <li>• exploring the opportunity to create flood risk categories associated with overlays that take into account flood function as well as volume and depth.</li> </ul>	Review the flood mapping data (not currently mapped in Development Plans) and update the Flood Risk Overlay.	<b>Reform (Gen 2 and beyond)</b>

### Discussion Questions:

- How can we better integrate council-owned flood data with the new Code and achieve consistency?
- What climate change projections should be used? What time-frame and emission scenarios?
- Should flood risk categories be based on physical (depth and velocity) and function and isolation risk factors?



## THEME 6: Environment Protection and Public Health

Ref No.	Key opportunities and challenges	Proposed response	Proposed timing
<b>6.1 Site Contamination</b>			
6A	The transition to the Code creates an opportunity to refine policies in order to minimise different interpretations.	Review and transition relevant SAPPL site contamination policies to the Code.	<b>Transition ready</b> 
6B	There is currently a lack of policies for planners to use in assessment when no referral is triggered (e.g. it is known that there are a number of undiscovered contaminated sites so there is a need to have policies that trigger proper investigations when required).	Review and develop appropriate policy for planners to assess site contamination where no referral is required.	<b>Reform (Gen 2 and beyond)</b>
<b>6.2 Interface including noise and air emissions</b>			
6C	There is an opportunity to review policies relating to interface, particularly in light of recent policy amendments and movement towards more mixed use zoning, e.g. residential areas alongside industry or commercial uses.	Review and refine the SAPPL Interface Module as required.	<b>Transition ready</b> 
<p><b>Discussion Questions:</b></p> <ul style="list-style-type: none"> <li>• <i>Should cumulative noise impact assessments be undertaken as part of the development assessment process?</i></li> <li>• <i>How can policy effectively address the interface between land uses in zones promoting mixed land uses? For example, a coffee roaster adjacent to a residential development in an urban corridor.</i></li> </ul>			

## NEXT STEPS

The *Natural Resources and Environment Policy Discussion Paper* will be out for public consultation until **3 December 2018**.

For information about the specific engagement activities, please visit **[www.saplanningportal.com.au](http://www.saplanningportal.com.au)**

The feedback received will help inform the preparation of Generation 1 of the Code Library and help prioritise future work and investigations for subsequent generations of the Code. The outcomes of the consultation

process will be released in a 'What We Heard' report.

The remaining **Blueprint for South Australia's Planning and Design Code Policy Discussion Papers** will be released progressively, with each available for public comment and accompanied by opportunities for industry and community engagement.

The Commission's **Policy Conversation Areas** will work through some of the more significant policy issues that will

be a focus for reform in 2018 and beyond. These are aligned to one or more of the Policy Discussion Papers and form a key component of the Commission's engagement process during the development of the Code.

In parallel, the draft **State Planning Policies** are also out for consultation until 7 September 2018.

The draft **Code Policy Library** will be released progressively for consultation in 2019.

## HAVE YOUR SAY

In recognition of the importance of collaboration in building a successful new planning system, the Commission is seeking feedback from planners, the community, industry professionals, educational institutions and other interested parties on this paper.

Your feedback is encouraged via:

- SA Planning Portal: Visit the Have Your Say webpage and lodge a submission at **[http://www.saplanningportal.sa.gov.au/have\\_your\\_say](http://www.saplanningportal.sa.gov.au/have_your_say)**
- Email: [DPTI.PlanningEngagement@sa.gov.au](mailto:DPTI.PlanningEngagement@sa.gov.au)
- Post: PO Box 1815, Adelaide SA 5001

**Discussion questions are included throughout the paper as well as the following general feedback questions.**

### Feedback questions

Are there any other key opportunities and challenges that you think the Code should respond to?

Are there any other ideas for Code policy solutions you would like to recommend?





# HOW YOU CAN GET INVOLVED

We invite you to participate and share your feedback on this policy discussion paper via:  
[www.saplanningportal.sa.gov.au](http://www.saplanningportal.sa.gov.au)

For more information, please contact us:  
[dpti.planningengagement@sa.gov.au](mailto:dpti.planningengagement@sa.gov.au)



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