



Illawarra-Shoalhaven Water Sensitive Framework

Building Climate Resilience for our Region

June 2021



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Document History

Authors	Bianca Benjamin
	Jonathan Ho
	Fiona Chandler
	Mark Wainwright
Reviewers	Jan Orton

Distribution

Issued to:	Melinda Liberato
Description:	Final Version
Date	7 June 2021

Acknowledgements:

We would like to acknowledge and thank the following organisations for their input in this document:

- ISJO
- Wollongong Council
- Shellharbour Council
- Kiama Council
- Shoalhaven Council
- DPIE
- LG NSW

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Glossary

CRC WSC – Cooperative Research Centre Water Sensitive Cities
DPIE – Department of Planning Industry and Environment
ISJO – Illawarra Shoalhaven Joint Organisation
DCP – Development Control Plan
LEP – Local Environment Plan
WSC – Water Sensitive Cities
WSUD – Water Sensitive Urban Design

Background

The Water Sensitive Illawarra-Shoalhaven Regional Framework (this Framework) has been developed under the *The Enabling Water Sensitive Communities* program, (grant funded program by NSW Department of Planning, Industry and Environment (DPIE) and LGNSW's Increasing Resilience to Climate Change program).

This Framework has been developed through consultation and participation of the four member Councils of the Illawarra Shoalhaven Joint Organisation (ISJO) and state government representatives, with the aim to increase climate change resilience through the uptake and success of Water Sensitive Urban Design (WSUD) systems across the Illawarra Shoalhaven region (the Region).

To achieve this, a regional Benchmarking exercise was conducted in 2020 on water sensitive cities and a workshop was held in 2021 to identify the key barriers to on-ground delivery of water sensitive outcomes. An overview of the process is provided in Figure 1.

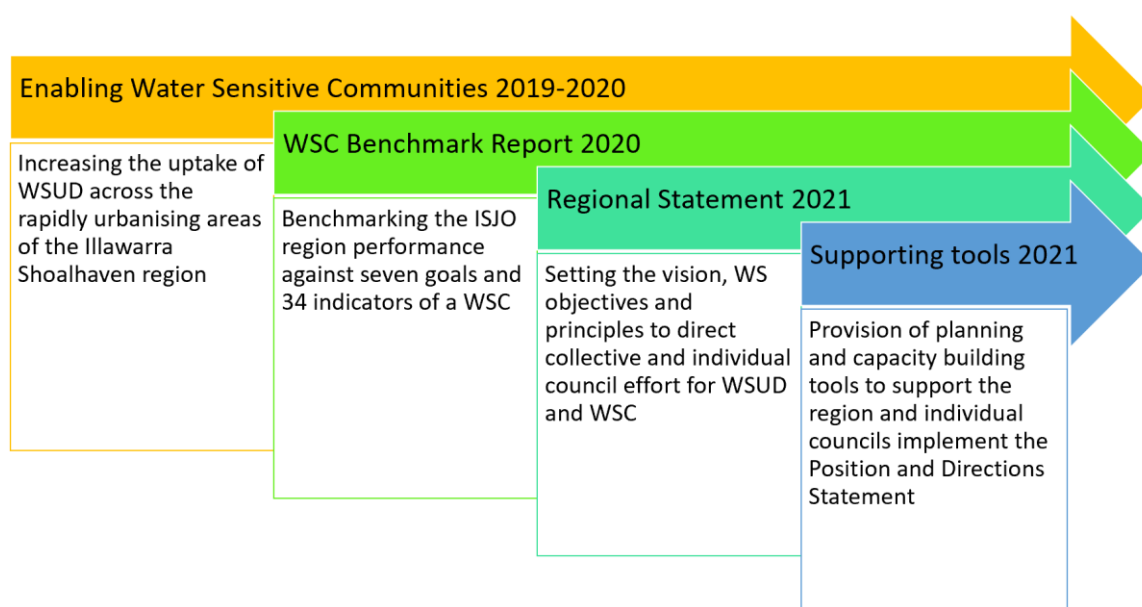


Figure 1. Enabling water sensitive communities - program to date

Key Barriers Identified

The key barriers to on-ground delivery of water sensitive outcomes identified in the 2021 workshop define the current position for the Region. These include:

- Fragmented and inconsistent water management policy and controls across the region.
- Inconsistent guidance and application of water sensitive cities planning across teams.
- A lack of collaboration and sharing in planning, implementing and evaluating water sensitive outcomes in urban development.
- Poor integration and alignment with strategic water planning at the project level.
- Resourcing constraints of both human resources and capital / recurrent funds.

- Insufficient capacity and capability, including a lack of water sensitive cities knowledge among staff, community and developers.

Key Regional Priority Areas

A review of the ISJO member Council's local planning frameworks was conducted for the WSC Benchmarking and discussed at the 2021 Workshop. The outcomes of these activities identified Key immediate priority areas for the Region to include:

1. ensuring good water sensitive governance
2. increasing community capital and capacity to engage in water sensitive practices
5. improving ecological health
6. ensuring quality urban space

The remaining water sensitive city goals exist within the current policy landscape and can be driven through alternative tools and mechanisms.

Regional Adoption of the Framework

This Framework supports ISJO member Councils to meet their obligations under the NSW *Local Government Act 1993* (Section 8) to “properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible in a manner which is consistent with and promotes the principles of Ecologically Sustainable Development” and “have regard to the long term and cumulative effect of its decisions”.

This Framework also aligns with many of the Objects of the *Environmental Planning and Assessment Act 1979* (Section 1.3) including promoting “the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources” and facilitating “ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment”.

The adoption of this Framework by ISJO and its member Councils will:

1. Demonstrate a commitment from the Illawarra Shoalhaven Joint Organisation to a water sensitive region
2. Provide a common approach for delivering a water sensitive region to improve the ecological, social, economic and cultural outcomes associated with urban development.

Document Control

This document has a review term of 5 years. The objectives of this Framework shall be assessed at the next review stage to ensure they continue to reflect council needs and aspirations for urban and water development.

Water Sensitive Illawarra-Shoalhaven Regional Framework

Our Vision

To develop a water sensitive region where there is a high capacity for all players to work together and deliver liveable, sustainable, resilient and productive places.

The vision of this Framework supports the vision of *Illawarra-Shoalhaven Regional Plan 2041*. The Regional Plan aims to create a sustainable future and a resilient community, capable of adapting to changing economic, social, and environmental circumstances.

Our Objectives

The objectives of the this Framework were selected based on the seven goals developed by the Cooperative Research Centre for Water Sensitive Cities (CRCWSC):

1. to ensure good water sensitive governance
2. to increase community capital and capacity to engage in water sensitive practices
3. to achieve equity of essential services
4. to improve productivity and resource efficiency
5. to improve ecological health
6. to ensure quality urban space
7. to promote adaptive infrastructure

Guiding Principles for Implementation

The Principles articulated in this section will guide ISJO member Councils in the review and development of their own water sensitive **governance** and **ground practices** of planning, design, construction and maintenance to achieve the objectives of this Framework. The Principles are based on findings from CRC WSC research into the links between urban and water planning (Figure 2, Chesterfield et al. 2021).



Figure 2. Principles to advance water sensitive practice and achieve the Water Sensitive Illawarra-Shoalhaven Regional Framework vision (adapted from Chesterfield et al, 2021)

Principle 1: Fit for purpose collaboration and knowledge sharing

This Principle emphasises the importance of collaborating across disciplines, with the community, between sectors and agencies to define and advance a shared agenda for development and responsibilities over time. It focusses on strengthening relationships with other sectors and sharing knowledge and skills across teams, councils and organisations. The complexity of planning, managing and delivering integrated water management in urban development calls for strategic cooperation at the regional scale and at the local scale flexible, innovative partnerships, sharing of information and resources and governance arrangements to improve urban outcomes.

Principle 2: Place-based future focussed approach

This Principle encourages a place-based approach to the planning and design of water in urban development. A place-based approach seeks to understand how stakeholders imagine the look, feel and function of a place to create a unique vision for the site. Place-based planning requires different

stakeholders to work collectively rather than in separate disciplines to investigate development outcomes across a range of elements (e.g. land-use configuration, waterways, water servicing, landscape, streetscapes, built form) that respond to the specific values, aspirations and opportunities of a place.

Principle 3: Context-specific

This Principle asks councils and developers to consider the particulars of a site, its broader catchment and regional context as well as impact from the future climate, when planning for urban development that is to understand the biophysical and socio-institutional attributes of a place and to identify local opportunities and challenges. Traditional water planning practices provide a limited set of servicing options that do not consider the unique local context of a site and how it interacts with the overall urban system. This has led to homogenous development outcomes that often exacerbate existing human and environmental issues such as urban heat, flooding and reduced access to and interaction with the natural environment. Understanding the influence of external factors, such as planning context, macro-economic trends and regional catchment activities, as well as the overall natural and built systems of a site will enable practitioners to integrate water planning and development in a way that harnesses the opportunities of the site across social, environment, cultural, ecological and economic processes.

Principle 4: Evidence-based decision making

This Principle considers how open data, research and monitoring and evaluation as well as continuous review and improvement of policy can support councils deliver better outcomes. This includes the consistent application of performance outcomes to test development scenarios, evaluating and articulating how integrated water management in urban development provides greater benefits across liveability, resilience and productivity and developing and carrying out evaluation and monitoring methods across water systems to support future decision-making.

Principle 5: Inclusive water sensitive engagement

This Principle seeks to engage and educate communities, councils, developers and partners in the water sensitive cities concept across governance, planning and project delivery and ensure communities are part of the decision-making process. In particular this principle recognises the longstanding connection of Traditional Owners to country and water and of indigenous knowledge of water management. This principle calls for councils to enable self-determination through partnering with Traditional Owners in planning, implementing, managing and maintaining water and urban development.

Principle 6: Continuous improvement and learning

This Principle anticipates an ongoing commitment to monitoring and evaluation and associated change. In particular to testing, comparing and refining different development and servicing scenarios and to embedding and refining policy and practice, securing funding and financing, and sustainable servicing to ensure water sensitive places are delivered as promised.

Principle 7: Integration with climate resilience and risk management processes

This Principle acknowledges the important role that WSUD plays in mitigating climate related risks and thereby building community resilience to climate change. It encourages Councils to consider including WSUD actions that mitigate climate risks in their climate change risk assessments and adaptation plans.

Outcomes and evaluation

Success of this Framework will be realised when the water sensitive principles and practices are part of the new business as usual and embedded in planning controls for each member council. It is recommended that:

- ISJO member Councils adapt and implement the supporting planning tools and resources offered with this Framework into their next DCP and LEP reviews
- ISJO member Councils adapt and implement the capacity building tools included with this Framework into their operational processes for staff and community
- a second water sensitive cities benchmarking exercise be undertaken at the five year review period to determine progression towards achieving the objectives of this Framework
- ISJO member Councils develop their own evaluation plans for monitoring and review

Contacts, supporting tools and resources

This Statement will be supported by practical tools to support ISJO and member Councils (**Error! Reference source not found.**):

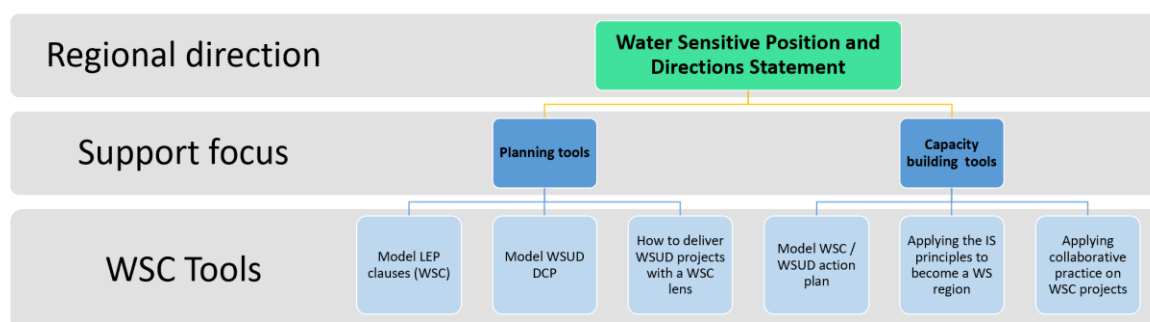


Figure 3. Water Sensitive Illawarra-Shoalhaven Regional Framework and supporting tools

1. WSC planning tools
 - a. Model LEP clauses for WSC
 - b. A model WSUD DCP to be adapted where needed by member councils
 - c. How to review, plan, deliver or maintain water sensitive urban design w a WSC lens
2. WSC capacity building tools
 - a. Model WSC / WSUD action plan
 - b. Applying the principles to become a WS region
 - c. Applying collaborative practice on WSC projects
 - d. How to engage stakeholders in WSC

The owner of this Framework is ISJO on behalf of its member Councils. The contact is ISJO Executive Officer : info@isjo.org.au

This Framework is complemented by the following resources and reports:

- Chandler, F., Orton, J., Ho, J., Nicholson, L. and Hammer, K., (2020). *Water Sensitive Cities Benchmarking and Assessment: Illawarra Shoalhaven Joint Organisation, New South Wales*. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

- Chesterfield, C., Tawfik, S., Malekpour, S., Murphy, C., Bertram, N. and Furlong, C. (2021). Practising integrated urban and water planning: framework and principles. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.
- CRC WSC Index - watersensitivecities.org.au/solutions/wsc-index/

Water sensitive city context

Why a water sensitive cities approach?

Rapid urban development and population growth in regional areas is resulting in complex, ecological and social issues – such as degradation of natural ecosystems and reduced liveability of urban spaces due to heat, lack of open green spaces and access to nature. These conditions also impact water systems and increase pressure on water supplies. Over the past decade, climate change impacts have added complexity to these issues and highlighted the importance of responding to urban pressures.

There is recognition across government, communities and industry of the critical role water plays in shaping the form and function of urban areas to meet the above challenges. Managing water resources requires not only the planning and delivery of services, supply, sewerage and drainage but also supporting broader socio-economic benefits such as liveability, resilience and productivity. Water considerations must be addressed, not in isolation but as an integrated part of the planning, design, building and maintenance of urban areas.

Illawarra Shoalhaven councils manage water through compliance with state legislation and through their local planning frameworks and development controls. At the local scale there is a general lack of planning for water beyond traditional considerations of riparian management, flooding and coastal risk, water use and quality. While several councils include integrated water management goals in strategic documents (e.g. Local Environment Plans), these are mostly unsupported by statutory provisions or policy direction meaning the broader benefits of a resilient, multifunctional water system are not achieved.

Therefore the four Councils of Illawarra-Shoalhaven identified the need for a regional framework to establish a coordinated urban water management and planning approach. This document is the result, and has been prepared in response to:

- increasing community recognition of water benefits and impact on resilience and liveability
- acknowledgement of Traditional Owners rights to water, connection to Land and Sea Country and continuing land management practices
- substantial growth and rapid development in the region
- the need to fill gaps in policy and establish new water management practices across the region.
- recognition of projected Climate Change impacts and how these may affect water cycles and hydrological systems

This document uses the water sensitive cities concept both to develop a consistent regional approach to urban development and water cycle management and enable on-ground practice to collectively guide Illawarra Shoalhaven towards a water sensitive future.

Water sensitive cities

The water sensitive cities concept, first identified in the 1994 National Water Initiative, and developed in great depth over the past 10 years by the Cooperative Research Centre for Water Sensitive Cities (CRCWSC), aspires to a state where water is managed in a way that meets a city's water needs while also supporting a city's urban liveability, sustainability, resilience and productivity. A water sensitive city centralises water considerations and processes in the planning and design of urban places, typically represented by:

1. a mix of innovative centralised, decentralised, and distributed fit-for-purpose water supply and reuse systems
2. urban design and green infrastructure that supports human and ecosystem wellbeing, providing environmental, economic, and social benefits

- government, business, and community able and active in working together to make plans, designs and decisions that are water sensitive.

The concept is articulated through an index of seven goals and 34 indicators that assists cities drive coordinated action towards a water sensitive state. Each of these goals and indicators must be considered equally and collectively to support water sensitive practice and governance (Figure 4).

Ensure good governance	Increase community capital	Achieve equity of essential service	Improve productivity & resource efficiency	Improve ecological health	Ensure quality urban space	Promote adaptive infrastructure
Knowledge, skills & organisational capacity	Water Literacy	Equitable access to safe & secure water supply	Benefits across other sectors because of water-related services	Healthy and biodiverse habitats	Activating connected pleasant urban green & blue space	Diversify self sufficient fit-for-purpose water supply
Water is key element in city planning & design	Connection with water	Equitable access to safe & reliable sanitation	Low GHG emission in water sector	Surface water quality and flow	Urban elements functioning to mitigate heat impact	Multi-functional water infrastructure systems
Cross-sector institutional arrangements & processes	Shared ownership, management & responsibility of water assets	Equitable access to flood protection	Low end-user potable water demand	Groundwater quality and replenishment	Vegetation coverage	Integration & intelligent control
Public engagement, participation & transparency	Community preparedness & response to extreme events	Equitable & affordable access to amenity values of water-related assets	Water-related business opportunities	Protect existing areas of high ecological value		Robust Infrastructure
Leadership, long-term vision & commitment	Indigenous involvement in water planning		Maximised resource recovery			Infrastructure & ownership at multiple scales
Water resourcing & funding to deliver broad societal value						Adequate maintenance
Equitable representation of perspectives						

Figure 4 Water sensitive city goals and indicators (sourced from watersensitivecities.org.au/solutions/wsc-index/)

Relationship to policy and legislative obligations

This document sits within a broader water and planning policy context. It complements federal, state and regional planning objectives relating to water and urban management as shown in Figure 5.

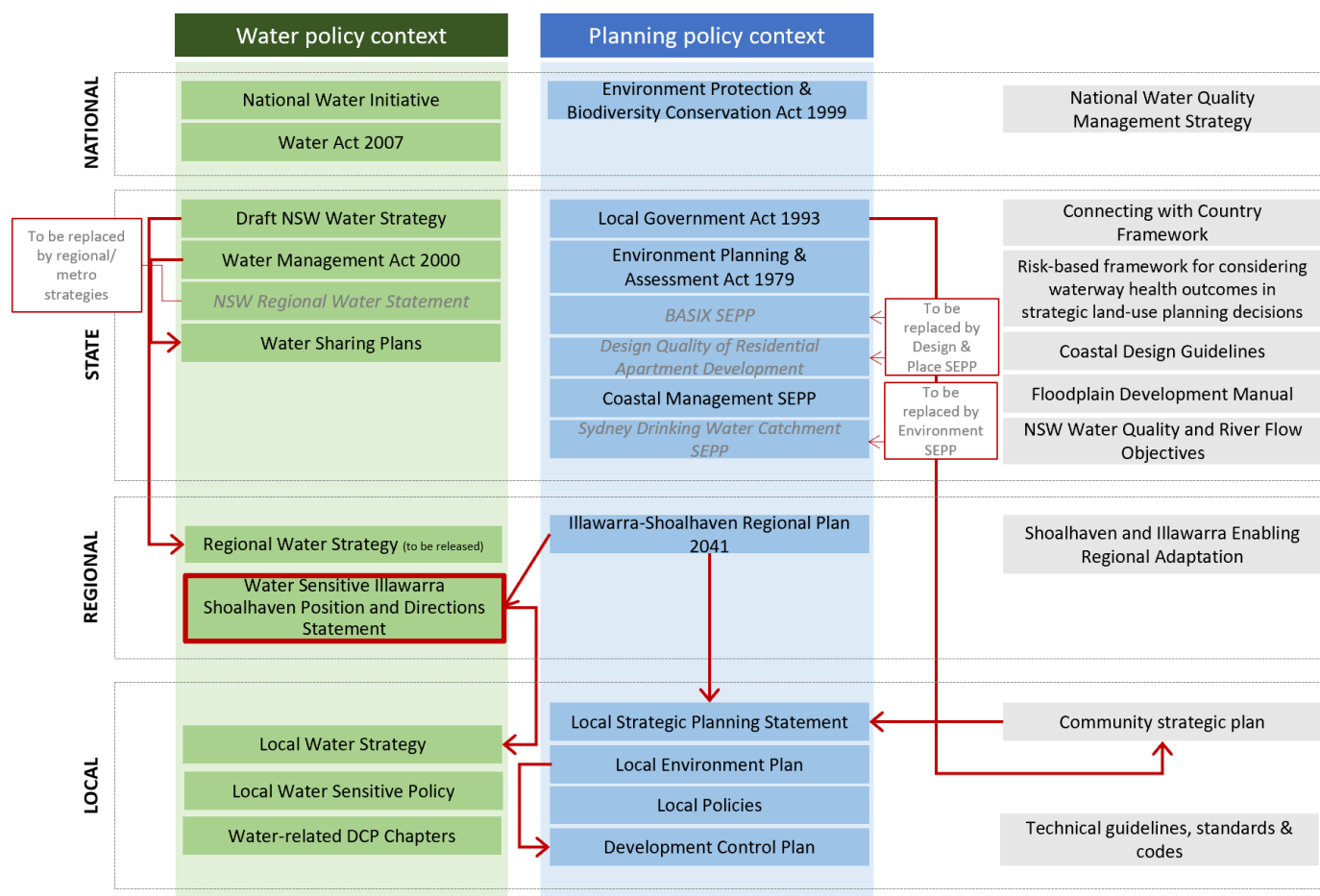


Figure 5 Water Sensitive Illawarra-Shoalhaven Regional Framework relationship to other policy