WATER SENSITIVE SA

Business plan
2021-22 to 2023-24

August 2021

Authors

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1. Who we are

Water Sensitive SA is a capacity building program that provides stakeholders across all disciplines within the development and urban water management industries, with the support they need to achieve the best water sensitive urban design (WSUD) outcomes.

Every capital works project, asset renewal and new development represents an opportunity for smarter water management that contributes to the creation of a more liveable, water sensitive community.

Developers, planners, urban designers, engineers, landscape architects, scientists, builders and maintenance workers all have roles in the development of our cities and suburbs, and many of them recognise the value of WSUD and incorporate it in new infrastructure projects and developments. Water Sensitive SA provides these professions with access to the latest WSUD information; an opportunity to gain valuable insight from the experiences of other practitioners; and guidelines, tools and training to inspire and facilitate the delivery of best practice WSUD.

Images: Sam Noonan, Andre Taylor, City of West Torrens, Water Sensitive SA, and Levesque and Derrick Architects

2. Our vision and objective

Water Sensitive SA will continue to support Adelaide and our regions on their journey to become water sensitive communities that are sustainable and resilient to climate change, and have intergenerational equity, and to aid in the creation of more liveable cities.

Our vision

Water sensitive communities that support cooler, greener, wilder and more climate resilient places to live and work.

Our strategic shifts

Water Sensitive SA's program will contribute to the following strategic shifts:

LIVEABLE: Communities connect with and value the role of WSUD and alternative water supplies in supporting healthy landscapes and living systems.

RESILIENT: Urban landscape climate resilience is enhanced through the application of WSUD and IWM.

SUSTAINABLE: Urban watercourses, coastal areas and marine environments exhibit high aquatic and biodiversity values.

PRODUCTIVE: Communities and businesses thrive in green urban spaces. Green infrastructure and food production are sustained by WSUD and alternative water supplies.

Our mission

Our mission is to support government, industry and community to mainstream water sensitive urban design (WSUD) and integrated water management (IWM) practices that enhance wellbeing and ecological health..

Goals

GREY TO GREEN: WSUD is integrated into asset renewal, capital works projects, urban development, and retrofit of existing homes and gardens.

WSSA's role to deliver grey to green:

AN INFORMED AND SKILLED COMMUNITY: All relevant government and industry sectors and the community have the knowledge, commitment and skills to deliver cooler, greener, wilder water sensitive communities.

Objectives

The achievement of the following **objectives** will demonstrate that the program has been effective in its engagement of a broad range of stakeholders, which has resulted in cultural and behavioural change:

BENEFITS OF WSUD ARE UNDERSTOOD: Increased awareness and understanding of benefits of WSUD and how it can be implemented.

INFORMED DECISION MAKERS: Organisational culture embraces the inclusion of WSUD in future investments.

WSUD IN POLICY: Performance-based WSUD and green infrastructure (GI) policies are embedded within the SA planning system and associated guidelines.

EFFECTIVE APPLICATION: Practitioners apply best practice WSUD and IWM strategies effectively to achieve desired water quality, flood management, water conservation and urban greening objectives.

The Water Sensitive SA's program aims to contribute to Green Adelaide's Business Plan, Local Government climate adaptation and asset management plans, and State Government planning policy.

Changes that we expect to see in the urban landscape:

- **Increased capacity to harvest and use rainwater and stormwater** on site, or close to where it falls.
- **Increased, and more biodiverse, soft landscaping and tree canopy** on private and public land, sustained by WSUD (e.g. green walls/roofs, raingardens, wetlands, and infiltration systems).
- **Increased pervious pavements** across public and private land to manage stormwater runoff and reintegrate water back into the urban landscape.
- Increased **urban food production and higher amenity landscapes** sustained by WSUD and alternate water use.

Outcomes

Benefits of WSUD are understood

Increased awareness and understanding of benefits of WSUD and how it can be implemented

Outcome1.1 Decision makers understand the multiple benefits of WSUD over a range of scales.

Outcome 1.2 Resources to inform planning, design, construction and maintenance of WSUD assets are readily available and accessed through a central on-line facility

Outcome 1.3 The community has greater awareness of how WSUD contributes to liveability and how they can personally adopt WSUD practices in their home and garden.

Informed decision makers

Organisational culture embraces the inclusion of WSUD in future investments

Outcome 2.1 Urban water leaders are supported in their efforts to influence across boundaries to effect organisational change in support of WSUD investments

Outcome 2.2 Evidence-base for water sensitive city transitions is translated for practical application

Outcome 2.3 The monetised benefits of WSUD are quantified and recognised in project feasibility assessment

Outcome 2.4 The whole-of-life costs of WSUD assets are understood

Outcome 2.5 WSUD asset maintenance programs are suitably resourced

WSUD in policy

Performance-based WSUD and green infrastructure (GI) policies are embedded within the SA planning system and associated guidelines

Outcome 3.1 Green infrastructure and WSUD performance-based planning policy is embedded within the Planning and Design Code, Standards and Guidelines

Outcome 3.2 Online InSite Water stormwater assessment tool for small scale development is recognised within the e-planning system by June 2024

Outcome 3.3 MUSIC Guideline for SA is referenced in relevant state government policy documents

Effective application

Practitioners apply best practice WSUD and IWM strategies effectively to achieve desired water quality, flood management, water conservation and urban greening objectives

Outcome 4.1 Practitioners have the knowledge and skills to effectively plan for the design, construction and maintenance of WSUD assets

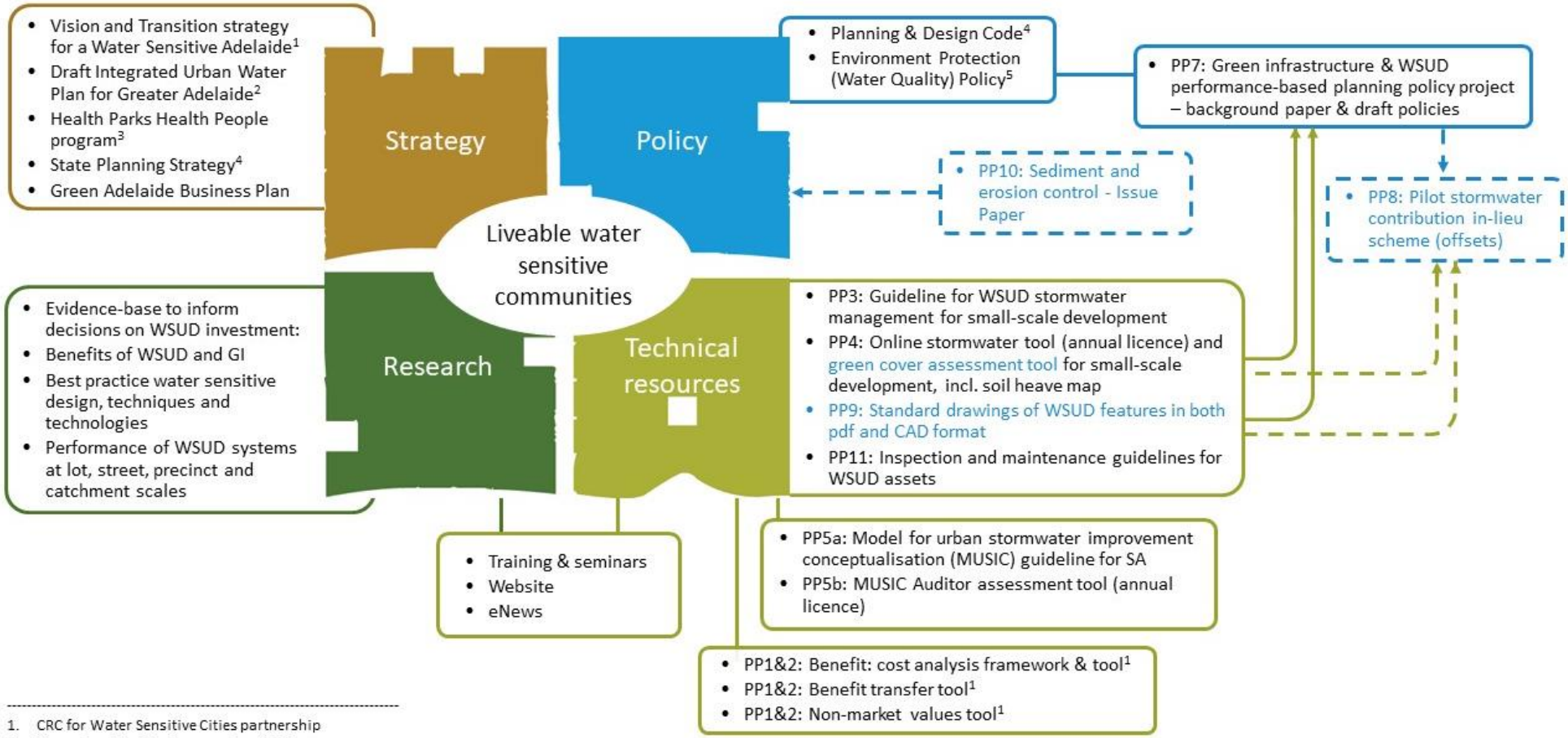
Outcome 4.2 Developers and the building industry effectively apply WSUD within their developments

Outcome 4.3 Councils effectively apply WSUD within their asset renewal and capital works projects

Outcome 4.5 New research addresses knowledge gaps

3. Our program

Overview



1. CRC for Water Sensitive Cities partnership
2. Department for Environment and Water
3. Department for Health and Wellbeing
4. Department of Planning, Transport and Infrastructure
5. Environment Protection Authority

Yet to be funded

What we offer

The Water Sensitive SA program has been developed under a logical framework drawing upon the outcomes of extensive consultation with our partners and practitioners. We will bring about a cultural shift in which WSUD is widely recognised and embraced, and provide practitioners with guidelines, tools and training to inspire and facilitate the delivery of world-class projects and developments.

Enabling factors to support the transition to a water sensitive community described by Brown (2007) that have also guided our program development include: Socio-political capital; champions; accountability; trusted and reliable science; market receptivity; bridging organisations; and binding targets. Our deliverables and key actions are detailed in Section 4.

We frame our work around the following principles/practices:

- skill development
- communities of practice
- applied research
- accessible resources
- efficiency of systems
- environmental, social and economic benefits of WSUD
- cooperation across jurisdictions.

As the hub of WSUD activity and learning in South Australia, Water Sensitive SA provides:

- WSUD policy development and implementation pathways
- networking opportunities and peer-to-peer learning on strategic, policy and technical matters
- specialist training to address key knowledge and skills gaps
- more accessible WSUD research for practitioners
- resource development, including guidelines and tools
- information sharing through our website, e-newsletter and articles.

Flagstaff Hill R-7 School, Flagstaff Hill raingarden. Image: DesignFlow

4. Priorities for 2021-22 to 2023-24

The Water Sensitive SA program for 2021-22 to 2023-24 incorporates the outcomes of our strategic planning workshop with investment partners held in October 2021. During the workshop we reviewed the achievements of the program since its inception in November 2014 and identified priorities for this business plan.

Over the next three years our focus will be to:

- Support asset managers shift from grey to green infrastructure.
- Support mainstreaming of WSUD practices by working closely with allied industries to reach new audiences with our training.
- Ensure proposed planning policy advisory material, practice guidelines and design standards incorporate best practice WSUD.
- Continue to raise awareness of our tools and guidelines to support greater uptake of WSUD in asset renewal, capital works projects and urban development, and retrofit of existing homes and gardens.

Our target audiences for these initiatives are:

- Water Sensitive SA investment partners and wider local government
- Collaborative partners: Stormwater SA, Resilient East, Resilient South, Adapt West, Adapting Northern Adelaide, Planning Institute of Australia (PIA), Australian Institute of Landscape Architects (AILA), landscape designers,
- Allied industries: Master builders, Urban Design Institute of Australia (UDIA), master plumbers and housing designers.
- Community

Appendix 1 provides a comprehensive summary of all guidelines, fact sheets and tools produced by the program to date.

The key actions proposed for the next three years are described in more detail below.

Marden Connect. Images: Water Sensitive SA

4.1. Part A – Core business

4.1.1. Core actions

Target audience	Actions
Stakeholder engagement	
Housing design industry	Work with master builders, house designers and architects to raise awareness of the: ▪ CRCWSC *Infill typologies catalogue* that incorporate WSUD and GI design principles, to increase housing choice in the market ▪ InSite Water stormwater assessment tool for small-scale development and its associated guidelines.
Development industry	Work with Renewal SA, Australian Institute of Architects (SA Chapter) and private developers undertaking medium density developments to share outputs from CRCWSC research on infill development and showcase exemplar medium density/greenfield developments.
Our partners	Continue to collaborate with our partners in the development of our strategic plan, business plan, our resources and communications materials.
Industry associations/ groups	Present at a variety of cross-disciplinary industry forums to raise awareness of opportunities to integrate WSUD into practice across a range of scales and provide the evidence base for such a change.
Research and adoption pathways	
Water Sensitive Cities Australia, Goyder Institute, University of Adelaide, University of South Australia	Seek partnerships with research institutions to address knowledge gaps in WSUD planning, design and practice.
Practitioners	Establish an advisory group to ensure the outputs of the CRC for Water Sensitive Cities, Goyder Institute and other research institutions are translated to an accessible format, and continue to inform WSUD policy and practice.
Local government, State Government	Translate research to provide the evidence base needed for urban greening and water sensitive cities transitions.
WSUD policy adoption and implementation	
Local government, state government agencies	Collaborate with local government and state agencies to build the case for inclusion of WSUD performance-based policy throughout the Planning and Design Code.
Developers, builders	Work with Attorney General's Department (AGD) to prepare Practice Guidelines and Design Standards to assist applicants comply with the WSUD performance objectives within the Planning and Design Code, e.g. water sensitive infill housing guidelines.
Local Government, AGD	With our investment partners, gather evidence on how well or otherwise the WSUD and urban greening policies within the Code are being implemented.

Target audience	Actions
Technical resources development	
WSUD practitioners	Continue to expand WSUD exemplar case studies and WSUD projects available on our website
WSUD practitioners	Produce “how to deliver WSUD” video content for social media to reach more practitioners and community members.
WSUD practitioners	Create a series of WSUD assets web pages that include benefits, design tips, presentations, videos, exemplar projects and research.
Asset managers	Develop consistent WSUD asset maintenance costs tracking to inform a lifecycle costs for WSUD assets guideline.
WSUD practitioners	Develop a suite of WSUD “how to” and project “showcase” videos to demonstrate best practice WSUD to a broad audience.
Training and community of practice	
Asset managers/allied industries	Provide targeted technical briefings about how to apply best-practice WSUD
WSUD practitioners	Implement training and seminars program that addresses WSUD knowledge and skills gaps.
WSUD practitioners	Increase the number of training resources available online and on-demand
Community	Continue to deliver WSUD in your home and backyard training to inform new builds, and home and garden retrofits.
Communications	
Designers, home builders, developers	Raise awareness of our WSUD for Developers, Local Government and Community web pages
WSUD practitioners, community	Regularly communicate with our practitioner and community e-news subscribers on best practice planning, policy, design, construction and maintenance of WSUD assets.
WSUD practitioners, community	Establish clear key messages about the benefits of WSUD to government, industry and community.
WSUD practitioners, community	Expand reach of key messaging of WSUD best practice through social media channels.
Our partners	Seek editorials in print media to demonstrate best practice WSUD and raise awareness of ability of WSUD to support cooler, greener, wilder communities.

4.1.2. Training and community of practice

Water Sensitive SA now offers a more flexible approach to learning. Practitioners looking to enhance their knowledge and capability in WSUD planning, design, construction and maintenance can do so in the following ways:

- Attend one of our scheduled training, seminars or workshops
- Participate in our online training on demand free courses
  - MUSIC Auditor
  - InSite Water Tool – compliance with the Planning and Design Code (available July 2021)
- Coordinate with colleagues to arrange in-house training on:
  - Construction of WSUD assets
  - Maintenance of WSUD assets
  - Streetscale raingardens – design and practice
  - WSUD in your home and backyard
  - Detailed design of wetlands
  - Green infrastructure and WSUD for new developments
  - Green roofs and walls (available June 2021)

Practitioners

Water Sensitive SA will continue to offer technical training and seminars to provide opportunities for peer-to-peer learning (including site visits), and research translation. Building the knowledge and skills base of South Australian WSUD practitioners is one of the primary objectives of Water Sensitive SA. We aim to develop a common understanding of the challenges and solutions associated with the planning, design, construction and maintenance of WSUD elements.

Our training program offers professional development to provide for a more consistent approach to WSUD and support the industry performance against best practice standards.

The seminars and workshops will provide an opportunity to establish a community of practice that provides access to latest research and peer-to-peer learning of WSUD practice that has worked well, and the challenges and learnings of putting WSUD into practice.

Priority capacity building topics for the 2021-22 financial year are interpretation and application of WSUD in the Planning and Design Code; application of infiltration systems in SA; guidelines for passively irrigated landscapes; and construction of WSUD assets.

Implementation of the training program, seminars and workshops aims to develop a common understanding of the challenges and solutions associated with the planning, design, construction and maintenance of WSUD elements. This will provide a more consistent approach to WSUD and support the industry performance against best practice standards.

Community – WSUD in your home and backyard

Water Sensitive SA has now trained over 450 members of the community in how to integrate WSUD elements into their new builds or retrofit of existing homes and gardens

This course is available to our local government partners at no additional cost, and others upon request.

4.2. Part B – Priority Projects

With the support of our program and investment partners, we have delivered the following Priority Projects over the past six years:

- PP1 – Investment framework for economics of water sensitive cities (INFFEWS) Benefit: cost analysis tool and value tool – as a partner in the CRC for Water Sensitive Cities project
- PP3 – Guidelines for stormwater management in small-scale developments
- PP4 – Stormwater assessment tool for small-scale development (InSite Water Tool)
- PP5 – Model for urban stormwater improvement conceptualisation (MUSIC) Guidelines for South Australia

During 2021-22 to 2023-24 we will develop the next suite of guidelines and tools for practitioners as described in *WSUD guidelines and tools*, below.

WSUD guidelines and tools

PP7 – WSUD performance-based planning policy The Planning and Design Code Phase 3 (the Code) was released in early 2021 and includes several high-level performance outcomes seeking the adoption of WSUD, however the inclusion of performance-based policies for stormwater runoff quality, peak flow or volume management within the Code still remains a challenge. We will continue to work with the Attorney General's Department, Department for Environment and Water and our partners to prepare the evidence-base for WSUD performance-based policy in the Code.

PP9 – Standard drawings in PDF and CAD of standard WSUD features To ensure investment in WSUD assets delivers the expected benefits to the environment and the community, it is vital that each project is grounded in best practice design. While Water Sensitive SA offers training to WSUD designers, design resources are needed to support the industry. Water Sensitive SA proposes to develop a suite of standard drawings in PDF and CAD format that can be used as a typical standard drawing, if applicable, or adapted to suit design requirements and site constraints.

PP10 – Sediment and erosion control issue paper Earthworks and soil disturbance during the construction process present a significant risk to water quality of urban streams and the marine environment. There is concern that South Australian sediment and erosion control practice falls well short of interstate performance. It is unclear if inadequate delivery of sediment and erosion control measures is due to deficient regulation, enforcement or industry capacity. The proposed issue paper will benchmark South Australia against other Australian states and make recommendations on the opportunities to bring about sediment and erosion control policy and practice needed to adequately protect our natural environment.

PP11 – Inspection and maintenance guidelines for WSUD assets Maintenance of WSUD assets for optimal functionality is key to ensuring the full benefit of investment in WSUD infrastructure is realised. Asset renewal within Councils and state government authorities typically adopts a "like for like" approach to asset replacement to deliver the nominated level of service. Asset replacement, however, provides an opportunity to efficiently integrate WSUD elements into the urban form – to move from grey to green. An inspection and maintenance guideline for WSUD assets, compliant with *IPWEA Practice Note 5 Condition assessment and asset performance guidelines* and aligned with ISO 55001*, Stormwater Infrastructure* is required to support Councils and developers in preparation of WSUD asset maintenance budgets and delivery of asset management programs.

PP8 – Pilot Stormwater contribution in-lieu scheme for a Council(s) Given the absence of quantifiable performance measures for stormwater runoff within the Code, investment in the development of a stormwater contribution in-lieu scheme, commonly referred to an offset scheme, needs to be placed on hold.

4.3. Part C – Operating costs

InSite Water tool

The InSite Water tool provides an efficient and technically robust method to demonstrate whether the design features of small-scale developments have met performance criteria for:

- water conservation and efficiency
- stormwater runoff quality discharged to waterways and marine environments via Council drainage systems.
- stormwater runoff volume
- stormwater runoff flow rates.

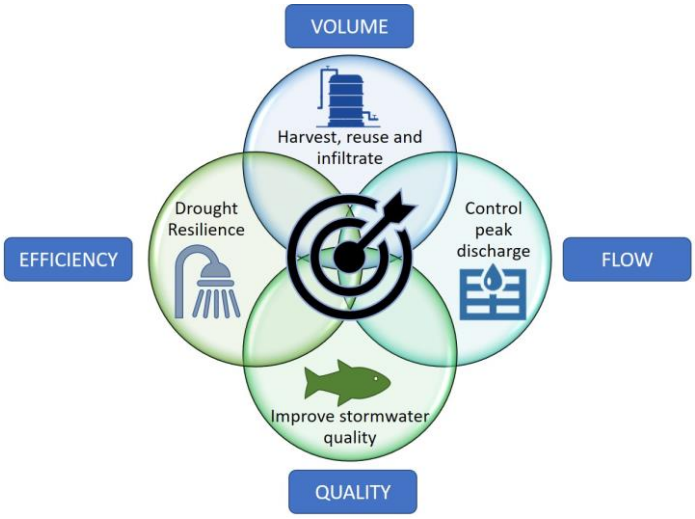


Figure 4.1 Design objectives for stormwater management

The InSite Water tool assists development applicants to optimise their solution to meet the four design objectives for stormwater management listed above.

The InSite Water tool is hosted and managed under a maintenance agreement with the developers of the tool, Organica Engineering.

MUSIC Auditor tool

MUSIC Auditor identifies any MUSIC model input parameters that do not comply with the guidelines or parameters that are outside common or expected ranges.

MUSIC Auditor provides a summary report identifying any areas of non-compliance, and further commentary to assist both consultants in revising their model or assessing authorities to make a decision whether or not to accept any non-compliance.

The MUSIC Auditor tool is hosted and managed under a maintenance agreement with the developers of the tool, E2Designlab.

5. The people behind the program

Governance

Water Sensitive SA program development and implementation is overseen by a Steering Committee consisting of eight leaders in the fields of engineering, planning, landscape design and research. This committee is responsible for setting the program's strategic direction and acting as its ambassadors. Appointed Steering Committee members as at May 2021 are:

- Sheryn Pitman (Chair)
- Greg Ingleton (Deputy Chair)
- Robin Allison
- Alison Collins
- Andrew King
- Joe La Spina
- Elsie Mann
- Harsha Sapdhare

Program delivery team

Water Sensitive SA program management is currently being delivered under a service contract with Green Adelaide, managed by the Department for Environment and Water (DEW), on behalf of the program partners. Program Manager Mellissa Bradley, and Communication and Events Manager Kathryn Bothe, are responsible for the delivery of the program.

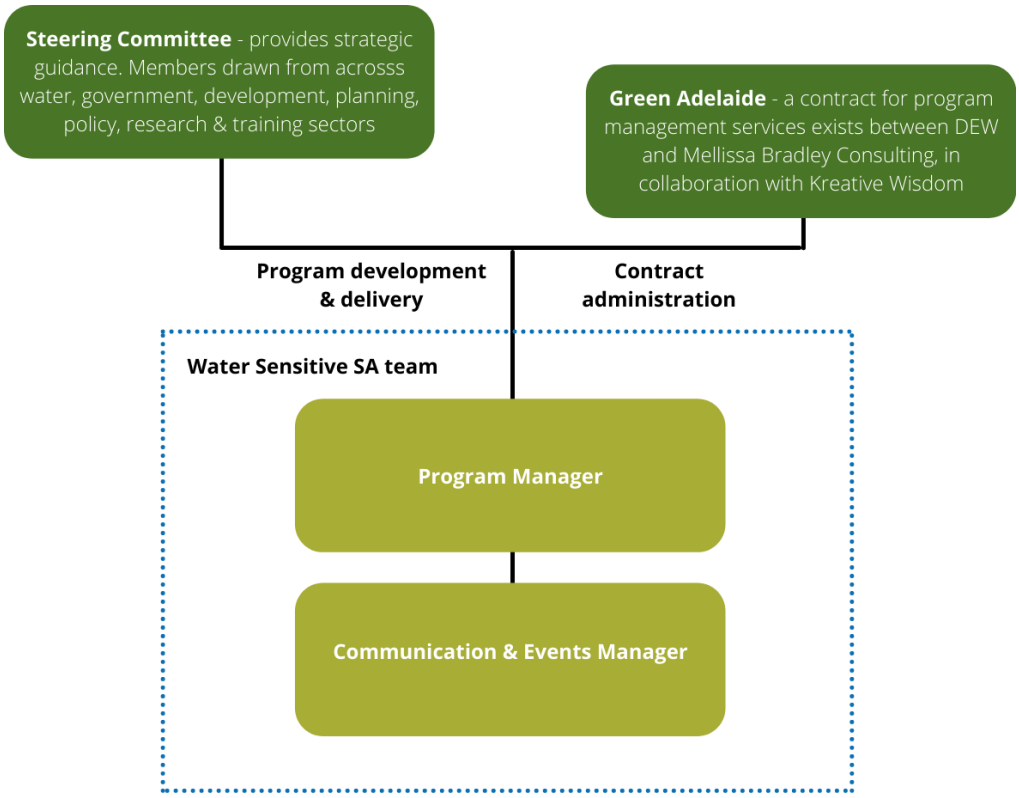


Figure 5.1 Water Sensitive SA Governance structure

Project partners

The investment partners are: Green Adelaide, CRC for Water Sensitive Cities, Local Government Research and Development Scheme, Campbelltown City Council, City of Adelaide, City of Burnside, City of Charles Sturt, City of Marion, City of Mitcham, City of Onkaparinga, City of Playford, City of Port Adelaide Enfield, City of Prospect, City of Salisbury, City of Tea Tree Gully, City of Unley, Rural City of Murray Bridge, Australian Government National Landcare Programme, EPA South Australia, Local Government Association of South Australia, SA Water and Stormwater SA.

In addition, significant investment support has been provided for our priority projects by City of West Torrens, Department for Environment and Water, and Stormwater Management Authority.

The University of South Australia provides valuable in-kind support to the program, providing the evidence base for many of our activities.

Figure 5.2 Program investment partners

6. Budget estimates

6.1. Income

The budget estimates provided in Table 6.1 are based upon current level of investment from Water Sensitive SA partners and prospective partners and is subject to the execution of formal grant agreements between the Green Adelaide and the relevant partners.

2021-22 income estimates summary

Table 6.1 Projected income from partners annually

	Income (as per grant agreement) per financial year (+ GST)		
Funding partner	2020-21 carryover	2021-22	Total
Carry over	$35,000		
Green Adelaide		150,000	
Adelaide City Council		5,000	
City of Burnside		5,000	
City of Campbelltown		5,000	
City of Charles Sturt		5,000	
City of Holdfast Bay[1]			
Corporation of the City of Marion		5,000	
City of Mitcham		7,500	
City of Mount Gambier[1]			
City of Norwood, Payneham St Peters[1]			
City of Onkaparinga		10,000	
City of Playford		5,000	
City of Port Adelaide Enfield		10,000	
City of Prospect		3,000	
City of Salisbury		10,000	
City of Tea Tree Gully		5,000	
Corporation of the City of Unley		3,000	
Corporation of the Town of Walkerville[1]		3,000	
SA Water[1]		5,000	
Rural City of Murray Bridge		5,000	
Total	$35,000	$241,500	$276,500

Note 1: Prospective or returning partners

Note 2: All income nominated above is subject to the execution of grant agreements between the partner organisations and Green Adelaide.

6.2. Expenditure

Budget estimates have been prepared based upon the current level of investment from existing partners as detailed below in Table 6.2, with total expenditure for 2019-20 expected to be approximately $200,000.

2021-22 to 2023-24 budget estimates

Table 6.2. Program budget estimates

Deliverable	Expenditure (+ GST) Forecast			
	2021-22[1] $	2022-23[2] $	2023-24[2] $	Total $
Part A: Core business				
Program management	18,000	18,000	28,000	
Stakeholder engagement	10,000	10,000	15,000	
Research and adoption pathways	10,000	20,000	20,000	
Technical resources development	40,000	40,000	40,000	
Training and community of practice	30,000	30,000	30,000	
Communications	18,000	18,000	18,000	
Sub-total 1 – Core business	**$126,000**	**$136,000**	**$151,000**	**$413,000**
Part B: Priority Projects				
PP1 Cost: benefits analysis tool application	15,000	15,000	15,000	
PP2 Lifecycle cost analysis	5,000	15,000		
PP4a Soil movement map – metropolitan Adelaide		5,000		
PP4b Green infrastructure assessment tool		50,000		
PP6 Update SA WSUD Technical manual		60,000		
PP7 WSUD performance-based planning policy	10,000	5,000	5,000	
PP8 Develop a pilot stormwater contribution in-lieu scheme for a Council(s)	10,000	10,000	80,000	
PP9 WSUD features standard drawings	28,000			
PP10 Sediment and erosion control – issue paper	5,000	5,000		
PP11 Inspection and maintenance guidelines for WSUD assets	35,000			
Sub-total 2 – Priority projects	**$108,000**	**$165,000**	**$100,000**	**$373,000**
Part C: Operating Costs				
PP4 InSite Water tool maintenance	15,000	15,000	15,000	
PP5 MUSIC Auditor tool licence	9,000	9,000	9,000	
Sub-total 3 – Operating costs	**$24,000**	**$24,000**	**$24,000**	
Total	**$258,000**	**$325,000**	**$275,000**	**$858,000**

Note 1: Subject to confirmation of funding partners
Note 2: Subject to confirmation of funding partners and grants (or similar)

7. Evaluation framework

7.1. Program reporting and evaluation

To ensure the Water Sensitive SA capacity building program is constantly evolving to respond to the needs of its partners and broader practitioners, the method of evaluation will include:

- monthly reporting to Green Adelaide on program activities and financial statement
- three-monthly reporting to program Steering Committee on progress towards performance targets and financial statement
- annual review of program outcomes to inform the following year's business plan
- a detailed evaluation of the program's impact to date is to be completed in June 2021, including:
  - a survey to track progress of development in perceived knowledge and awareness for South Australian practitioners
  - a qualitative survey of our partners.

7.2. Reporting performance

Program risk analysis

To ensure that risks to the quality of program deliverables and the overall longevity of the program are adequately managed, a risk analysis has been undertaken.

The likelihood, consequence and risk rating tables used in the risk analysis are provided in our *Program risk assessment* document, available on request.

Unity Park Biofilter, Salisbury

Appendix 1

Our program outputs

Policy

- PP7: Green infrastructure & WSUD performance-based planning policy project – background paper & draft policies
  https://www.watersensitivesa.com/the-best-of-green-infrastructure-and-water-sensitive-urban-design-policy/

Technical resources

- PP1&2: Benefit:cost analysis framework & tool[1]
  CRC for Water Sensitive Cities Benefit: cost analysis tool for green infrastructure and water related projects

- PP1&2: Non-market values tool[1]
  Non-market values and benefit transfer tool

- PP3: Guidelines for WSUD stormwater management for small-scale development
  https://www.watersensitivesa.com/resources/technical-aides/guidelines/stormwater-management-guidelines-for-small-scale-development/

  - WSUD 01: A guide for water sensitive urban design: Stormwater management for small-scale development
  - WSUD 02: Residential development – deemed-to-satisfy solutions for stormwater management
  - WSUD 03: Residential development – compliance with the InSite Water Tool
  - WSUD 04: Commercial development – compliance with the InSite Water Tool
  - WSUD 05: Technical drawings of standard WSUD treatments for small-scale development
  - WSUD 06: InSite Water Tool User Manual
  - WUSD 07: InSite Water Tool Engineering Methods
  - WSUD 08: FAQs

- PP4: InSite Water online stormwater assessment tool

- PP5a: Model for urban stormwater improvement conceptualisation (MUSIC) guideline for SA
  https://www.watersensitivesa.com/resources/technical-aides/guidelines/south-australian-music-guidelines/

- PP5b: MUSIC Auditor assessment tool
  https://www.watersensitivesa.com/resources/technical-aides/guidelines/music-auditor/

PP6 – WSUD Technical Guidelines

- A guide to raingarden plant species selection and placement
  https://www.watersensitivesa.com/wp-content/uploads/Raingarden-Plant-Fact-Sheet-v5_FINAL-Dec16.pdf
- Raingarden planting palettes fact sheet
  https://www.watersensitivesa.com/wp-content/uploads/Raingarden-planting-palettes_April-2020.pdf
- Green roofs fact sheet
  https://www.watersensitivesa.com/wp-content/uploads/200311_green-roofs-fact-sheet_19WSA_FINAL-DRAFT.pdf

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[1] CRC for Water Sensitive Cities partnership

Website

Stakeholder targeted resources

- WSUD for developers – small-scale infill
- https://www.watersensitivesa.com/resources/wsud-for/developers_small-scale-infill/
- WSUD for developers – major infill/greenfield
- https://www.watersensitivesa.com/resources/wsud-for/developers_major-infill-greenfield-developments/
- WSUD for community https://www.watersensitivesa.com/community/
- WSUD for Local Government https://www.watersensitivesa.com/resources/wsud-for/local-government/

L-R: Hillview Road, Netherby permeable paving; Kegworth & Wheaton Roads, Melrose Park permeable paving and infiltration system. Images: Water Sensitive SA. Cnr Hartley Road & Jarman Terrace, Flinders Park raingarden under construction Image: Raingarden 500