WATER SENSITIVE SA

Business Plan Annual Review 2015-16

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Authors

This document was prepared by:

Name, title	Mellissa Bradley, Program Manager
Organisation	Water Sensitive SA
Address	PO Box 351, Uraidla
Telephone	0431 828 980
Email	mellissa@watersensitivesa.com

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1. Executive Summary

The Water Sensitive SA program, in its second year of delivering capacity building services to South Australian water sensitive urban design (WSUD) practitioners, has contributed to a greater awareness and depth of understanding of the role of WSUD in the creation of more liveable communities.

This document reflects upon the achievements of the Water Sensitive SA program during 2015-16 and sets out the proposed outputs and activities for 2016-17. The proposed program for the next financial year aims to place South Australia in the best possible position to achieve broad adoption of WSUD within policy and practice into the future.

Highlights for 2015-16

In September 2015, Water Sensitive SA launched its new website and has since become a trusted source of the latest WSUD news and resources for South Australian practitioners.

We have built strategic alliances with industry peak bodies including Australian Institute of Landscape Architects (AILA), Planning Institute of Australia (PIA). Stormwater SA and IPWEA to progress the WSUD agenda. The program has raised the profile of WSUD within the 30 Year Plan (Planning) Review such that the development of green infrastructure supported by best practice WSUD is now viewed within state planning agency networks as an essential component of any urban renewal or growth.

Our training program 2015-16 was focused on developing practitioners' fundamental skills in detailed design and best practice construction and maintenance of WSUD assets including streetscape raingardens, wetlands, infiltration systems and GPTs. In addition to the technical program, a 2-day leadership course designed to foster emerging WSUD leaders guided participants through the development of their own personal action plan for the advancement of WSUD. This suite of courses can now be readily delivered across Greater Adelaide and regional South Australia to meet the demand of the industry.

Our seminar and workshop series provided an opportunity for engagement with the planning profession. The *Pathways to water sensitive communities through planning* seminar challenged the planning industry to view South Australia's current WSUD policy framework in context of leading planning frameworks interstate. Opportunities for WSUD policy integration with the new *Planning, Development and Infrastructure Bill 2016* were explored.

Attendees at our courses and seminars report an increased ability to deliver best practice WSUD and a genuine eagerness to apply the learnings in their projects and work programs.

Our partnerships with local and national research institutions has provided a pathway for latest research to reach practitioners. Using a Goyder Institute for Water Research data base we have developed an interactive map and photo gallery of SA WSUD projects on our website. Water Sensitive SA has contributed to peer reviews of Goyder Institute reports to ensure outcomes are reported in a way that is accessible to WSUD practitioners. We have collaborated with the Cooperative Research Centre (CRC) for Water Sensitive Cities to: share the outcomes of a review of the South Australian WSUD planning policy framework in national context, provide training in biofiltration guidelines and prepare the project scope for the proposed cost-benefit analysis tool.

The Water Sensitive SA bimonthly e-newsletter keeps our 539 subscribers in touch with the latest WSUD training and events, showcases leaders in WSUD policy, strategy and practice both in SA and interstate and connects practitioners with latest research findings.

Financial statement

The Water Sensitive SA budget allocation for 2015-16 was $183,600 + GST. The program's financial position was regularly monitored via monthly reports to the Adelaide and Mount Lofty Ranges NRM Board and quarterly reports to the Water Sensitive SA Steering Committee. For the reporting period expenditure exceeded the budget estimate by approximately $400. This small deficit will be carried forward into 2016-17.

Looking forward to the 2016-17 program, the total budget estimate of $355,000 is substantially more than previous years as a result of new partners offering targeted investment dollars for our priority projects. The related project allocations are $80,000 for Priority Project 1 & 2 Cost-benefit analysis tool and lifecycle costs and $133,000 for Priority Projects 3 & 4 Online stormwater assessment tool and associated guideline. Our core program activities of governance, stakeholder engagement, research adoption pathways, technical resources development, training & community of practice, and communications have a budget allocation of $142,000. This figure is less than previous years due to less resources being required for course development and a proportion of the program manager's time being allocated to management of the priority projects.

Note: All budget figures quoted are exclusive of GST.

Direction for 2016-17

During 2016-17, Water Sensitive SA aims to provide more opportunities for peer-to-peer learning through showcasing WSUD innovations in SA, providing a forum to discuss challenges and share solutions. The program will also seek greater collaboration with the development industry to showcase how private industry is embracing WSUD as a marketing tool, offering lifestyle benefits.

With the support of our investment partners and grant funds from the Stormwater Management Authority, Water Sensitive SA looks forward to working with local government and state agencies to deliver the online stormwater assessment tool for small-scale developments to streamline the development approval process, while achieving better WSUD outcomes.

2. Background

Who are we?

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.

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; training on know how to apply it properly; and an opportunity to gain valuable insight from the experiences of other practitioners; guidelines, tools and training to inspire and facilitate the delivery of best practice WSUD.

Every capital works project, infrastructure renewal and new development represents an opportunity for smarter water management that contributes to the creation of a more liveable, water sensitive community. Water Sensitive SA will bring about a cultural shift in which WSUD is widely recognised and embraced.

Our vision

Our vision is that:

- WSUD is an integral component in urban development and major projects to facilitate the transition of the state's cities and towns to water sensitive communities.
- All relevant government and industry sectors and the community have the commitment, knowledge and skills to work towards this common objective.

Our mission is to provide leadership for government, industry and broader stakeholders through innovation and flexibility in WSUD-relevant policy and design. We will bring about a cultural shift in which WSUD is widely recognised and embraced. We will provide practitioners with guidelines, tools and training to inspire and facilitate the delivery of world-class projects and developments.

What we offer

The Water Sensitive SA program has been developed under a logical framework drawing upon the outcomes of extensive consultation undertaken with practitioners throughout the development of the business case (Alluvium 2012), the program establishment project (Designflow 2014) and more recently with the appointment of the program manager.

As the hub for 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, blog articles and forums.

Our partners

Our program

ASPIRATIONAL PROGRAM GOAL

Water Sensitive Urban Design (WSUD) is an integral component of any development or infrastructure project and is considered vital in facilitating the systemic transition to water sensitive communities. All relevant government and industry sectors have the commitment, knowledge and skills to meet this common goal.

LONGER-TERM OUTCOMES

- Greater connection between communities and their environment (both local and remote)
- Increased amenity values
- Reduced impact of run-off from stormwater and priority watercourses in aquatic, coastal and marine environments
- Increased demand and supply of alternative, fit-for-purpose water sources
- Productive uses of alternative water sources maximised and contributing to urban food production
- Urban watercourse protection with high quality aquatic and biodiversity outcomes
- Integrated climate change adaptation using water to green our suburbs and reduce heat island effects.
- Reduced flood risk

	INTERMEDIATE OUTCOMES	ACTIVITIES
Policy development	• Decision makers and communities understand the multiple benefits of WSUD including enhanced liveability, resilience, sustainability and productivity. • Consistency and equity in the application of WSUD in new developments and infrastructure projects.	• Facilitate the incorporation of practitioner expertise into agency processes to develop an implementation framework for SA WSUD policy. • Advocate for changes in WSUD policy and practice in government, industry and public forums.
Technical resources	• Practitioners have the guidelines and tools necessary to inform planning, design, construction and maintenance of WSUD assets.	• Review existing technical guidelines for WSUD in SA and regionalise several interstate guidelines in partnership with other WSUD capacity building programs. • Create resources, including online tools, and deemed to comply guidelines, to support implementation of WSUD policy.
Communications	• Practitioners and the broader community are informed of techniques to apply WSUD over a range of scales.	• Deliver 'Water for Liveability' campaign to raise practitioner and community awareness of the benefits of WSUD and how it can be applied. • Case studies, e-newsletters, blogs and online forums.
Coordinated approach to training	• Practitioners efficiently deliver best practice integrated water management and WSUD technologies, with reduced financial risk.	• Provide training regarding WSUD planning, detailed design, construction, operation and maintenance including: detailed design of biofilters, WSUD 101 for planners and development assessors, construction and maintenance of vegetated stormwater management systems.
Institutional capacity	• Increased ability of various agencies and industry sectors to collaborate on projects and discuss and debate the technical, political and socio-economic issues associated with mainstream uptake of WSUD.	• Provide forums for practitioners across government and industry to network and discuss WSUD policy, technical, political and socio-economic matters and implementation challenges (establishing a community of practice).
Protecting our investment	• The whole-of-life costs of WSUD assets are understood.	• Develop reference materials to document the capital, operational and maintenance costs associated with WSUD to inform budgeting processes of developers and Councils for capital works, operations, maintenance and asset renewal.
Research	• Accessible research increases practitioner trust in the benefits and application of WSUD.	• Work with researchers such as the Goyder Institute, CRC for Water Sensitive Cities and CSIRO to provide research outcomes of relevance to the practitioner base in an accessible form. • Inform future research where appropriate.

Figure 2.1 Water Sensitive SA program outcomes and activities

3. What have we achieved to date?

The Water Sensitive SA 3 Year Business Plan (3 Year Plan) sets out a series of overarching program goals as a means of measuring the impact and reach of the program. An assessment of progress towards the achievement of our high-level goals to demonstrate whether the program has been effective in its engagement of a broad range of stakeholders, to achieve cultural and behavioural change is provided in Table 3.1. Progress against the key performance indicators (KPIs) established in the 3 Year Plan for our core business outputs are monitored on a quarterly basis and reported to the program Steering Committee. The highlights are provided in Section 3.2 and the full detail comparing targets and results is provided in Table 6.1 of the Appendices.

Table 3.1 High level program goals

Program goals	Current status	Proposed 2016-17 activities
1. Where WSUD targets need clarification, these are clarified by June 2016 or research is implemented to confidently allow adoption of defensible mandatory requirements.	Pathways to water sensitive communities through planning seminar raised profile of need for WSUD performance targets and gathered support from practitioners.	*WSUD Policy* Develop the narrative for strategic partners to present the case for WSUD and green infrastructure.
2. WSUD policy framework for adoption is agreed by June 2016.	While no policy adoption framework has been agreed, DPTI has indicated a willingness to consider WSUD and green infrastructure in greater detail within: (i) the 30 Year Plan for Greater Adelaide; and (ii) the proposed Planning & Design Code to integrated WSUD.	*WSUD Policy* Participate in 30 Year Plan for Greater Adelaide review processes and consultation on the development of Planning and Design Code
3. Metropolitan and Greater Adelaide Councils have commenced development plan amendments to incorporate WSUD targets within their development plans by June 2017.	The Planning Minister in his letter to Water Sensitive SA on 3 April 2016 stated that, “Due to the extensive planning reform agenda that is currently being undertaken by Government, a Ministerial water sensitive urban design Development Plan Amendments will not be actively pursued at this time”.	*WSUD Policy* Participate in 30 Year Plan for Greater Adelaide review processes and consultation on the development of Planning and Design Code
4. A close alliance has been established with the development industry HIA/UDIA such that the benefits of WSUD implementation are well understood and the industry, in collaboration with Water Sensitive SA, is working towards supporting its own members to increase their knowledge and practical application of WSUD.	Initial contact has been made with UDIA and Property Council on an informal basis.	*Stakeholder Engagement* Significant focus of program on engagement with development industry regarding shared values, priorities, tools to support industry uptake of WSUD and the development of case studies of private developments featuring WSUD
5. Council/private practice – planners, landscape architects and engineers report an increased practical	Course content developed for Water Sensitive SA 1. Design of streetscape raingardens	*Training* Re-run the courses 5 and 6 through Greater Adelaide and the

Program goals	Current status	Proposed 2016-17 activities
understanding of WSUD principles and practical application, relative to the baseline awareness and knowledge levels established by Alluvium Consulting and Kate Black Consulting (2012).	2. Detailed design of wetlands 3. Leading across boundaries to advance WSUD 4. WSUD in your backyard (community). 5. Construction of WSUD assets 6. Maintenance of WSUD assets	regions during 2016-17 for practitioners Train trainers in the *WSUD in your backyard* course #4 to take the course to wider community through local government and NRM
6. The program has secured funding from a mix of government (local, state and federal) and industry sources to ensure sustainability for another three to five years and beyond	17 current funding partners: • Adelaide & Mount Lofty Ranges NRM Board • 10 Councils • Local Government Association and Research and Development Scheme • EPA/ National Landcare Programme • Stormwater SA • SA Water	*Technical Resources* • Stormwater Management Authority – successful grant July 2016, value $110,000 • Negotiations are ongoing with respect to funding and partnership for the proposed cost-benefit analysis tool

3.1. Achievements by program area

In 2015-16, the Water Sensitive SA program was delivered under a series of key program areas that correspond to the needs of our constituents: WSUD policy, stakeholder engagement, research, technical resources, training, and community of practice and communication. Following is an overview of key outputs during this period. For a comparison of our performance relative to our key performance indicators refer to Table 6.1 of the Appendix and Table 3.2 below for an analysis of our training program and seminar series.

WSUD policy/advocacy:

On 23 March 2016, Water Sensitive SA hosted the *Leadership to advance WSUD* half-day workshop with state agency and peak body representatives with a direct interest in WSUD and green infrastructure to:

- explore strategies/actions that members of the Steering Committee and its strategic partners could employ, both individually and as an 'advocacy coalition', to drive change to advance water sensitive cities in South Australia (e.g. influence policy and practice)
- explore how the Steering Committee and its partners could use existing networks (i.e. personal relationships) and enhance them to drive positive change
- use a conceptual framework relating to 'cross-boundary influence' (e.g. from the leadership literature) to reflect on opportunities and options, and to identify specific strategies / actions the committee and its partners could take (e.g. as part of a focused 'influence strategy').

The attendees agreed to form a coalition of strategic partners to progress the Living Cities agenda, being led by the Australian Institute of Landscape Architects (AILA) and Engineers Australia (EA) underpinned by best practice WSUD. Key recommendations of the group have been embedded in the proposed outputs and work plan for 2016-17.

In March 2016, Water Sensitive SA met with EPA Water Quality Division to discuss the interstate models for reciprocal policy in statutory planning and environment protection regulatory frameworks and the potential to introduce similar approaches in SA under the Environment Protection (Water Quality) Policy or similar.

As an outcome of the *Pathways to water sensitive communities through planning* seminar and workshop held in October 2015, Water Sensitive SA wrote the Minister for Planning regarding the need for performance-based policy within the planning system to support WSUD. In a related action, the Program Manager met with Andrew Grear, Director Statutory Policy, DPTI in late 2015 regarding (i) the possible opportunities to establish an offset scheme (akin to the open space contribution scheme) in situations where the SA WSUD Policy performance targets cannot be met on-site, and (ii) the proposed online stormwater assessment tool for small scale/simple development to assist the efficient assessment of development applications while delivering WSUD outcomes that meet the SA WSUD policy.

Priority Project 1 and 2: Cost-benefit analysis tool and Lifecycle cost guidance

Representatives from local and state government and the Water Sensitive SA steering committee provided input into the development of a brief for a cost-benefit analysis tool to demonstrate the benefits of water sensitive design projects over a range of scales.

An opportunity arose for Water Sensitive SA to collaborate with researcher and Master's student with the International Water Centre, Elsie Mann, to deliver against key components of the brief. The Program Manager is co-supervisor of Elise's research project entitled *Enhancing adoption of water sensitive urban design in Adelaide – review and adaptation of available tools to assess costs and benefits* being conducted by Elsie Mann as part of her Master's project. To date, the project has:

- undertaken a literature review,

- analysed the features and suitability of the five cost-benefit analysis tools deemed to have the best alignment with Water Sensitive SA's objectives
- developed a stakeholder questionnaire to gather data regarding the knowledge, attitudes, aspriations, skills and capacity with respect to the development and application of the proposed cost-benefit analysis tool
- identified key professionals across local government (asset management/strategy), consulting industry and state government agencies.

A preliminary grant proposal has been lodged with Horticulture Innovation Australia Green Cities Fund to deliver on the full project brief, which seeks to develop a national, industry accepted tool for cost-benefit analysis of green infrastructure and WSUD projects. Expressions of interest for detailed grant proposals have been invited and are due on 30 May 2016. A related preliminary grant proposal was submitted by the City of Onkaparinga on behalf of a consortium of Councils and one consultant. The opportunity will now be explored to combine the two initiatives to ensure a single tool for South Australia is produced. The outcomes of Ms Mann's research will provide valuable background and context for the wider project.

Stakeholder engagement/awareness raising:

In addition to face-to-face meetings with new and potential investment partners, and other industry bodies, to ensure the Water Sensitive SA program meets the needs of our partners and broader industry, presentations have been made to key industry stakeholder groups regarding the opportunities to integrate WSUD at a range of scales:

- 21 July 2015 – Water Industry Association, Water Sensitive Communities
- 3 September 2015 – Tree Net annual Symposium, *Water sensitive urban design – opportunities within private and public greenspaces*
- 12 October 2015 – Environmental Engineering Society, *How to achieve liveable, water sensitive communities*
- 25 November 2015 – Stormwater SA AGM, *Water Sensitive SA first 12 months (Ah-ha moments)*
- 25 February 2016 – Parks and Leisure Australia, *How WSUD can support the management of trees in a changing climate.*
- 2 May 2016 – NRM Adaptation Practitioners Group – *Using networks to advance WSUD*
- 28 June 2016 – Adelaide Sustainable Building Network - *The interplay between the built form and water sensitive urban design.*

Research

The Program Manager has worked closely with the CRC for Water Sensitive Cities (The CRC) and the Goyder Institute for Water Research during 2015-16 to ensure latest research outcomes are shared with South Australian practitioners via our e-newsletter and training and events program. In particular, this association has resulted in presentations from several researchers or CRC industry partners at the *Introduction to adoption guidelines for stormwater biofiltration system*s training and *Pathways to water sensitive cities through planning events*, all of which were highly regarded by participants.

Water Sensitive SA has directly contributed to the CRC program in the following ways:

- 18 Mar 2016 – participated in Tranche 2 communication and adoption workshop, to advise the CRC on the preferred mechanisms to bring the outcomes of research to practitioners in a format they can readily digest.
- 15 Feb 2016 – participated in Tranche 2 project development workshop #2, refining the details of the SA project proposals

- 2 & 3 Dec 2016 - Tranche 2 project development workshop #1. Program Manager presented on South Australian practitioner's research priorities and provided input into the development of Tranche 2 (2016-17 to 2018-19) program.
- Member of the CRC Regional Advisory Panel as the main conduit for two way communication between the CRC and SA Industry partners of the CRC, on behalf of member Adelaide and Mount Lofty Ranges NRM Board.

Water Sensitive SA has directly contributed to the Goyder Institute for Water Research program in the following ways:

- Review of draft reports with regard to WSUD policy and stormwater management planning
- Adapted Goyder Institute WSUD projects in SA database to create an interactive map for the Water Sensitive SA website
- Regular liaison with respect to pending outputs that will contribute to Water Sensitive SA priority projects, in particular, calibration of the MUSIC model for SA conditions.

Technical resources

Website

The new Water Sensitive SA website launched in September 2015 featuring:

- an interactive map of over 240 WSUD assets throughout Greater Adelaide and regional area
- blog articles on emerging WSUD issues
- technical forums
- a hub for information on training opportunities, industry events and WSUD resources.

Case studies

Water Sensitive SA will continue to expand its series of case study fact sheets to showcase the range of different approaches to WSUD in SA including:

- Randolph Avenue (Fullarton) streetscape upgrade (streetscape raingardens and stormwater wells)
- Burnside BPods (infiltration systems)

Pending case studies at working draft stage due for release early in 2016-17

- Oaklands Park Wetlands
- Commercial, Park and Ride facility

Fact Sheets

Rainwater tank size selection table for Kent Town rainfall data, to assist the community to select an appropriately sized rainwater tank to suit their demand patterns, level of water security sought and connected roof area.

In addition, the *Draft raingarden plant species selection* fact sheet, currently under development, provides guidance to both professionals and the home gardener in suitable plants to ensure functionality and performance of any raingarden, while complementing nutrient removing species with companion planting for greater amenity and resilience. Due for release early in 2016-17.

Priority Projects 3 & 4 – Cost Benefit Analysis Tool for WSUD and green infrastructure

The online stormwater assessment tool for small scale/simple development and deemed to comply guideline to accompany online tool project brief, has been developed in consultation with local and state government practitioners to address Priority Projects 3 & 4. The purpose of the tool is to provide a user friendly online tool for small-scale developments that assess the performance of proposed WSUD elements against the nominated design criteria, an associated deemed to comply guideline and user manual, to:

- increase the efficiency of development application and approval processes, and
- achieve better outcomes for flood risk, water quality, amenity and microclimate.

+The project brief is available to any current or potential investment partners. It will go out to tender in August 2016.

The *Sustainable and liveable infill developments: A WSUD approach* project is being delivered by Christian Bell, fourth-year (completed) Bachelor of Civil Engineering student on behalf of Water Sensitive SA, supervised by the Program Manager. The study compares a typical 10 dwelling residential block with alternative scenarios incorporating a range of WSUD features including permeable paving, upsized rainwater tanks, raingardens, onsite detention and green roofs that meet the SA WSUD Policy performance targets. The effectiveness of potential WSUD solutions to improve stormwater runoff quality are assessed applying the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) modelling platform, with the hydrological results compared for accuracy in the Storm Water Management Model (SWMM). An assessment of ambient temperatures as a result of the urban heat island effect will be conducted in ENVI-met for each development scenario. Preliminary results for MUSIC modelling have been determined.

Priority Project 5- MUSIC model Guidelines for SA

The Goyder Institute for Water Research is soon to release the *Draft report Implementing Water Sensitive Urban Design in Stormwater Management Plans* for which the Program Manager has provided comment. This project includes recommendations on the calibration of the MUSIC model for South Australian conditions that will inform the preparation of MUSIC Guidelines for SA.

Priority Project 6- Review of SA WSUD Technical Manual

In-principle support has been provided by Water by Design (Queensland) and Clearwater (Victoria) WSUD capacity building programs to share guideline resource materials for adaption for SA. A desk top review that identified interstate resources to address the recognised gaps in the current WSUD Technical Manual has been undertaken with a view to updating this reference when funds become available.

Training

During 2015-16, Water Sensitive SA delivered six full day courses for WSUD practitioners across the full project life of WSUD assets from design and approval through to construction and maintenance; a two day urban water leadership course; and a short course for the community on ways to integrate WSUD at the allotment scale for retrofits and new builds. Water Sensitive SA has offset the costs of training content development and delivery of the practitioner courses with attendance fees set at $275 (incl. GST) for investment partners and $440 (incl GST) for others. A $10 fee was set for the community short course by the hosts, Natural Resources AMLR.

The two free seminars delivered in 2015-16 were well attended and provided an opportunity to practitioners to share experiences in the application of WSUD.

The full program for 2015-16 is listed below with an analysis of participant feedback provided in Section 3.2.

Training

- 26 May 2016 – Maintenance of WSUD Assets
- 25 May 2016 – Construction of WSUD Assets
- 14 & 16 April 2016 – WSUD in your backyard, Community short course
- 21 & 22 March 2016 – Leading across boundaries to advance water sensitive urban design
- 25 February 2016 – Detailed design of constructed stormwater treatment wetlands
- 27 August 2016 – Designing streetscale raingardens (25 attendees).
- 8 July 2015 – Introduction to CRC for Water Sensitive Cities – adoption guidelines for stormwater biofiltration systems

The course Introduction to WSUD for Planners and Development Assessment Engineers was scheduled to be held on 31 May 2016. The course was cancelled due to limited registrations in what

proved to be a busy period for the planning industry, however the content, in the majority, will be provided via the Water Sensitive SA seminar series during 2016-17.

Seminars/workshop events

- 29 October 2015 – Pathways to water sensitive communities through planning.
- 16 October 2015 – Plant species selection for amenity and resilience in stormwater biofilters and wetlands.
- 23 March 2016 – Leadership to advance WSUD workshop with peak bodies and lead agencies

Communications

With more than 500 subscribers to its email list, Water Sensitive SA communications activities are seeking to mainstream WSUD practices and create an environment that WSUD is "business as usual" for a growing number of Councils in South Australia. Key outputs of the Communications program in 2015-16 include:

- Bi-monthly e-newsletter including:
  - latest news from industry and research organisations,
  - our training and seminars
  - industry events
  - Feature blogs/articles:

  29 June 2016 – Practical ways to create water-wise microclimates in urban infill developments
  4 April 2016 – The coalition commences
  9 February 2016 – The multiple benefits of rainwater tanks
  30 November 2015 – Zero additional maintenance WSUD systems
  24 September 2015 – Policy frameworks for WSUD in five Australian cities
- Establishment of a "Community" webpage on our website to host the *Water for liveable communities* campaign to raise public awareness of the benefit of WSUD and how it can be applied.
- Water Sensitive SA YouTube channel established in November 2015 featuring presentations from selected seminars, including:
  - Pathways to Water Sensitive Communities through Planning seminar:

    The SA WSUD Policy delivering on state priorities, Julia Grant, Executive Director, Water and Climate Change, DEWNR

    The case for WSUD, Mellissa Bradley, Program Manager, Water Sensitive SA

    The Planning, Development and Infrastructure Bill 2015 and opportunities to integrate WSUD, Andrew Grear, Executive Director, Statutory Planning, DPTI

    Policy frameworks for WSUD in five Australian cities, Linda Choi, Monash University (Law Faculty)

    The business case – On-site versus off-site stormwater treatment, Mark Liebman, Blacktown City Council

    Policy instruments and pathways for SA WSUD Policy, Baden Myers, University of South Australia

    Draft SA WSUD Planning Policy module, Martin Allen, DEWNR

- *WSUD capacity building and planning. Can we have one without the other?* Dr Andrew O'Neill, Healthy Waterways (QLD), Water by Design.

- *How to build a raingarden* (in your backyard).

• Radio interview on ABC 891 (23 January 2015) as part of stormwater quality feature story.

LEGEND – Performance relative to target

- Target exceeded
- Completed as per target
- In progress and on track
- Target not met or yet to commence

3.2. Performance against core business KPIs for 2015-16

Table 6.1. Performance against core business KPIs for 2015-16

Outcome/output	KPI	Target	Actual
Program Business Planning			
Outcome 1 – Transparency and accountability in business and operational planning and reporting			
	1.1. Annual business plan prepared. Prepare 3 year business plan (review annually), stakeholder engagement plan and training plan.	May (preceding relevant financial year)	Subject of this report
	1.2. # agenda papers prepared, meeting coordinated for Water Sensitive SA steering committee	4 per annum	July 2015 completed Oct 2015 completed Feb 2016 completed May 2016 completed
	1.3. # of reports prepared – program performance against KPIs and financial management	4 per annum	July 2015 completed Oct 2015 completed Feb 2016 completed May 2016 completed
	1.4. Overall program review undertaken	May 2016 and May 2017	May 2016 completed
Stakeholder engagement			
Outcome 2 – Inclusivity			
Outcome 2a All relevant practitioners and industry groups are engaged in Water Sensitive SA program development and program delivery.	2.1. # organisations and diversity of industry groups consulted.	100% metropolitan Adelaide Councils and key industry associations by July 2015	70% Councils (face to face) 50 organisations

Outcome/output	KPI	Target	Actual
		60 by November 2015	
	2.2. # of presentations made by Water Sensitive SA to industry forums/seminars	6 per annum	Water Industry Association – 21 July 2015 Tree Net Annual Symposium – 3 Sep 2015 Environmental Engineering Society – 12 Oct 2015 Stormwater SA AGM - 25 Nov 2015 Parks & Leisure Australia – 25 Feb 2016 NRM Adaptation Practitioners Network -2 May 2016 Adelaide Sustainable Building Network – 28 June 2016
	2.3. % of investment partners providing endorsement of stakeholder engagement plan	90%	No advice to date
Outcome 3 – Recognised value of program			
Outcome 3a Financial partners understand the value of their investment and agree the program meets industry needs.	3.1. % of investment partners providing endorsement of draft business plan	90%	See below. Renewal of partnership deemed to be endorsement of business plan.
	3.2. # of new investment partners following release of business plan	12 additional Councils by Oct 2015 10 other organisations by Oct 2015	8 x existing partners renewed agreements in 2015-16 4 x new partners joined the program in 2015-16 1 x new member grant agreement pending 1 x grant application successful Stormwater Management Authority (July 2016):
WSUD policy adoption and implementation			
Outcome 4 – Adoption of WSUD performance targets			
Outcome 4a Binding performance targets for water conservation, stormwater runoff quality and stormwater will drive a consistent, equitable approach to WSUD, based upon best practice	4.1. # of Councils, organisations or industry groups actively advocating for SA WSUD Policy adoption within planning and building approvals processes	25 by July 2016	28 (77% attendees Pathways to WSC through planning seminar who completed survey supported adoption of a WSUD module within the planning policy library/ proposed state planning code (n=37 returned surveys) Established SA coalition to advance the Living Cities agenda including (IPWEA, AILA, Stormwater SA, PIA)

Outcome/output	KPI	Target	Actual
Technical resources development			
Outcome 5 – Technical resources for WSUD projects			
Outcome 5a Agreement reached with interstate and international capacity builders for sharing technical information and which elements SA is to lead Outcome 5b Resources are readily available through a central on-line facility Outcome 5c Practitioners have the guidelines necessary to inform planning, design, construction and maintenance of WSUD assets.	5.1. Sources for all categories of technical information identified and links made on Water Sensitive SA website	Website hits >100 by May 2016	Average 1430 page views/month (November 2015 – April 2016
	5.2. Contract(s) signed for provision of missing technical information for which Water Sensitive SA is to take lead	New material on-line by June 2017	Pending priority projects and additional funding
	5.3. Quality of SA-produced technical guidance is peer reviewed and assessed to be good	New material peer reviewed and approved.	Pending priority projects and additional funding
	5.4. Proportion of industry sectors (i.e. planning, design, assess, construct and maintain etc.) for which technical support resources are available on line	All sectors by June 2017	Pending priority projects and additional funding
	5.5. % of practitioners citing Water Sensitive SA website as a primary source of information on WSUD technical matters	70% by May 2017	To be undertaken in March 2017
	5.6. % of practitioners reporting resources to support their role in WSUD are available via Water Sensitive SA website.	70% by May 2017	To be undertaken in March 2017
Training and community of practice			
Outcome 6 – A proficient WSUD Practitioner community			
Outcome 6a: Practitioners can deliver best practice integrated water management and WSUD	6.1. % of practitioners reporting improved ability to delivery best practice WSUD	80%	Various see detailed results Section 3.2

Outcome/output	KPI	Target	Actual
into the planning, design, construction and maintenance of WSUD assets.	6.2. % of practitioners reporting they will apply the learnings in their current role	70%	Various see detailed results Section 3.2
	6.3. qualitative data on how practitioners will apply the learnings	n/a	See Section 6.2 of Appendix
	6.4. % of investment partners supportive of Draft Training Plan	85%	Renewal of partnership deemed to be endorsement of business plan and training program
	6.5. # of collaborations with industry groups/training providers to strengthen the WSUD content of existing courses	5 by May 2017	2[1]
	6.6. # of full day courses delivered per annum for priority knowledge and skills gaps	4 per annum	5 x full day courses 1 x 2 day course 1 x 2 short course on two occasions
	6.7. # of attendee days in training courses run by Water Sensitive SA	80	162 - 139 full day courses and 23 in 2 x short courses. Refer to Table 3.2, Section 3 for details
	6.8. # of attendees per year – seminar/workshop series	160	97 - Refer to Table 3.2, Section 3 for details
	6.9. % of course attendees reporting that training/seminar increased their knowledge of the topic in question.	80%	Refer to Table 3.2, Section 3 for details
	6.10. % of course attendees reporting that course material and presenter were of a good standard or higher.	80%	Refer to Table 3.2, Section 3 for details
	6.11. % of course attendees reporting the course/seminar was relevant to their current role.	70%	Refer to Table 3.2, Section 3 for details

[1] Primary Industry Centre for Science Education (PICSE): University of Adelaide to deliver1.5 hour session on the basics of biofilters (in conjunction with Andrew King) as part of a soils course for high school teachers. Course postponed to 2016.

2 University of Adelaide, Architecture Department, Dr Eliza Palazzo, Opportunities within architecture course to address the built form as it can provide for WSUD.

Outcome/output	KPI	Target	Actual
Outcome 6b: WSUD practitioners are well networked through peer to peer learning opportunities	6.12. # of seminar series held each year	4 per annum	2 (no change in reporting period)
	6.13. # of participants for each seminar series	40 per seminar	37 (Plant species16/10) 60 (WSUD Policy 29/10)
	6.14. % of seminar attendees reporting that training/seminar increased their knowledge of the topic in question	80%	85% (Plant Species) n=11 97% (WSUD Policy) n=37
	6.15. % of seminar attendees reporting that the presenter was of a good standard or higher	80%	91% (Plant Species) 88% average over 7 speakers (WSUD Policy)
	6.16. % of seminars attendees reporting the seminar was relevant to their current role	80%	100% (Plant Species) 83% will apply learnings (WSUD Policy)
	6.17. Qualitative data on how practitioners will apply the learnings	N/A	Refer to Section 6.2 of the Appendix
	6.18. % of Council practitioners who report improved ability of development applicants to demonstrate best practice WSUD	60%	Longer term goal, not within lifetime of plan. Recommend delete for 2016-17
	6.19. % of practitioners reporting improved knowledge of techniques to incorporate best practice WSUD elements within designs	80%	85% (Plant Species) N/A (WSUD Policy)
Communications			
Outcome 7 – Communications			
Outcome 7a Increased awareness of best practice, WSUD strategy, policy, techniques and applications. Outcome 7b	7.1. # of media releases/media (radio) engagements	3 per year	1 (ABC 891, 23 Dec 2015)
	7.2. Sponsorship for awards event	$2,500	nil
	7.3. # of practitioners reporting an increased awareness of best practice WSUD strategy, policy and practice as a result of Water Sensitive SA communications	70%	Not surveyed to date

Outcome/output	KPI	Target	Actual
Increased trust in WSUD to deliver multiple benefits to the community, environment and economy	7.4. # of practitioners reporting that Water Sensitive SA communications have demonstrated the multiple benefits of WSUD	70%	Not surveyed to date
	7.5. # of e-newsletter subscribers	500 subscribers by July 2016	539 in May 2016 (up from 468 in Feb 2016)
	7.6. # of forum conversations per annum	6 per annum in 2015/16	2 (Forum functionality not enabled. Contributors need to login in to post comments but website does not have subscriber login functionality. Arris to amend

3.3. Training and seminars – survey results

During 2015-16, Water Sensitive SA has delivered five courses and has three pending delivery in May 2016 at the time of reporting. Given the importance of training to the program and our partners the detailed analysis of the survey feedback is provided below. Qualitative feedback is provided in Appendix 6.2.

Table 3.2 Training/event participant survey feedback with respect to the quality, effectiveness and relevance of each of the respective courses

Outcome 6a:

Practitioners can deliver best practice integrated water management and WSUD into the planning, design, construction and maintenance of WSUD assets.

KPI	Target	Actual	Actual by course								
		Totals	Training							Seminars	
			Intro. to CRC biofilt. guidelines	Designing streetscape raingardens	Detailed Design of Wetlands)	Leading to advance WSUD)	WSUD in your backyard	Construction of WSUD assets	Maintenance of WSUD assets	Plant species selection	Pathways to water sensitive communities through planning
No. of survey participants			n = 12	n = 21	n = 14	n = 12	n = 12	n=14	n=11	n = 11	n = 37
1.1. % of practitioners reporting improved ability to delivery best practice WSUD	80%	-	100%	95%	98%	N/A	No data. Not included in NRMB survey	86%	100%	100%	N/A
1.2. % of practitioners reporting they will apply the learnings in their current role	70%	-	100%	90%	83%	100%	No data	100%	100%	100%	83%
1.3. qualitative data on how practitioners will apply the learnings	n/a		See Appendix 6.2								

	KPI	Target	Actual	Actual by course								
1.4.	% of investment partners supportive of Draft Training Plan	85%	Yet to be sought									
1.5.	# of collaborations with training providers to strengthen the WSUD content of existing courses	5 by May 2017	2[2]									
1.6.	# of full day courses delivered per annum for priority knowledge and skills gaps	4 per annum	8	Full day	Full day	Full day	2 x full day	2 x short course (1.5 hrs)	Full day	Full day	2 hrs	Full day
1.7.	# of attendee days in training courses run by Water Sensitive SA	80	162	63	25	21	13	23	16	11		
1.8.	# of attendees per year – seminar/workshop series	160	97								37	60
1.9.	% of course attendees reporting that training/seminar increased their knowledge of the topic in question.	80%	-	90%	95%[3]	93% [3]	100%	No data	91%	95%	85% (n = 11)	97% (n = 37)
1.10.	% of course attendees reporting that course material and presenter were of	80%	-	100%	95%	100%	100%	No data	89%	100%	91%	88% - average over 7 presenter

[2] Primary Industry Centre for Science Education (PICSE): University of Adelaide to deliver 1.5 hour session on the basics of biofilters (in conjunction with Andrew King) as part of a soils course for high school teachers. Course postponed to 2016.
2 University of Adelaide, Architecture Department, Dr Eliza Palazzo, Opportunities within architecture course to address the built form as it can provide for WSUD.
3 Greatly or somewhat (excludes those indicating improved their knowledge a little)

	KPI	Target	Actual	Actual by course								
	a good standard or higher.											
1.11.	% of course attendees reporting the course/seminar was relevant to their current role.	70%		100%	90%	83%	100%	Not relevant			100%	83%

4. Proposed 2016-17 outputs

4.1. What factors influence the 2016-17 program?

An ability for the Water Sensitive SA program to be flexible to capitalise on emerging opportunities will be key to maximising return on investment and influence on policy and practice. During 2016 are number of opportunities have emerged that influence the allocation of Water Sensitive SA resources.

The *Leadership to advance WSUD* workshop hosted by Water Sensitive SA on 23 March 2016 highlighted for the need for the Water Sensitive SA Program

- greater engagement with the community with respect to practical ways to integrated WSUD new and existing developments applying professional marketing expertise.
- consistent messaging across all professions and government with respect to water sensitive urban design and green infrastructure principles and the benefits of these approaches – Development of a "Narrative" for urban water and green infrastructure that combines policy, state strategic and economic policies and best practice opportunities into one cohesive document.
- capitalise on the National Living Cities Alliance led by Australian Institute of Landscape Architects and Engineers Australia promoting a Five Point Living Infrastructure Plan,
- provide input into the policy direction of the 30 Year Plan for Greater Adelaide – 5 year review
- provide technical advice and guidance to DPTI (Planning) for the development of the Planning & Design Code, under new *Planning Development & Infrastructure Bill 2016*
- Promote WSUD solutions as part of the achievement of a Carbon Neutral Adelaide
- Engage with the Healthy by Design program to achieve synergies
- Work with Local Government to support the implementation of regional Climate Change Adaptation Plans as they relate to WSUD
- Continue to strengthen the relationship with the Green Infrastructure Project

4.2. How will the program evolve in response emerging needs?

Governance

This function will remain largely unchanged, with expanded use of contract administrative services to gain efficiencies and contain program management costs. An independent review of the three-year program will be conducted to assess whether the program is meeting its objectives.

Stakeholder engagement

As identified in the three-year plan, our third year of operation will have a particular focus on working with the development industry to identify areas of shared values and develop resources to support the industry's uptake of WSUD, including case studies for private developments at a range of scales.

Continued engagement with Local Government, the consulting sector and our partners will ensure the resources we develop, particularly those identified as priority projects, address the needs of WSUD practitioners.

Research

Water Sensitive SA will continue to work with research organisations to translate research outcomes for practitioners, however less resources are available for this purpose during in 2016-17 relative to 2015-16. The CRC for Water Sensitive Cities have indicated that they will invest more heavily in science communication of research outcomes and Water Sensitive SA will work to connect materials produced with SA practitioners, policy and decision makers and the community.

WSUD Policy adoption

Together with our strategic partners, develop the narrative for urban water and green infrastructure as the basis for communication across professions and to the broader community and development industry will be a key focus for the remainder of 2016.

Efforts to secure funding and collaborators for Priority Projects 1 & 2 Cost-benefit analysis tool for WSUD and green infrastructure will continue. Water Sensitive SA will continue to work with Elsie Mann, Masters Student with the International Water Centre in collaboration with Water Sensitive SA to support the delivery of the related research project *Enhancing adoption of Water Sensitive Urban Design in Adelaide – review and adaptation of available tools to assess costs and benefits*.

Technical resources development

Develop the proposed Online Stormwater Assessment Tool and associated guideline document in stages, subject to available funds. Noting that Stage 1 is within the budget estimates to be delivered within current funding commitments.

Work with DPTI (Planning) to:

- identify opportunities to integrated the proposed Online stormwater assessment tool with the proposed e-development application system and
- integrate the design principles from the associated guideline into the Planning & Design Code.

Training and Community of practice

A significant focus of 2015-16 was the development of training materials for practitioners, and in recent months expanding to courses for the community. In 2016-17 we will extend this training package throughout greater metropolitan Adelaide and regional areas to provide greater access to services for WSUD practitioners. Water Sensitive SA team resources can then be focused on bringing emerging research to practitioners and sharing knowledge of WSUD project success and challenges through the provision of greater opportunities to develop a community of practice via seminars and issues based working groups, for example Raingardens Practitioners Working Group.

Water Sensitive SA will make the *WSUD in your backyard* course material available to our investment partners in conjunction with coaching a group of trainers in the delivery of the course via “train the trainer” sessions, to enable the course to reach the widest possible community audience, predominantly via local government.

Communications

During 2016-17 Water Sensitive SA will place greater priority into enhancing our social media campaign to promote the Water for Living Communities campaign, the “Community” webpage currently under construction and the Manifesto. Opportunities to further engage with the community on the benefits of WSUD and its practical application at the allotment scale will be pursued in partnership with the Community Engagement team of Natural Resources Adelaide and Mount Lofty Ranges.

4.3. Our core business deliverables/outputs for 2016-17

Table 4.1 Water Sensitive SA core business deliverables

Outcome/output	Activities
Program Business Planning	
Outcome 1 – Accountability and reporting	
Outcome 1a – Transparency and accountability in business and operational planning and reporting	1.1. Prepare 3-year business plan (review annually), stakeholder engagement plan and training plan.
	1.2. Executive support to Water Sensitive SA Steering Committee
	1.3. Program performance and financial management reporting
Stakeholder engagement	
Outcome 2 – Inclusivity	
Outcome 2a All relevant practitioners and industry groups are engaged in Water Sensitive SA program development and program delivery.	2.1. Deliver a government and industry campaign seeking the SA WSUD policy adoption within planning policy and the building code, though professional networks and industry associations.
	2.2. Present to industry forums/seminars to raise awareness of the case WSUD and the mechanisms and opportunities for transition to a water sensitive community
Outcome 3 – Recognised value of program	
Outcome 3a Financial partners understand the value of their investment and agree the program meets industry needs.	3.1. Involve our partners in the development of our business and operational plans.
WSUD policy adoption	
Outcome 4 – Adoption of WSUD performance targets	
Adoption of existing SA WSUD Policy performance targets for water conservation and stormwater runoff quality and quantity will drive a consistent, equitable approach to WSUD based upon best practice.	4.1. Promote the SA WSUD Policy on Water Sensitive SA website and seek community and industry wide support for their adoption
	4.2. Facilitate cross agency/local government workshops and discussions to identify the most effective pathway for adoption of the WSUD policy.
	4.3. Work with researchers and other interstate capacity building programs to develop the case for WSUD including a cost benefit analysis

Outcome/output	Activities
	4.4. Coordinate practitioner input into the scoping and implementation of a life cycle cost analysis for a range of WSUD element types for capital works and retrofit projects and across a scales of development types
Resources development	
Outcome 5 – Technical resources for WSUD projects	
Outcome 5a Resources to support planning, design, construction and maintenance of WSUD elements are readily available through a central on-line facility Outcome 5b Practitioners have the guidelines necessary to inform planning, design, construction and maintenance of WSUD assets.	5.1. Provide a central hub (Water Sensitive SA website) for WSUD resources and information.
	5.2. Develop case studies to share the stories and learnings from successful WSUD projects across a range of scales and project types
	5.3. Coordinate practitioner input into project scoping and implementation for the development of a deemed to comply guideline to inform the proposed urban design code (under the planning reform)
	5.4. Coordinate practitioner input into project scoping and implementation for the develop an online tool for stormwater design and assessment of simple/small scale developments
	5.5. Coordinate practitioner input into the review and update of WSUD technical guidelines for SA
Training and community of practice	
Outcome 6 – A proficient WSUD practitioner community	
Outcome 6a: Practitioners can deliver best practice integrated water management and WSUD into the planning, design, construction and maintenance of WSUD assets. Outcome 6b: WSUD practitioners are well networked through peer to peer learning opportunities	6.1. Prepare a training and community of practice plan to address knowledge and skills gaps
	6.2. Procure training providers and coordinate delivery of 4 full day training courses per year to address the needs of planning, detailed design, construction and maintenance of WSUD assets.
	6.3. Liaise with existing training providers that service our target stakeholder groups to seek amendments to existing courses to better integrate WSUD into the curriculum (e.g. surveyors, plumbers etc.)
	6.4. Source presenters for seminar series, host and facilitate workshops to establish a community of practice, fostering peer to peer learnings
Communications	
Outcome 7 – An informed WSUD practitioner community, together with broader public	
Outcome 7a	7.1. Deliver a community campaign through mainstream media, and social media to raise awareness of the benefits of water sensitive urban design as an integral component of our urban landscape and the risks of no action and enable active participation of citizens.

Outcome/output	Activities	
Increased awareness of best practice, WSUD strategy, policy, techniques and applications. Outcome 7b Increased trust in WSUD to deliver multiple benefits to the community, environment and economy	7.2.	Develop a Water Sensitive SA award to promote the successes of the industry – include categories for local government and developer (large scale and small scale)
	7.3.	Research and prepare bi-monthly e-newsletters to keep practitioners up to date with the latest research, policy, strategy and practice from both SA and interstate.
	7.4.	Moderate on-line forums to address emerging technical, strategy and policy challenges.
	7.5.	Source guest writers of blog articles to provide a more detailed insight into current research and practice
	7.6.	Moderate blog article on-line comment and discussions
	7.7.	Develop and actively manage a social media campaign via LinkedIn and Twitter
Research & adoption pathways		
Outcome 8 – Research integration with practitioners		
Outcome 8a – WSUD research is accessible to practitioners	8.1.	Collaborate with researchers to make research outcomes more accessible to practitioners, clarifying potential adoption pathways
Outcome 8b – WSUD research addresses practitioners knowledge gaps	8.2.	Collaborate with researchers to develop research projects to address knowledge gaps

Training and community of practice

Building the knowledge and skills base of South Australian WSUD practitioners is one of the primary objectives of Water Sensitive SA. Implementation of the training program and seminar series shown in Table 4.2 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.

The seminar and workshop series will provide an opportunity for access to latest research and peer–to-peer learning of WSUD practice that has worked well and the challenges and learnings along the way to establish a community of practice for SA.

Table 4.2 Indicative training and seminar series schedule

Date	Training/ Seminar	Topic
2016-17		
July 2016	Seminar	WSUD solutions for commercial developments. *Feasibility assessment of design-construction, operations and maintenance of BMPs low impact development for capital region of Alberta, Canada (V)*
August 2016	Seminar	Engaging communities in the transition to water sensitive cities
September 2026	Training	How to use the Benefits of Sustainable Urban Drainage (BeST) Cost-Benefit Analysis tool from the Construction Industry Research and Information Association (CIRIA, UK)
October 2016	Seminar / site visit	Bowden Urban Village– working towards a Green Star Community rating through integrated water cycle management
November 2016	Training	Construction of WSUD assets (regional SA)
November 2016	Training	Maintenance of WSUD assets (regional SA)
November 2016	Seminar	WSUD and micro climate benefits – theory and practice (V)
December 2017	Seminar	Pump optimisation for a range of alternative water sources. Orange, NSW – a case study (V)
February 2017	Training	Construction of WSUD assets (southern metro region)
February 2017	Training	Maintenance of WSUD assets (southern metro region)
March 2017	Seminar	Getting balance back into the urban water cycle - Street scale infiltration solutions (V)
May 2016	Training	A guide to preparing Stormwater Management Plans
June 2017	Training	Model for urban stormwater Improvement conceptualisation (MUSIC) Training

(V) denotes event will be recorded on video and place on Water Sensitive SA YouTube channel.
Note: Indicative program – may be subject to change dependent upon service provider availability and demand.

5. Budget estimates

5.1. Income

The budget estimates provided in Table 5.1 are based upon existing grant agreements between the AMLR NRM Board and Water Sensitive SA investment partners. A selection of partners chose to commit funds for the initial three-year program, while others chose to consider their commitment on an annual basis.

2014-15 to 2016-17 income summary

Table 5.1 Projected income initial three years of program

	Income (as per grant agreement) per financial year (+ GST)			
Funding partner	2014-15	2015-16	2016-17	Total
Adelaide and Mount Lofty Ranges NRM Board	100,000	100,000	100,000	300,000
DEWNR/ Adelaide and Mount Lofty Ranges NRM Board			42,000	42,000
City of Burnside	5,000	5,000	5,000	15,000
City of Charles Sturt	5,000	5,000		10,000
City of Marion	5,000	5,000		10,000
City of Port Adelaide Enfield	5,000	5,000	5,000	15,000
City of Playford	5,000	5,000		10,000
City of Salisbury	10,000	10,000		20,000
Local Government Research & Development Scheme	25,000			25,000
SA Water	5,000	5,000	5,000	15,000
Stormwater SA	10,000			10,000
Local Government Association	10,000	10,000		20,000
EPA Catchments to Coast Program - Australian Government – National Landcare Programme	10,000	10,000		20,000
City of Tea Tree Gully		5,000	5,000	10,000
City of Onkaparinga		10,000	10,000	20,000
City of Mitcham		5,000		5,000
Rural City of Murray Bridge		5,000		5,000
Stormwater Management Authority			110,000	110,000
Total	195,000	185,000	282,000	662,000

5.2. Expenditure

2014-15 to 2016-17 budget estimates summary

To enable the proposed budget in table 5.3 to be compared with previous estimates the budget estimates as at July 2015 are provided in table 5.2 below.

Table 5.2 Program 3-year budget estimates to fulfil nominated goals and outcomes (subject to additional investment) as per 3 Year Business Plan July 2015

Deliverable	Expenditure (+ GST)			
	2014-15	2015-16	2016-17	3 year total
Part A – Core functions				
Program management	21,300	18,000	18,000	57,300
Stakeholder engagement	13,500	14,000	10,000	37,500
Research and adoption pathways	3,500	8,500	39,000	51,000
WSUD policy/implementation	9,700	20,000	4,000	33,700
Technical resources development	39,500	14,000	27,000	80,500
Training and community of practice	46,000	71,500	68,000	185,500
Communications	16,500	19,000	19,000	54,500
Sub-total 1	$150,000	$165,000	$185,000	$500,000
Part B: Priority projects				
Case for WSUD – cost benefits analysis		40,000		40,000
Lifecycle cost analysis		40,000		40,000
Technical guidelines review and update/adapt – SA and interstate			120,000	120,000
Deemed to comply guideline – urban design code		60,000		60,000
Online tool for simple/small-scale developments			100,000	100,000
MUSIC (stormwater quality model) Guidelines for SA			50,000	50,000
Sub-total 2	-	140,000	270,000	410,000
Total	**$150,000**	**$305,000**	**$455,000**	**$910,000**

2014-15 to 2016-17 actual expenditure and budget estimates 2016-17

Budget estimates have been prepared based upon the current level of investment as detailed in Table 5.3 below.

Table 5.3 Program 3-year budget estimates within current committed funds to fulfil nominated goals and outcomes

Deliverable		Expenditure (+ GST)			
		2014-15[4] Actual	2015-16 Actual	2016-17 Estimate	3 year total Estimate
	Part A – Core functions				
Program management[1,5]		32,725	18,500	20,000	71,225
Stakeholder engagement		17,450	14,683	10,000	42,133
Research and adoption pathways		5,450	12,350	8,000	25,800
WSUD policy/implementation		4,868	10,812	6,000	21,680
Technical resources development[2]		19,930	27,902	20,000	67,832
Training and community of practice		20,655	66,773	58,000	145,428
Communications[3]		21,990	17,716	20,000	59,706
Sub-total 1		$123,068	$168,736	$142,000	$433,804
	Part B: Priority projects				
Case for WSUD – cost benefits analysis			5,800	80,000	85,800
Lifecycle cost analysis				incl above	
Technical guidelines review and update/adapt – SA and interstate[6]			4,500	0	4,500
Deemed to comply guideline – urban design code			1,000	23,000	24,000
Online tool for simple/small-scale developments			3,500	110,000	113,500
MUSIC (stormwater quality model) Guidelines for SA[6]			500	0	500
Sub-total 2		-	15,300	213,000	228,300
Total		$123,068	$184,036	$355,000	$662,000

Note 1: Reporting to steering committee and DEWNR, Business Plan, Investment Prospectus , Year 1 includes development of scope of works for priority projects . Subsequent years allocation to correct program area, ie WSUD policy and Technical resources, admin.
Note 2: Year 1 includes new website development, interactive map, SA WSUD sites case studies and image gallery
Note 3: Year 1 includes brand development
Note 4: 7 months of program, commencement in 2014-15
Note 5: Year 3 Program Management – Includes independent 3 year revew of program
Note 6: Item deferred subhect to additional investment

6. Appendices

6.1. Key performance indicators amendments for 2016-17

A selection of key performance indicators for 206-17 have been amended as either (i) the available budget for particular program areas is less than anticipated and (ii) we have achieved the target set and have set more challenging targets:

Table 6.1 Program activity performance indicators amendments

KPI	Original Target	Amended Target	Reason for amendment
2.2 # of presentations made by Water Sensitive SA to industry forums/seminars	6 per annum	4 per annum	Budget limitations
3.2 # of new investment partners following release of business plan	12 additional Councils by Oct 2016 8 other organisations by Oct 2016	10 additional Councils by Oct 2016 8 other organisations by Oct 2016	More realistic target
5.1 Sources for all categories of technical information identified and links made on Water Sensitive SA website	Website hits >100 by May 2016	Website hits > 1600/month, on average, by May 2017	Target met, more challenging target needed
1.9 # of attendees per year – seminar/workshop series	160	Delete.	Duplicate of 7.17. In wrong section
6.5 # of collaborations with industry groups/training providers to strengthen the WSUD content of existing courses	5 by May 2017	2[3]	Need to fully develop existing identified opportunities
6.8 # of attendees per year – seminar/workshop series	160	delete	Duplicate of Target 6.13

[3] Primary Industry Centre for Science Education (PICSE): University of Adelaide to deliver1.5 hour session on the basics of biofilters (in conjunction with Andrew King) as part of a soils course for high school teachers. Course postponed to 2016.
2 University of Adelaide, Architecture Department, Dr Eliza Palazzo, Opportunities within architecture course to address the built form as it can provide for WSUD.

KPI	Original Target	Amended Target	Reason for amendment
6.18 % of Council practitioners who report improved ability of development applicants to demonstrate best practice WSUD	60%	Delete	Longer term goal, not within lifetime of plan
7.5 # of e-newsletter subscribers forum subscribers	500 subscribers by July 2016	700 subscribers by July 2017	Target met, more challenging target needed
7.8 # of blog articles per annum	10 per annum	6 per annum (one per e-newsletter	Budget limitations.
7.10 # of online forum subscribers	500 by July 2016	30 subscribers by July 2017.	Forum subscribers incorrectly assumed to be same as regular subscribers. Forum not functioning as intended on website. To be corrected with website upgrade early in 2016-17

6.2. Training & seminar series – Qualitative data on how practitioners have indicated they will apply their learnings

6.2.1. Training

Introduction to stormwater biofiltration guidelines CRC FOR Water Sensitive

Data not collected

Designing streetscape raingardens

- Into actual works at council reserve and Local Government Centre
- Trial and error maybe !
- In landscape practice.
- Ensure our landscape works review design and ensure they are built to best practice.
- Current streetscape project.
- I will be applying learnings in future projects.
- Immediately
- Taking new knowledge and ideas I will look for more opportunities to incorporate WSUD in our projects.
- Attempt some small scale designs.
- New project will be tweaked to incorporate learning from today.

Detailed Design of Wetlands

Attended by 45% Local Government and 55% consulting industry representatives

- Design / development applications
- Review of wetland designs submitted to council by developers.
- Project Development
- Critique designers
- Especially in checking design by others.
- Design of wetlands, music modelling of wetlands 3
- In the design of new wetlands, construction, plant selection, sizing etc. MUSIC modelling tips
- In wetland design and species selection
- Wetland layout / plant selection

Leading to advance WSUD

- Put together a leadership plan and specific actions for this coming year
- Managing across network, it's importance.
- Seek opportunities to apply identified actions.
- Re-evaluating my leadership style by identifying the type of leader I am and moving forward.
- Daily and plan.
- Try to advance WSUD in the development industry.
- Developing an influence strategy. Active networking.
- Develop and implement an influence strategy for engagement with the development industry.
- By practicing
- Integrate influence strategy into program and project formation and execution.
- Action plan
- I found it very affirming and this will help with my confidence. Persuasion techniques I will look at in more detail.

WSUD in your backyard (community audience)

- Look into larger rain water tank and plumbing into the house or rain garden.
- Find out more.
- Rain garden for the front third. Get our tanks in.
- Connect rainwater to house.
- Approach landlord for tank
- More learning
- talk about rain garden at school
- Rainwater tanks
- Plant more Bananas
- Think more about diverting and soaking rain into Swales or similar and try to use more rainwater for other uses during the wet months when the tanks are full and overflowing and not required for garden watering"

Construction of WSUD assets

- Through existing projects.
- Development assessment.
- Through construction supervision.
- Definately going to apply the information I have gained from this training to contractor management in upcoming projects.
- Applying in everyday design works.
- Share with co-workers.
- In construction and planning.
- In future construction of wetlands construction.
- By checking our specifications
- Assessing design and construction of WSUD assets

Maintenance of WSUD assets

- Forming maintenance schedules
- To current and upcoming projects.
- Crucial to my job
- Provide advice to our asset team
- In my field of work
- Discussion with my mananger

6.2.2. Seminars

Plant species selection

- I can make recommendations now to landscape team
- Documenting WSUD elements and mentoring junior staff
- I am interested in the propagation of rare local species.
- On all future design projects
- A greater understanding of plant selection will enable increased detail when conducting consultation with stakeholders
- Specify a variety of suitable plants in my designs.
- No scope in current role, but will continue to be interested in this space and try to keep up to date in case of future
- work opportunities
- Suggested species should assist overcoming inherent design problems in some situations.

- In future designs and stormwater controls

Pathways to water sensitive communities through planning

- In policy
- Think more about influencing behavioral change.
- I will keep water sensitive design in account.
- Find out how WSUD guidelines will be enforced in SA.
- Policy guidelines.
- Advice to clients.
- By ensuring assessment of proposals includes WSUD consideration.
- Through NRM objectives Ecological sustainable design
- Inform the final report for Project B5.1 (CRC for Water Sensitive Cities)
- Development assessment with mainly larger developments. Design.
- Looking for opportunities to implement.
- I will have to double my lobbying!
- Advocate - explore Communication with w/DA
- Through education
- Working with LG on storm water management NRM plan review
- Reinforces current initiative to pursue more rigorous application of available policy and facilitate by ready solutions
- Need to investigate further the Blacktown City use of open space biofilters under large grass areas.
- Synthesise findings to inform development of policy recommendations
- Through informing new policy development and in discussions with developers