# Water Sensitive SA – Three-Year Program Review – Final Report

## April 2017

wave CONSULTING

WATER SENSITIVE SA

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| Version | Date | Author(s) | Distribution |
|---|---|---|---|
| 1 -Draft | 12 April 2017 | R.Catchlove | Mellissa Bradley, Water Sensitive SA Program Manager |
| 2 – Final | 28th April 2017 | R.Catchlove | Mellissa Bradley, Water Sensitive SA Program Manager |
| 3 – Updated final | 3rd May 2017 | R.Catchlove | Mellissa Bradley, Water Sensitive SA Program Manager |
| 4 – updated cover image | 17th July 2017 | R.Catchlove | Mellissa Bradley, Water Sensitive SA Program Manager |

## Disclaimer

# EXECUTIVE SUMMARY

Water Sensitive South Australia (WSSA) is a capacity building program for water practitioners in South Australia. The core aim of the program is to improve the capacity of practitioners and institutions to design, build and maintain water sensitive urban design (WSUD) assets. The Program Manager (on behalf of the Steering Committee and funders) commissioned a review of the program as it approaches the end of the third year of operation.

This report, completed in early 2017 by Wave Consulting, was commissioned to provide an independent evaluation against an agreed set of Key Performance Indicators (KPIs) and evaluation questions.

The report is based on two datasets: perceptions of funding partners (collected through 16 one-on-one interviews with individual funding partner representatives), and perceptions of practitioners, gathered through an online survey.

**The funders and practitioners are very supportive and positive about the work to date, and would like to see the program continue**.

There is an issue in managing expectations, and managing the frustration with the change (or lack of change) in regulation to mandate WSUD in new developments. Achieving a 'culture change' is a long-term goal, and has yet to be achieved to date according to the interviews.

The key results from the online survey are:

- 84% of practitioners are satisfied or very satisfied with the program to date
- 96% of practitioners believe that the program should continue

The funding partners were reasonably consistent in their perceptions of the program, and these are represented graphically in the following figure.



Range of responses from funding partners
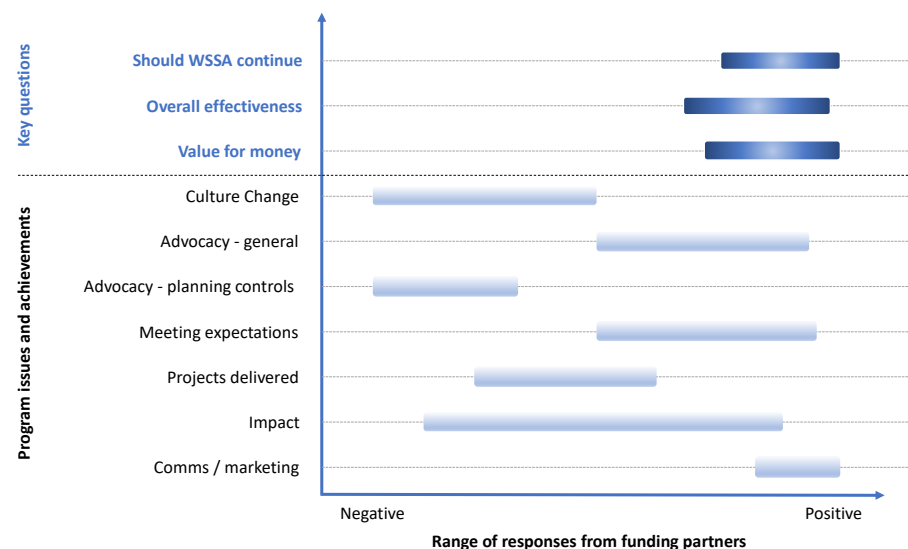
The 10 recommendations in this report have been split into four themes:

| Strategic direction | Advocacy | Networks | Operational |
|---|---|---|---|
| 1. Review program logic | 5. Planning controls advocacy | 7. Strategic alliances | 8. Complete priority projects |
| 2. Prospectus and diversified funding | 6. Political and executive engagement | | 9. Communications |
| 3. Program clarity | | | 10. Succession planning |
| 4. Emerging issues | | | |

# 1   Introduction

Water Sensitive South Australia (WSSA) is a capacity building program for water practitioners in South Australia. The core aim of the program is to improve the capacity of practitioners and institutions to design, build and maintain water sensitive urban design (WSUD) assets. The Program Manager (on behalf of the Steering Committee and funders) commissioned a review of the program as it approaches the end of the third year of operation.

This report, completed in early 2017 by Wave Consulting, was commissioned to provide an independent evaluation against an agreed set of KPIs and evaluation questions.

The report is based on data gathered between February and March 2017, and was limited in scope to the professional views of the funding partners and practitioners, hence didn't seek to assess the quality of the WSSA deliverables or the on-ground impact of the Water Sensitive SA program across the region.

The audience of this report is the Water Sensitive SA Steering Committee, Program Manager, and funding partners.

# 2   Background

Water sensitive urban design is "an approach to urban planning and design that integrates the management of the total water cycle into the land use planning and development process" (Water for Good, 2009).

While in other states capacity building programs were established to support practitioners in designing and building assets, there was no formal, dedicated program to support practitioners and build capacity in South Australia in 2014.

In early 2012, the Adelaide and Mt Lofty Ranges NRM Board, along with several other stakeholders, commenced a project to establish and fund a capacity

building program to support additional and higher quality WSUD assets across the South Australian region.

Alluvium Consulting and Kate Black Consulting prepared a "Business case for a water sensitive urban design capacity-building program for South Australia" for the Adelaide and Mt Lofty Ranges NRM Board and the associated steering committee. That report set out a potential framework, outlined priorities and suggested an implementation plan and host organisation.

As part of this process, a needs analysis was conducted to help inform the structure of the program; it also aimed to establish baseline data for WSUD practitioner knowledge, experience and needs. This provided valuable data on the state of the industry.

Based on the business case and strategic alignment between the NRM Board and Councils, with State Government in kind support, the Water Sensitive SA program commenced in October 2014 with funding secured for three years. The funding was sourced primarily from the Adelaide and Mt Lofty Ranges NRM Board, but with contributions from a range of local councils and industry groups.

A key milestone was an evaluation near the conclusion of the three-year initial funding period to assist the steering committee and funding partners in making the decision on whether to extend the program.

# 3   The program

Water Sensitive SA was established in October 2014 with funding until 30 June 2017 from several investment partners including the Adelaide and Mount Lofty Ranges Natural Resources Management Board, selected Greater Adelaide Councils, SA Water, Stormwater SA, Local Government Association, and the EPA.

It is resourced by two staff, a Program Manager (full time equivalent (FTE) of 0.6) and a Communications Officer (0.2).

The program mission is: *to engage with a broad range of stakeholders to influence the change in policy, culture and practice needed to underpin the mainstream adoption of WSUD in new development, capital works and retrofit projects.*

It delivers the following services and products:

- 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 the website, e-newsletter, blog articles and forums.

# 4   Scope

The scope of this evaluation is to:

- Review the impact of the Water Sensitive SA program with respect to a change in cultural acceptance of WSUD as a viable alternative to conventional design and influence WSUD policy and practice across a range of professional disciplines and industries.
- Identify any emerging WSUD capacity building needs of South Australian practitioners.

The measures of success for Water Sensitive SA are:

1. WSUD targets requiring clarification are clarified by June 2016 or research implemented to confidently allow adoption of defensible mandatory requirements.

2. WSUD policy framework for adoption was agreed by June 2016.
3. Metropolitan and Greater Adelaide Councils have commenced development plan amendments to incorporate WSUD targets within their development plans by June 2017.
4. A close alliance has been established with the development industry (represented by 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.
5. Council/private practice – planners, landscape architects and engineers report an increased practical understanding of WSUD principles and practical application, relative to the baseline awareness and knowledge levels established by Alluvium Consulting and Kate Black Consulting (2012).
6. The program has secured funding from a combination of government (local, state and federal) and industry sources to ensure sustainability for another three to five years and beyond.

# 5  Evaluation method

The method to evaluate the success of the WSSA program, over the period October 2014 to February 2017, was as follows:

- Review of documentation from WSSA, including the business plan, engagement plan, website, and newsletters.
- Conduct 16 one-on-one interviews (predominantly face to face, but some by telephone - most interviews lasting approximately an hour).
- An online survey of practitioners and data analysis, including a comparison of results from the 2012 survey.
- Discussion with WSSA Program Manager to review recommendations.

The method included both qualitative and quantitative elements. The method was limited in terms of who represented the funders in the interviews, their experience to date with the program, and their interest in participating in an evaluation survey.

The interview questions and online survey were developed in collaboration with the Program Manager, who has intimate knowledge of the audience and industry, and data required to complete the evaluation.

The interview questions covered the broad themes of:

- Involvement and experience to date
- Purpose
- Program achievements
- Membership benefits
- Future focus

It must be acknowledged that there is a strong element of self-selection inherent in this method and is biased towards those with an interest in WSUD and capacity building, and those who are relatively familiar with the purpose of WSSA. The evaluation was not scoped to engage with a broader audience in this project to counter that inherent bias, due to budget constraints.

# 6  Partner and practitioner feedback

## 6.1  Perceptions of funding partners

16 one on one interviewees were completed, mainly face to face (at the NRM Board's office), in February and March 2017. The people interviewed were funders and mostly at the team leader or officer level, including some managers and directors. The representatives that were interviewed were mostly the officers that approved the funding of WSSA, hence were in a good position to provide feedback on the program and input into the next phase.

**The overall result demonstrated that the funding partners are very satisfied with the program, and believe it should continue. They highly value and respect the program manager and, subject to internal sign off, would continue to fund the program into the future**.

The key areas of success mentioned in the interviews are:

- Establishing a brand.
- Engaging with the core of the industry and then expanding that area of influence.
- Creating a South Australia specific website containing "all things WSUD".
- Delivering training and creating products, such as interactive maps.
- A good stream of communications.
- A sincere acknowledgement of Mellissa as an effective, enthusiastic, and efficient program manager.

The areas where the expectations of funding partners weren't met included:

- Limited influence in achieving state government planning control requirements for more WSUD in new developments.
- Limited influence at the executive and political level (though many also acknowledged that this may be difficult)
- Engaging practitioners outside those that are already involved or aware of WSUD (there was some disagreement).
- Engaging practitioners outside of the metro area.
- Completing some of the larger priority projects.

There are several explanations for why expectations weren't met, including a key one of a lack of additional funds.  These expectations and issues are discussed in the following sections.
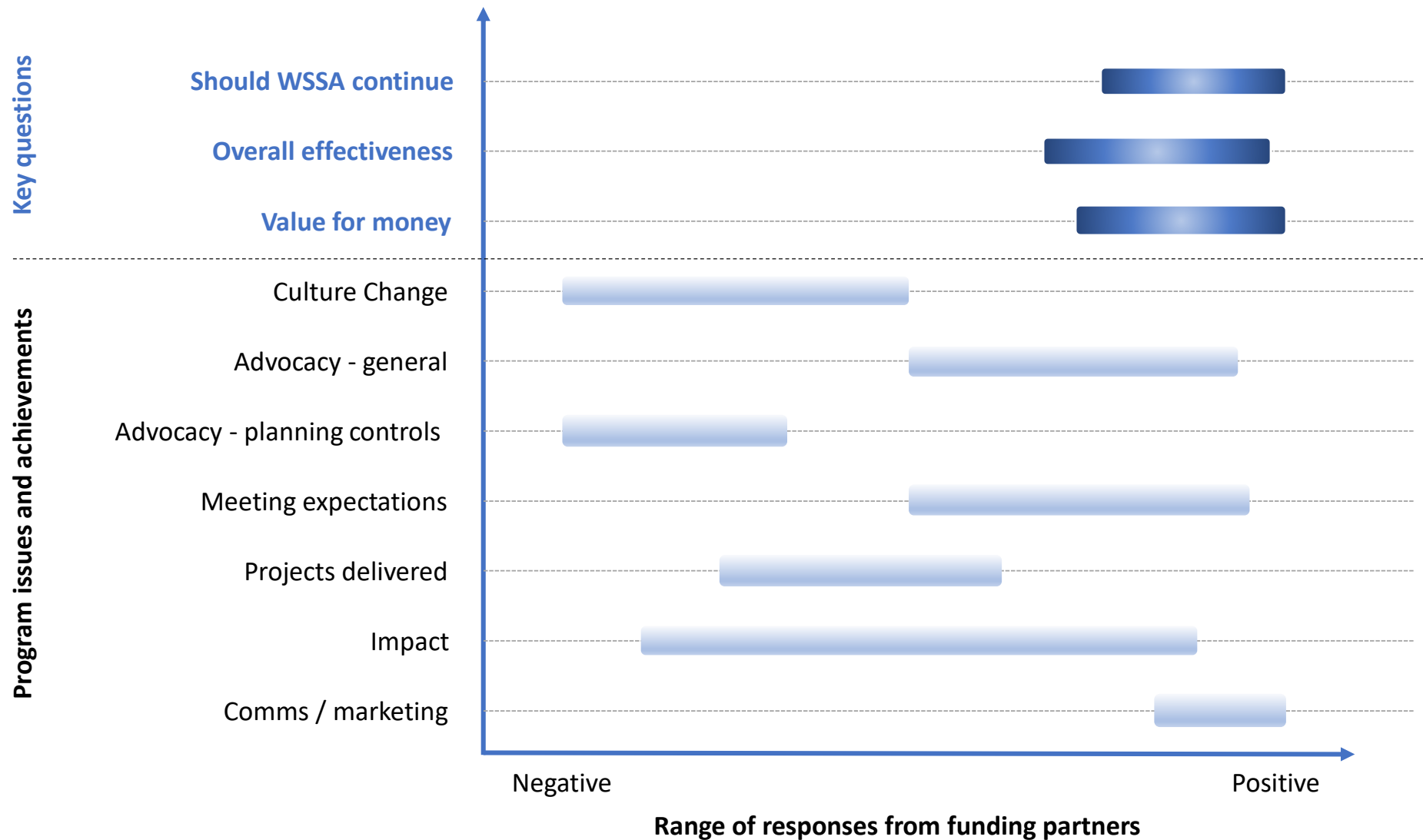
*Figure 1.        Visualisation of qualitative data collected through the interviews*

Figure 1 represents the diversity and the general trend of responses provided in the interviews. It is not a quantitative figure, but the chart broadly characterises the interpretation and diversity of the responses provided.

This section briefly summaries the key points raised in the interviews, under the main questions posed.

### 6.1.1 What is the core purpose of Water Sensitive SA?

Capacity building, advocacy and education were the three principal terms used to describe the purpose. There was broad alignment in terms of the purpose of the program, though the hierarchy of the numerous purposes and the language used was different across all the respondents. An indicative quote from a respondent on the subject of purpose was:

> *"There are multiple purposes: to be the custodian and moral compass of WSUD in the state (key point of determination and standards); to educate; to influence strategy, policy and planning."*

### 6.1.2 What has WSSA achieved?

Funders responded to this question in differing ways, as they had different expectations. On the whole, respondents felt that a lot had been achieved, considering that the program was only just beginning and needed to establish a brand. Securing funding, establishing appropriate governance structures, developing tools, disseminating guidelines, and then marketing and engaging with practitioners were the key achievements mentioned. An indicative quote from a respondent on the subject of achievements was:

> *"Water Sensitive SA has generated momentum, and has created one central point for all WSUD materials and guidelines to be in the one place. It has established a network and delivered events and technical tours."*

### 6.1.3 What has changed?

The key issues mentioned by funders when responding to this question included: there are more people involved in WSUD, more momentum in the industry generally and that resources and technical training now have a more local or South Australia specific focus.

There was also a recognition that culture change takes significant time and that there was still a need to expand the number (and sectors) of professionals that are engaged and involved in WSUD. Culture change is marked as a more negative response in Figure 1, on the basis that it hasn't happened yet but funders still have confidence that it will change. An indicative quote from a respondent on the subject of change was:

> *"There is a culture of change but it is slow. Councils are becoming more strategic in their approach to WSUD."*

### 6.1.4 What hasn't changed?

There was some frustration that there had not been more changes in regard to state government planning controls. The issue of planning controls was by far the most concerning and the highest priority for funders. Some, but definitely not all, where cognisant that the influence of WSSA on this issue is limited, in the context of urban planning, development, affordable housing, and politics generally.

Another key area that hasn't changed was the level of education and enthusiasm for WSUD from the building, construction, and development sectors. An indicative quote from a respondent on the subject of what hasn't changed was:

> *"State policy hasn't changed, but I didn't expect it to change."*

### 6.1.5 What is the biggest driver of change?

This question related to what was driving the program itself and how this related to the change in WSUD adoption. In most cases funders identified that the program manager, Mellissa Bradley, was the greatest driver of change. In other cases, it was identified that the groundswell of practitioner interest in learning more regarding effective WSUD was driving change, as were the macro scale issues of climate change and creating more liveable, green cities.

An indicative quote from a respondent on the subject of drivers was:

> *"We have a highly motivated program manager. She has the understanding of local government, and has confidence of others in the industry."*

### 6.1.6 What is the biggest barrier to achieving more?

Four issues were mentioned in response to this question: state government legislation (the same issue as mentioned above under what hasn't changed), developers and their lack of interest in WSUD, funding for the program (and hence capacity to reach out and advocate more), and ability to demonstrate the value of WSUD.

An indicative quote from a respondent on the subject of barriers was:

> *"It is our ability to communicate and explain the benefits and how they are monetised. Need to take account of the externalities, and the more we do that the developers will follows."*

### 6.1.7 Why do you fund WSSA?

Funders were contributing to this program for a variety of reasons. Mostly it related to two issues: support for the greater good or industry as a whole and an alignment with the individual organisation's strategic goals.

An indicative quote from a respondent on the subject of funding was:

> *"We believe it in. We want standards to be set across the whole region and we think WSSA can achieve that. "*

And

> *"We are confident in its alignment with our strategic plan, and know that it is critical for a water sensitive city."*

### 6.1.8 How do you perceive the return on investment or value for money?

Most of the responses to this question were very positive, but it should be noted that most funders only contribute a relatively small amount of money.

Some mentioned the specific and organisational benefits (like a tool or a discounted event ticket), but generally the respondents identified that they were very satisfied and felt they got a lot back from the program.

An indicative quote from a respondent on the subject of value for money was:

> *"Hell yeah! We stand to gain in improved capability and save us money of in long term, and hopefully environmental savings too."*

And

> *Is it value for money? Definitely. Getting discounts on tickets is important as we can spread it around the council.*

### 6.1.9  What emerging needs should WSSA tackle?

There were two types of answers to this question. Firstly, respondents wanted what they felt were existing issues and needs addressed (e.g. the state government planning controls). Secondly, the respondents wanted the program to focus on new and emerging issues such as green infrastructure, urban heat islands and climate change.

An indicative quote from a respondent on the subject of emerging needs was:

> *"It should focus on climate change, green infrastructure, and heat mapping of urban environments. Need to capture new sectors and new people. Need to help organisations integrate."*

## 6.2  Perceptions of practitioners

In March 2017, an online survey was sent to all 590 practitioners on the WSSA mailing list, and was advertised on social media and through newsletters. The survey included 23 questions, some of which were repeated from the 2012 survey of practitioners.

50 responses were received for the survey. This isn't a large sample size and would most likely include the 'converted' and 'interested' practitioners. The results should be viewed as not entirely representative of the whole WSUD sector and to most likely contain a positive bias.

**The responses to the online survey were overwhelmingly supportive of the program, reinforced the practitioner needs for a capacity building program, and reiterated that the Water Sensitive SA program should continue.**

The 50 respondents were:

- Mostly from local government, state government and consulting sectors (74% in total from these three sectors),
- Predominantly from engineering, planning and landscape architecture (48% of respondents).
- Have worked in the industry for more than 5 years (78% in total responded that they have worked for more than 5 years in the industry)

### 6.2.1  Key results

The following results are taken from some high-level questions, asked to gain an overall perception of the success of WSSA:

- 84% of practitioners are satisfied or very satisfied with the program to date.
- 96% of practitioners believe the program should continue.
- 76% of respondents indicated they felt they had a 'good' or 'very good' level of WSUD knowledge.

## 6.2.2  Tracking questions

In order to understand the change in perceptions of WSUD practitioners, the following questions were asked in both 2012 (in determining the needs of the industry), and the 2017 survey (as part of the three-year evaluation).
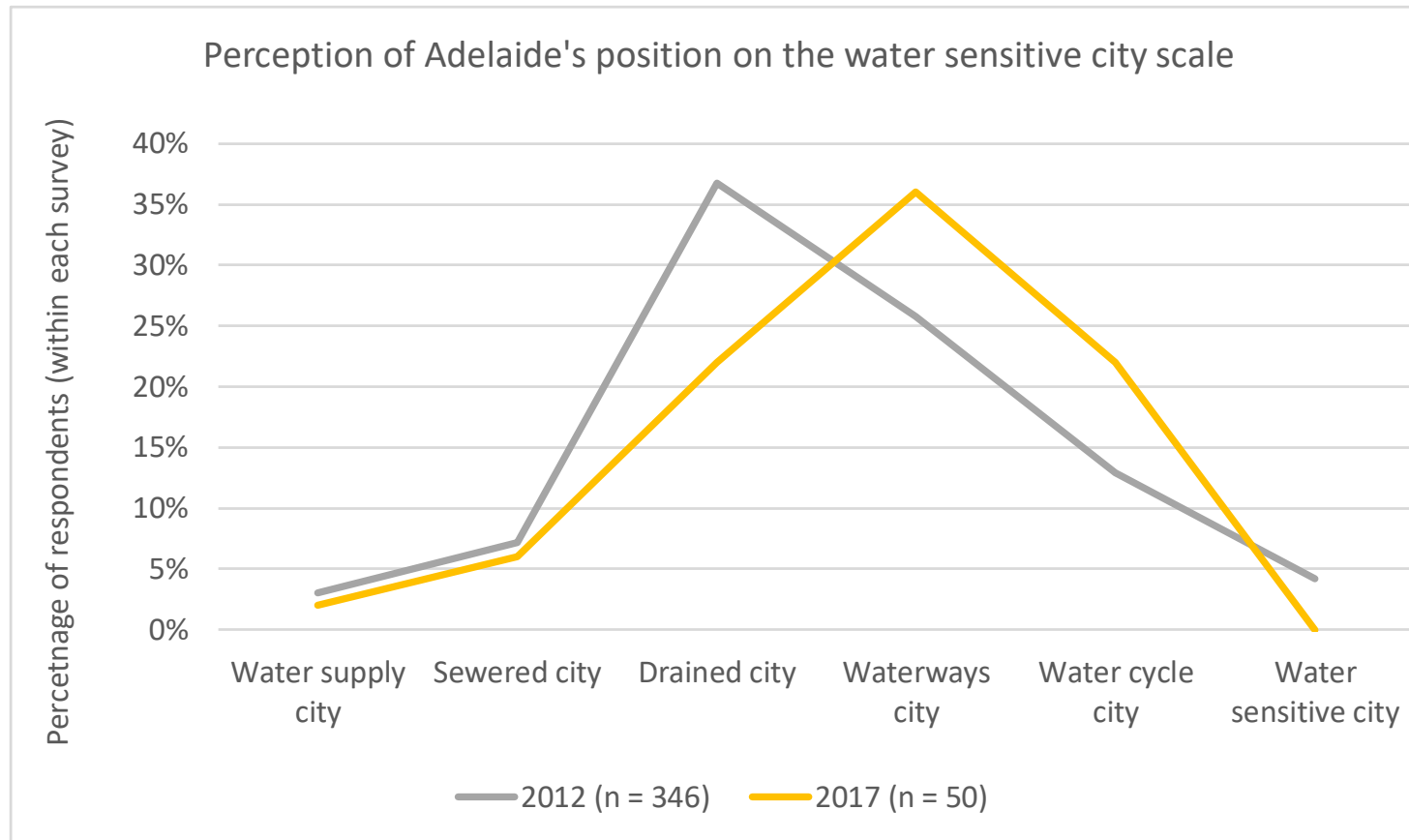


*Figure 2.        Change in practitioners' perceptions of the position their city sits on a spectrum towards a water sensitive city*

While it appears there has been some movement towards an increase in practitioners viewing Greater Adelaide as a more water sensitive city, as noted above, the survey respondents are likely more engaged and enthusiastic about WSUD, so there may not be a large real change on this issue.
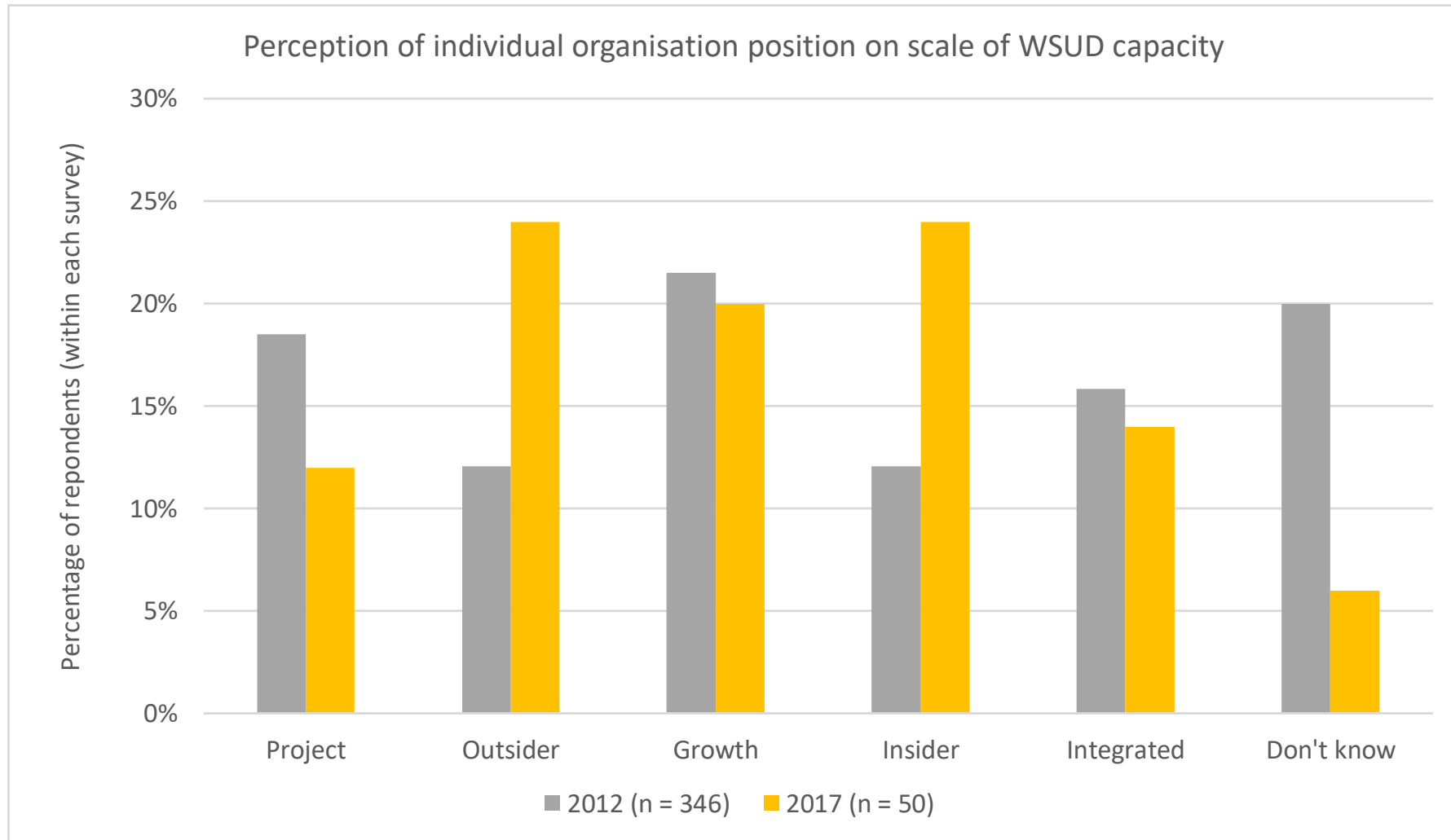
*Figure 3.        Change in practitioners' perception of where their organisation is on a spectrum*

There is a subtle shift in the perception of the position of where individuals see their own organisation on a spectrum of embracing WSUD (as seen in the change from Project to Outside), but the trend isn't obvious or conclusive.
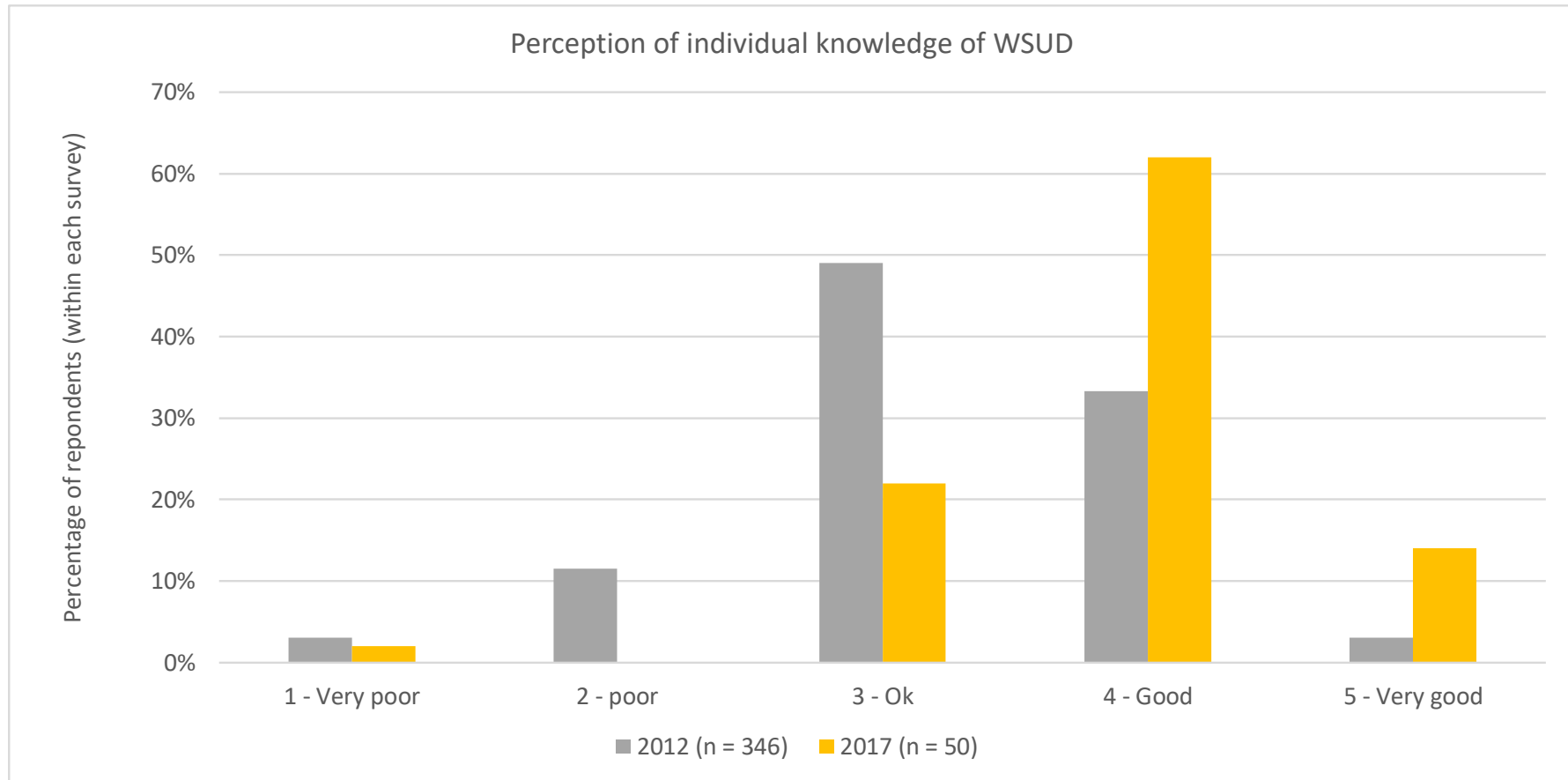
Figure 4.        *Change in practitioners' perception of their knowledge of WSUD*

There is a clear shift in knowledge of WSUD in the industry, even accounting for some bias in the 2017 sample.  This correlates with the view of the funding partners that there was an increase in knowledge.  While the data isn't broken down into sectors, and the surveys aren't linked in that we can track who is improving in knowledge, it is likely that the engineers and planners in Council are more involved, attend more training, and mostly likely to be gaining more knowledge of WSUD over the past three years.

### 6.2.3  Other noteworthy results

The online survey also revealed some other results of interest on the perception of the industry at this point in time. This included:

- 59% of respondents indicated WSSA was the primary source of technical information (but 25% disagreed with this).
- 96% of respondents felt that WSSA had increased their knowledge of WSUD, so correspondingly, only 4% of respondents felt that WSSA had NOT increased their knowledge of WSUD.
- 54% of respondents believed that if WSSA didn't continue there would be an "adverse impact of urban development on flooding, water quality, urban heat island effects and overall amenity".
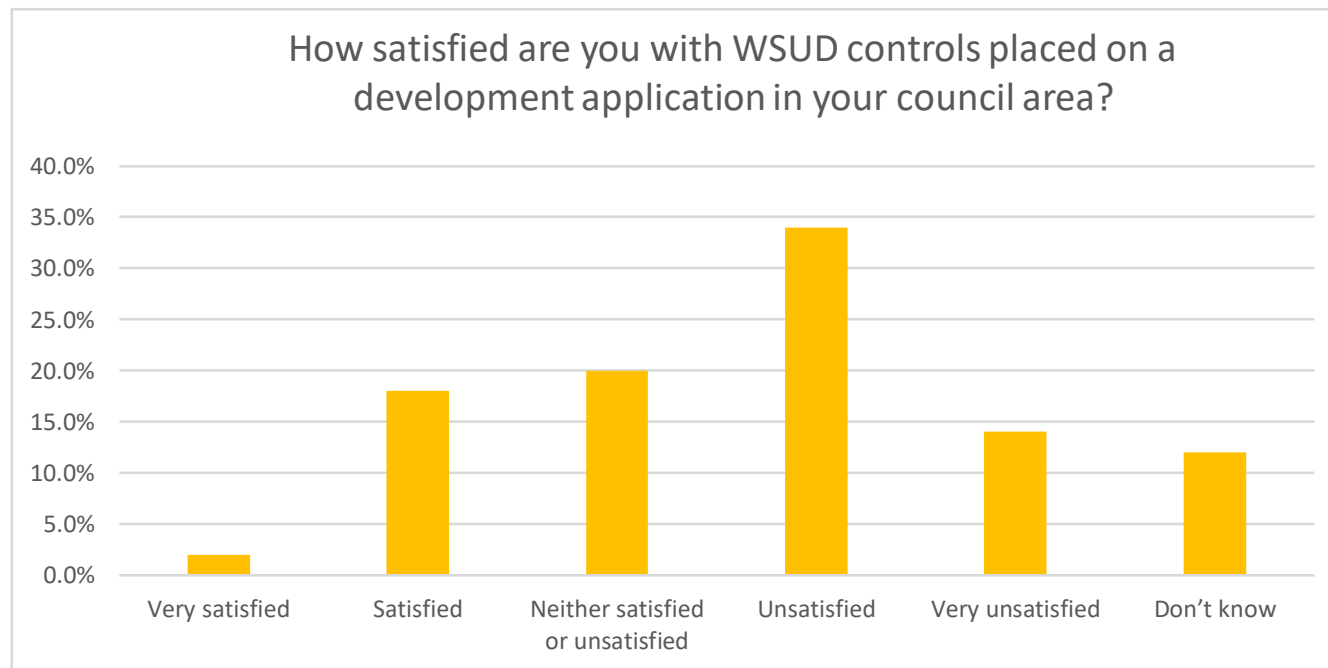


*Figure 5.       Practitioners' satisfaction with planning controls (2017 survey, n = 50)*

While practitioners indicated that they were quite unsatisfied with WSUD controls, they did appreciate that WSSA has been trying to change this. 88% of respondents indicated they agreed or strongly agreed that "Water Sensitive SA has been active in the advocacy for WSUD principles and performance targets should be reflected in planning policy."

## Familiarity with WSSA resources
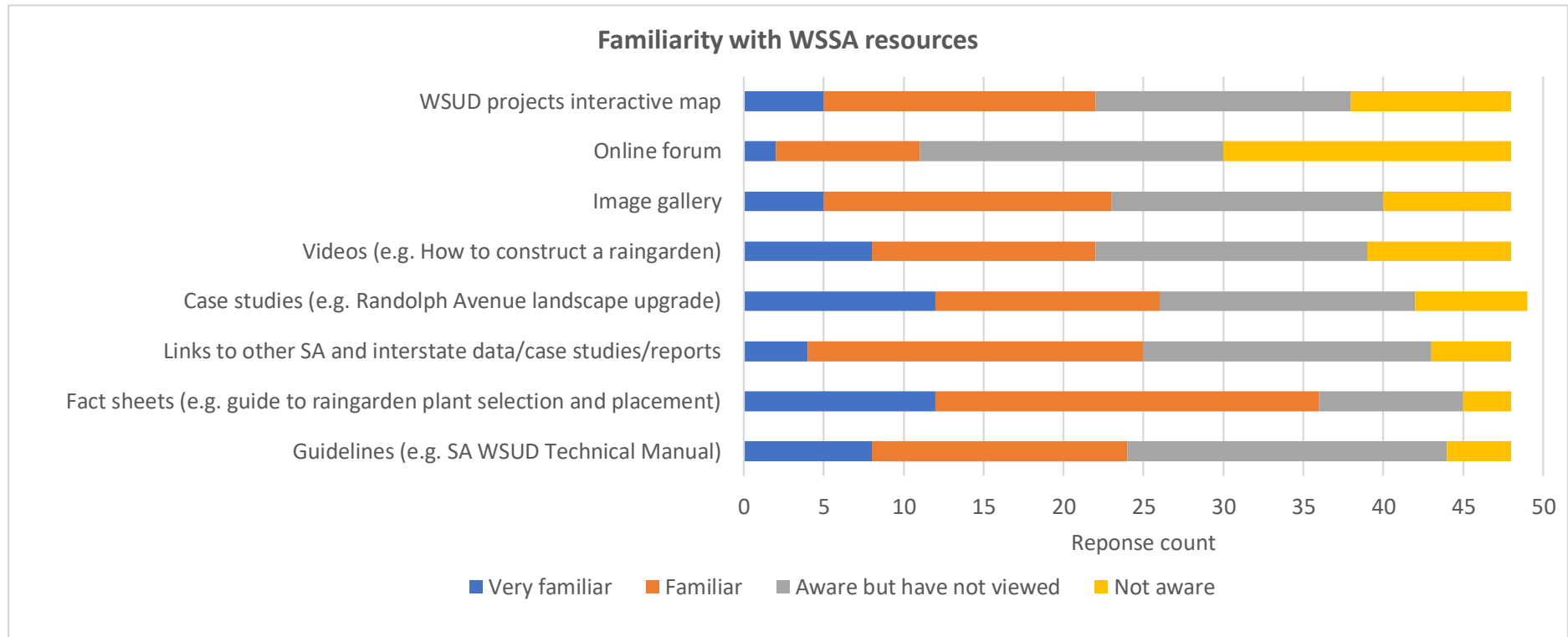


*Figure 6.        Familiarity with WSSA resources*

An interesting point in Figure 6 suggests that apart from Fact Sheets, there are more people that are aware of but haven't used a variety of the available resources, when compared to those that have used them.

*Figure 7.    Frequency of key words when responding to "Name one thing that Water Sensitive SA has helped you with" (Size and darkness of colour indicates more frequent term).*

# 7   Discussion

This section discusses the results and potential implications. Both datasets (the interviews and the online survey) provide a very positive view of the program, but there are some nuances and interesting issues identified within the datasets.

It is worth noting that the Managers and Directors interviewed were clearly more able to critically evaluate the program and the outcomes it has achieved, compared to those that at operational levels. At the operational level, the respondents were keenly aware of the subject matter, but perhaps less able to take a bird's eye view of how the program was performing and its place in achieving change.

## 7.1   Divergence of opinions

There was not a significant amount of divergence of opinion between responses to the one on one interviews, or much divergence between the data from the interviews and online survey. However, there is clearly a mismatch between the expectations of councils and their funding commitments. Some have large expectations and only contribute $5,000 or only offer in-kind contributions. Some even suggest that once their chosen project is finished, they might not continue to fund the program at all.

Many are frustrated with the larger planning/political issue and are expecting Water Sensitive SA to make a difference at this level. At the heart of this, and this is not specific to this program, the lack of appreciation is evident for how professional and industry development programs, such as WSSA, reduce risk and costs to the public sector, improve the performance of assets and benefit the community.

A key issue moving forward for the next three years, assuming WSSA continues, is to consider how to reset the expectations of local councils as funding partners. This could be achieved in a group workshop and discussion on future funding, that clearly matches the amount of funding and the respective expectations, from each organisation or sector.

## 7.2   Purpose and direction

While all recognise and articulate that the purpose of the program is to build capacity and inform a wide audience of the value, benefits, techniques, and guidelines associated with WSUD, there is some variability in how funders respond to the question related to the core purpose of the program. This is a minor but important issue, particularly as they are funding partners, not interested parties, responding to this question. The program can have many purposes, and it was interesting to note that most funding partners didn't view advocacy as the most important, core purpose, but then ultimately criticised the program for a lack of advocacy in achieving change in planning policy.

A phrase used regularly in the interviews was the need to 'maintain momentum'. This is a real concern from the perspective of both funders and practitioners; the disbandment of the program would lose the momentum achieved to date. In the online survey, when asked about the future focus of the project, the following terms were used:

> *"It's great to steer the direction of the events and be able to comment on the website content.  We get direct support back and I get direct line to research."*
>
> *Funding partner.*

Another comment regarding the purpose and direction is the narrow scope of the program on stormwater quality assets. Many stormwater related capacity building programs across Australia have been focused solely on

stormwater quality assets and not the wider range of other WSUD issue and asset types. There is a benefit in being focused, but also a danger in not embracing a wider range of asset types and issues. This issue should be discussed by the Steering Committee going forward. It is a significant issue when considering the brand the program is establishing for itself, as this is difficult to change once it is established. Representatives from SA Water and regional councils were definitely more conscious of the need to broaden the scope.

## 7.3    Changing strategic priorities

All organisations review and update their strategic priorities. It is apparent that, at the moment, the new strategic directions of state and local government (and community) are:

- Resilience
- Climate change
- Affordable housing
- Energy
- Green infrastructure

Water quality is not usually mentioned as an organisational strategic priority (even in 2014 when the program was being established), making it more difficult to justify investment in a capacity building program like WSSA.

> *"We need to link with climate change and the increased rainfall, increased erosion, which all can be dealt with through WSUD. As a city, we need an integrated approach, and I believe WSSA can facilitate that".*
>
> *Funding partner.*

The challenge for WSSA is to evolve the program to a point where a) WSUD programs can be repackaged to be viewed through a new strategic lens, or b) the program itself can be changed to align with new strategic directions.

## 7.4    Governance and resourcing

There were no real issues raised on the issue of governance, which is a very positive sign, indicating the governance structure is functioning and satisfies the needs for the WSSA's strategic direction, independence, and professional delivery of services.

From a resourcing perspective, there is a very clear appreciation of the value that Mellissa Bradley, as Program Manager, is providing to the program. Many acknowledged that Mellissa is doing a lot of hard work, well beyond the time and scope of the project. Many people identified that a key risk to the program is the possibility of the current Program Manager burning out. This can be addressed through the development of a succession plan.

This burnout phenomenon has been observed in other capacity building programs and in internal organisation capacity building, whereby the key champion and advocate only maintains momentum for a few years before resigning.

More support for the Program Manager and increased strategic guidance from the Steering Committee will alleviate this issue, as well as an open discussion regarding a succession plan for the role.

## 7.5    Stakeholder engagement

One of the key issues raised was the lack of engagement (not for want of trying by WSSA) of the building, construction, and development industries. This is verified by the small number of responses to the online survey from

those sectors (only one person out of 50 identified themselves as a contractor).

Another interesting observation raised by the funders was lack of success in engaging at the executive and political level. This is a significant issue that relates directly to the ability of the program to influence regulation and planning policy change.

> *All councils are doing raingardens differently. All councils doing development applications differently. It's about people as much as it's about content.*
>
> *Funding partner.*

## 7.6   WSUD Policy

The key issue from a policy perspective is the desire from practitioners for the state government to introduce controls to mandate WSUD for all new urban developments. While commercial and industrial land wasn't explicitly discussed, it is assumed that practitioners also expect controls on this redevelopment as well.

This is a large advocacy project, and one that has been active for several years or perhaps even decades. There was a somewhat unrealistic expectation that WSSA could create this change in the first three years and also perhaps a lack of appreciation of the wide range of issues that the state government (the officers and the elected representatives) would be considering in adopting a regulatory change such as this. These external issues include political cycles, economic cycles, a focus on how WSUD planning controls would impact on housing affordability (which is contestable and research shows, from a whole economy perspective, it is beneficial).

While virtually all funding partners would like to see this issue progressed, in most instances they didn't show much appreciation that it may mean a slow down or stop to other WSSA projects.

Other policy issues raised and worthy of consideration for WSSA advocacy were the trigger values for WSUD (e.g. how many additional square metres of imperviousness of new development before controls are placed on a development?), how to ensure consistency of design between councils, and, additionally, how to bring about a systematic change to the way WSUD maintenance will be handled in the future.

> *We haven't pushed that hard on the local policy front – associated with the lack of progress at the State Government level.*
>
> *Funding partner.*

## 7.7   Research adoption pathways

There was nothing significant raised under the issue of adoption pathways (in either dataset), other than the fact that WSSA is now a good avenue to ask for, receive and tailor research.

## 7.8   Training and community of practice

The delivery of training was seen as one of the significant achievements of WSSA, and importantly was seen to be responsive to the needs of the practitioner.

In terms of future training, the top five areas identified in the online survey were:

- Preparing a business case for WSUD projects (including cost–benefit analysis)
- Maintenance of WSUD assets
- Construction of WSUD assets

- Design of streetscale raingardens
- WSUD policy interpretation for development

From a community of practice perspective, a key success of the program has also been the networking that has been organised and come about through various activities (e.g. seminars, workshops, site tours, and training events). Based on the practitioner support, this element of the program should continue. Figure 7 reinforces this as the word 'networking' was the most used term when practitioners were asked about one things the program has helped the with.

> *We didn't really have any training prior to WSSA. Now we have that and there is a changing acceptance of paying for full day courses. Good to have a degree of independence and the program has become the go to group for training and knowledge.*
>
> *Funding partner.*

## 7.9 Technical Resources

There is quite an interest, and general satisfaction, with the technical resources the program has delivered to date. No one raised any concerns about the technical detail of any of the work that WSSA has been involved in.

The next step with the technical resources is to focus on the adoption and communication of these tools, to ensure that the resources are being used and understood.

It was interesting to observe that many people hadn't accessed the online mapping portal and most people hadn't heard of the online forums. It may be debatable as to their use in delivering technical resources, but it does indicate that a more labour intensive approach (i.e. workshops and one on one meetings) is required to tackle and deliver technical resources.

An emerging technical issue is how to assess and then design for urban heat issues (or more accurately microclimate issues). This technical issue also links to the broader energy discussion in South Australia, as passive cooling is one option to reduce energy consumption, but it requires a good understanding of how effective WSUD and green infrastructure are in this regard.

Also, there is an expectation, probably unrealistic, that all of the Australia wide research can and should be adapted to South Australia conditions, that the program will have to continually address with each resource that is released.

## 7.10 Communications

WSSA is clearly working hard on engaging with practitioners, organisations, other industry groups, and keeping an up to date website. Respondents were very satisfied with this, and it is paying dividends. 89% of respondents to the online survey preferred emails and newsletters.

The next step to improve communications could be to take a more integrated approach, so that newsletters, social media, and website updates are delivered in sync.

A review of communications should also be conducted in the context of (a) engaging at the executive level and (b) engaging with developers and the building industry.

## 7.11 Priority projects

Priority projects were mentioned a lot by the funders, suggesting high awareness and interest in the specific projects, but also that they have narrow view of the value of WSSA.

The fact that some funding partners felt that their funding support may change once their "pet project" was finished, was concerning.

The online tool is clearly the highest profile priority project, and is attracting a lot of interest. Some were concerned about the slow rate of progress in finalising the priority projects, but no specific issues or reasons were raised in the context of slow delivery. Again, it should be noted that these required additional funds, which have an influence over WSSA's ability to progress them.

Priority projects are important as they help a group of stakeholders (and funders) rally around a problem that they feel the industry needs to address, and get involved in producing a product (like guidelines, online tool, case study, demonstration project).

## 7.12 Program logic

Another deeper issue that virtually no one (apart from one comment in the online survey) questioned or raised was the underlying principle and theory of capacity building, that the whole WSSA program is based on.

This is important as all good programs (not just capacity building programs) need to continually question their 'program logic' (see https://www.lga.sa.gov.au/page.aspx?u=2297).

This review and consideration of program logic is relevant as the original business case (Alluvium and Kate Black Consulting, 2012) suggested that there was a real policy, economic, social, and environmental need for a program and that a capacity building program that broadly focused on individual and organisations and state wide advocacy, would results in better WSUD in South Australia.

In developing a new business plan for the next three years, it would be appropriate to ensure that the fundamental principles and program logic of WSSA are still current and the best way forward for the program.

## 7.13 Measuring impact

Finally, the long-term success of the program will come down to how WSSA can demonstrate the impact on the industry's capacity, and impact on urban development and environmental values of the whole region (urban waterways and the Gulf St Vincent).

An interesting disconnect currently exists between the satisfaction and support of the program, and the ability of both funders and practitioners to articulate what the real impact WSSA has had to date. Most referred to 'building momentum' and 'more people engaged with WSUD', but no one referred to anything more tangible (in terms of industry capacity or on ground outcomes and environmental benefits).

This is mostly explained by the fact that the program is only just beginning. The impact to date has been simply the establishment of a central portal and platform, as well as the delivery of several training events and seminars. This is valuable, but WSSA will need to demonstrate more value in the coming phases.

In terms of the impact of the training events and seminars that have been delivered by Water Sensitive SA, more detailed data has been collected through the events, and reported in the "Business Plan Annual Review 2015-16". This does demonstrate an impact of the program, but interestingly isn't as widely acknowledged by the comments made by the funding partners. See Appendix B for a summary of the data that Water Sensitive SA has collected and links to determining the impact of the program in building up knowledge and delivering better quality WSUD assets.

In the long term, being able to demonstrate impact and achievements will be critical in further funding.

In moving ahead with a program, it is worth thinking of what the program is delivering and how in the long term it will be possible to capture the impact of the program.

Some options are:

- Number of assets across the whole region
- Catchment area now treated by WSUD
- Number of organisations with WSUD assets
- Number of organisations with WSUD policy
- Number of organisations with WSUD budgets
- Performance of assets
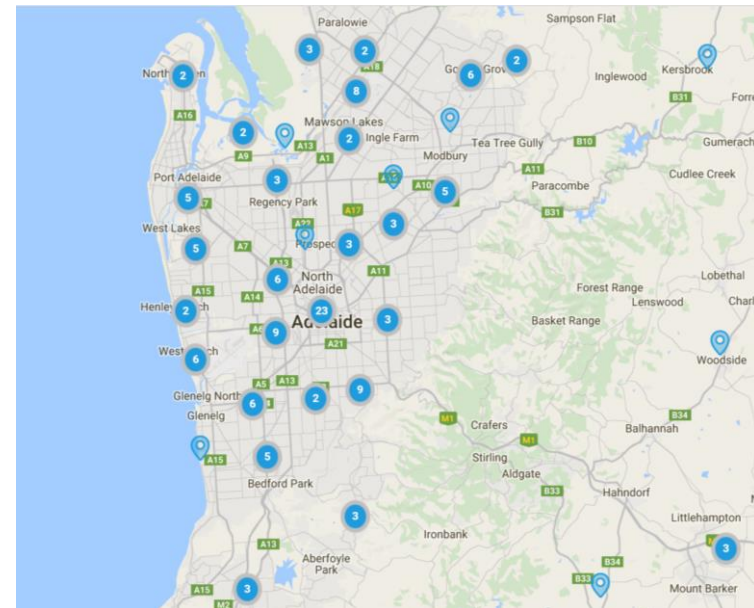- Endorsement of policies / business plans by key bodies



*Figure 8.        Interactive map of WSUD assets (Source: Water Sensitive SA)*

# 8 Measures of success & perceptions of progress

The Water Sensitive SA program has six measures of success. Using the data collected in this project, predominantly from interviews with funding partners, the following assessments have been made against the six measures.

*Table 1.Review of measures of success*

| No. | Measure of success | Comment |
|---|---|---|
| 1 | WSUD targets requiring clarification are clarified by June 2016 or research implemented to confidently allow adoption of defensible mandatory requirements | Research has been completed in this area, but there didn't seem to be a wide discussion or acceptance of the clarity of the targets. |
| 2 | WSUD policy framework for adoption was agreed by June 2016 | Relatively little was said about this measure of success, so no assessment is made of progress against this measure of success |
| 3 | Metropolitan and Greater Adelaide Councils have commenced development plan amendments to incorporate WSUD targets within their development plans by June 2017 | Several councils seem to have made progress in considering and adopting development plan amendments. |
| 4 | A close alliance has been established with the development industry (represented by HIA/UDIA) such that the benefits of WSUD | It seems that a lot of effort has been made to engage with the development industry, but there is still more work to do, and funding partners did not |
|   | 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 | mention any formal alliances with HIA and UDIA. |
| 5 | Council/private practice – planners, landscape architects and engineers report an increased practical understanding of WSUD principles and practical application, relative to the baseline awareness and knowledge levels established by Alluvium Consulting and Kate Black Consulting (2012) | The program has reached more people and there seems to be a shift in knowledge and awareness, but there is also a view from funding partners that there is a lot further to go with reaching practitioners. |
| 6 | The program has secured funding from a combination of government (local, state and federal) and industry sources to ensure sustainability for another three to five years and beyond | There is a very positive view of future contributions and funding commitment, so this is mostly likely to be met. |

The comments in the table above were made based on an interpretation of the data obtained in this project. It should be noted that many of the funding partners and practitioners may not be fully aware of the status of all of these measures. This highlights a need to identify the method by which program partners prefer to receive communications on matters relating to these key issues.

The Annual Review Report to be released by Water Sensitive SA in June 2017 will provide further evidence of progress against these targets, and the comments contained in this report should be noted as not a full review of these measures, but perceptions only.

# 9 Recommendations

Based on the data and analysis in this report, the recommendation is for the Water Sensitive SA program to continue. The specific recommendations are described below.

Clearly the funders and practitioners believe WSSA should continue. The recommendations here refer to changes or enhancements to WSSA's purpose, program, benefits and delivery. These recommendations are written for the purposes of the current Steering Committee, and to assist the program to obtain ongoing and increased funding.

## 9.1 Strategic direction

1. **Review program logic.** Review the program logic of WSSA. It is recommended the core principles and assumptions, in which the program is based, be reviewed to ensure the projects, tasks and events delivered result in achieving the short and long term goals the Steering Committee has approved. The product of this work could then be used to engage with all funders, to be clarify what their expectations are, what the respective funding contributions are, and to realistically evaluate what will be achieved with the current level of resourcing.

2. **Prospectus and diversified future funding.** Secure funding for the next three years. It is critical that in principle, and then contractual, commitments are obtained from major funders, to continue the program for a further three years. Develop a prospectus to assist in obtaining diversified funding partners. There is a need to continue to

seek new funding partners, due to the uncertainty of funding the existing funding partners have, particularly local government. A short prospectus should be developed to enable a clear and concise picture of the value of WSSA, and used in discussions with a variety of other industry groups, companies, and government agencies. This prospectus could be written in a way to also encompasses emerging issues such as urban heat, green infrastructure, and climate change. The purpose of this recommendation is to help evolve and realign the program to the current political and technical issues.

3. **Program clarity.** It is recommended that a review and realignment of the delivery of the program by undertaken. This can be done after the above two recommendations are complete, and should clearly align to the agreed purpose and objectives. The program themes could be grouped under three key strategic areas: advocacy for regulatory change, networking, and practitioner knowledge and skills. With so many different projects, expectations, and funding parties, it is recommended the program should have clearer progress outcomes under the three key themes. The Steering Committee should provide direction on time allocation across the three themes (i.e. 50% of WSSA time to be spent delivering knowledge based tasks), prioritising all projects and tasks within each of the themes.

4. **Emerging issues.** Consider how emerging issues apply to WSSA, such as urban heat island, climate change and WSUD maintenance. WSSA should consider the need, opportunity, and cost of including these other issues as part of the delivery of the WSSA program. Noting that all changes usually come with an increase in resourcing, some minor modifications to projects and training may result in larger benefits to practitioners, by understanding in more detail how WSUD is relevant and helps address these emerging issues.

## 9.2 Advocacy

5. **Planning controls advocacy.** It is recommended that to move ahead with advocacy for state government planning controls, three tasks be completed. Firstly, a stocktake be undertaken of the work to date, completed by WSSA, in advocating for state government planning controls. Secondly, hold a workshop to document all stakeholders' expectations. Thirdly, develop a clear set of options (to ensure there is a set of smaller achievements articulated, rather than an 'all or nothing' option) for regulatory change.

6. **Political and executive engagement.** It is recommended that the Steering Committee consider how to improve the program's ability to engage with and build trust at the executive and political level. This may be possible through existing partners and empowering some of the directors and managers who are familiar with the program, to help spread the message. This is important in the context of influencing regulatory change.

## 9.3 Networks

7. **Strategic alliances.** It is recommended that a specific focus on creating strategic alliances with the developer, building and construction industry groups be undertaken. These stakeholders are very important in achieving a culture change and an on-ground change, so development of formal alliances (as has been achieved with the Planning Institute of Australia South Australian branch), would be recommended.

## 9.4 Operational

8. **Complete priority projects.** It is recommended the six priority projects be completed as soon as is practicable. Partners are interested and expecting these projects to be completed, and as articulated in the Business Plan (2016), plenty has already been achieved with these projects. By finalising them, a tangible return on investment will be realised.

9. **Communications.** Streamline and increase reach of communications. It is recommended that WSSA liaise with communications experts to determine how to reduce the work load associated with marketing and communications, while increasing the reach of the program.

10. **Succession planning**. It is recommended that a discussion be had with the Program Manager and Steering Committee in regard to how a sustainable work load can be maintained, and the specific options for a succession plan regarding the Program Manager role in the long term.

The final word should go to an open comment in the online survey from a practitioner:

*"If we want to position Adelaide as a truly green city within the driest state, in the driest continent, amid the uncertainty and threat of rising temperatures from climate change, then we can't afford to not continue to invest and support good WSUD"*

# 10 References

Alluvium and Kate Black Consulting, 2012. Business case for a water sensitive urban design capacity-building program for South Australia

LGA, 2017. Program Logic – what is it? https://www.lga.sa.gov.au/page.aspx?u=2297

South Australian Government, 2009. Water for Good.

# 11 Appendix A – List of Funding Partners interviewed

The list of people interviewed for this project were:

- Brenton Curtis, City of Unley
- Chong Khoo, Rural City of Murray Bridge
- Con Theodoroulakes and Glynn Ricketts, City of Marion
- Dameon Roy, City of Salisbury
- Greg Ingleton, SA Water
- Greg Pattinson, City of Playford
- James Kelly, City of Tea Tree Gully
- Jenni McGlennon and Andrew Thomas, City of Onkaparinga
- Murali K.G., City of Charles Sturt
- Nathan Wicker, City of Port Adelaide Enfield.
- Ruth Ward, SA Environment Protection Authority
- Sam Phillips, DEWNR, Natural Resources Adelaide and Mount Lofty Ranges
- Simon Thompson, Local Government Association
- Martin Allen, Department of Environment, Water and Natural Resources

- Andrew King, Stormwater SA
- Tim Johnson and Russell King, City of Mitcham
- Wendy Hoare, City of Burnside

# 12 Appendix B – Feedback on Training and Seminars

Water Sensitive SA collect data from participants on their feedback of the training and seminars they attend.

This data is relevant in understanding how the industry is becoming more knowledge, and the impact that the program is having.

The data shown in the table below was supplied by Water Sensitive SA, within the document "Business Plan Annual Review 2015-16".

*Table 2.Feedback on training and seminars (Source: Water Sensitive SA, 2016).*

| 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 | | | | | | | | |
| 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[1] | | | | | | | | | |

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[1] 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 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 a good standard or higher. | 80% | - | 100% | 95% | 100% | 100% | No data | 89% | 100% | 91% | 88% - average over 7 presenter |
| 1.11. | % of course attendees reporting the course/seminar was relevant to their current role. | 70% | | 100% | 90% | 83% | 100% | Not relevant | | | 100% | 83% |