



**Alternative water resources –
contributions to Adelaide's
water security**

Mellissa Bradley, Program Manager

Murray Darling Association – Region 7
22 February 2018



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Water Sensitive SA - established to build the capacity of all organisations with a role in the planning, design, approval, construction or maintenance of new developments and infrastructure to implement best practice water sensitive urban design (WSUD)

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What we do



A hub for WSUD activity and learning in South Australia:

- 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.



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Water Sensitive SA Program Partners



Other project partners

Stormwater Management Authority



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Stormwater management & re-use in Greater Adelaide



- Current initiatives
 - Managed aquifer recharge schemes
 - Wastewater re-use
 - Infiltration systems
 - Biofilters
- Our priority projects
- Opportunities for the future



Oaklands Wetland, City of Marion

Image: Michael Mullan

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Managed aquifer recharge (MAR)

Managed Aquifer Recharge (MAR) Schemes

58 constructed MAR harvesting sites (SA), 2017

Within Adelaide only (not wider SA)

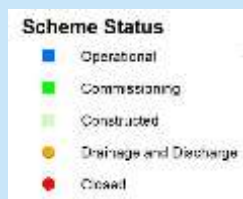
- 'as constructed' harvest capacity is approximately 16 GL per annum
- in 2016-17 approximately 8.5 GL was harvested.

For more information: Kretschmer, P, 2017, [Managed Aquifer Recharge Schemes in the Adelaide Metropolitan Area](#), DEWNR Technical report 2017/22, Government of South Australia, Department of Environment, Water and Natural Resources, Adelaide



Distribution network

750 km of alternative water distribution pipes



Recycled wastewater

Recycled wastewater re-use



- Reuse 33% of recycled water (~ 35GL/yr of treated effluent)
- Main focus has been on the big things



Options for the future

- Integration of non potable sources
- Supplying water for both small and large scale reuse
- Expand distribution network



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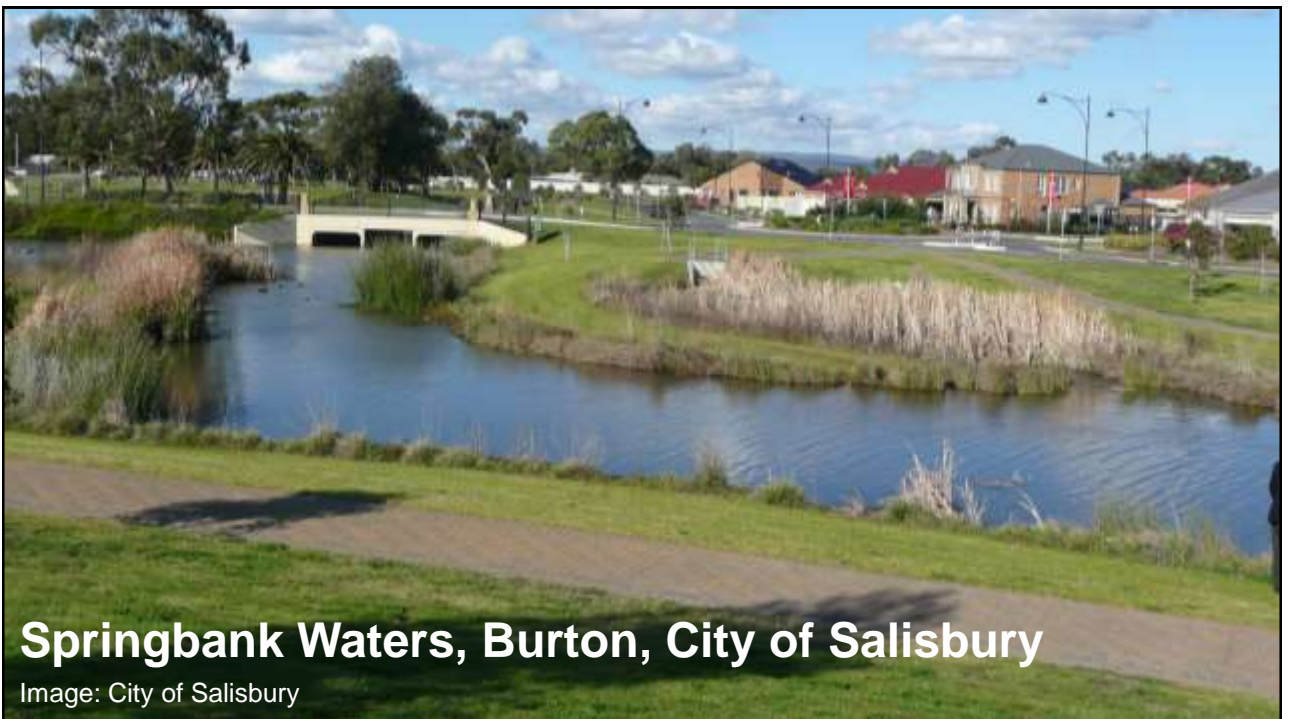
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Catchment-scale WSUD systems











Torrens Linear Park wetland & MAR City Tea Tree Gully

Image: City of Tea Tree Gully

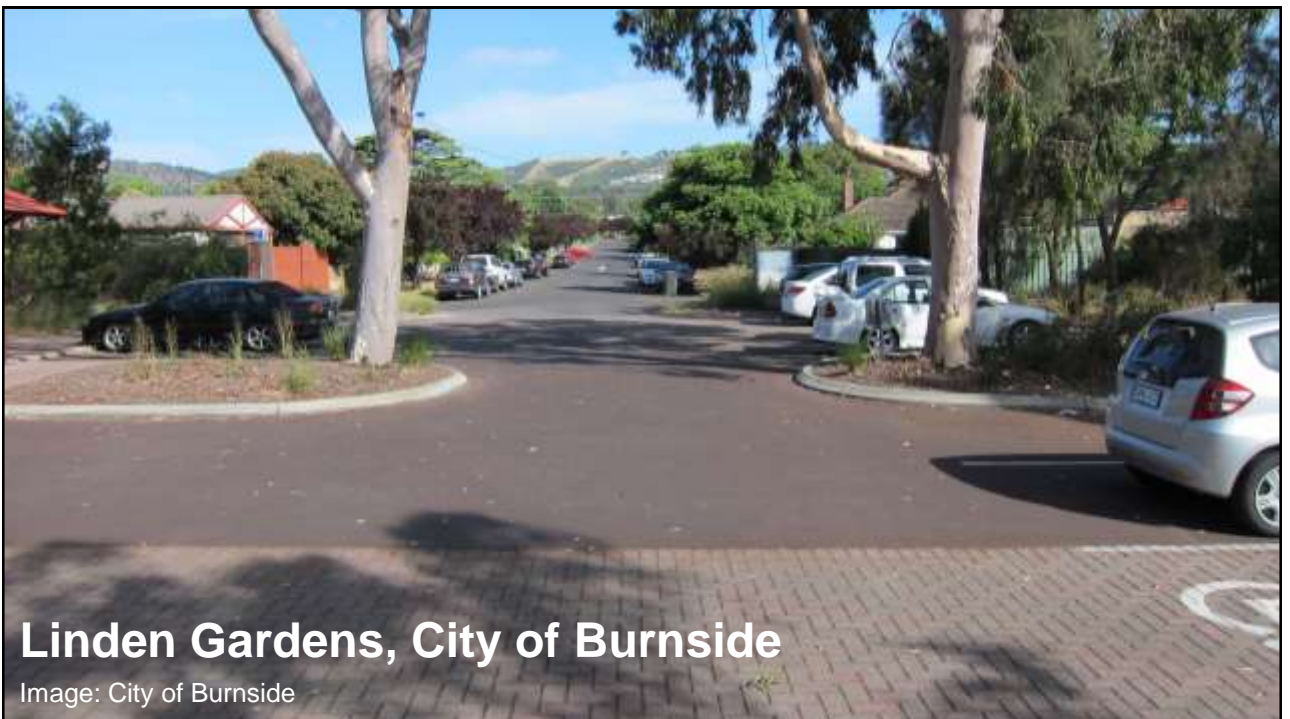
Streetscale WSUD systems





At source harvesting and re-use - Infiltration systems







Burnside B-Pods and guerrilla gardening



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Development



Lightview, City of Port Adelaide Enfield

Image: Water Sensitive SA



Lightview, City of Port Adelaide Enfield

Image: Water Sensitive SA





Lightsview, City of Port Adelaide Enfield

Image: Water Sensitive SA





Allotment Scale

We are getting this....



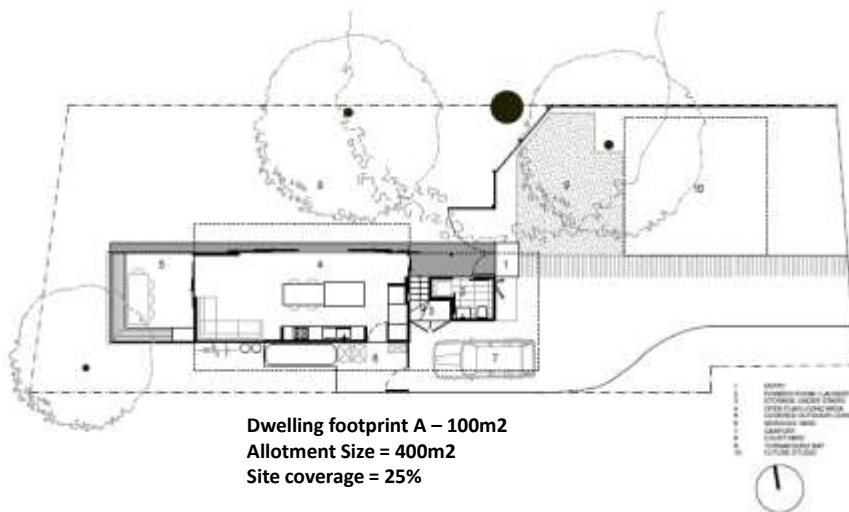
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The 100m² house

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Source: Levesque & Derrick Architects, lada.com.au

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Source: Levesque & Derrick Architects, lada.com.au



5,000L rainwater tank for:

- Toilet flushing
- Laundry
- garden

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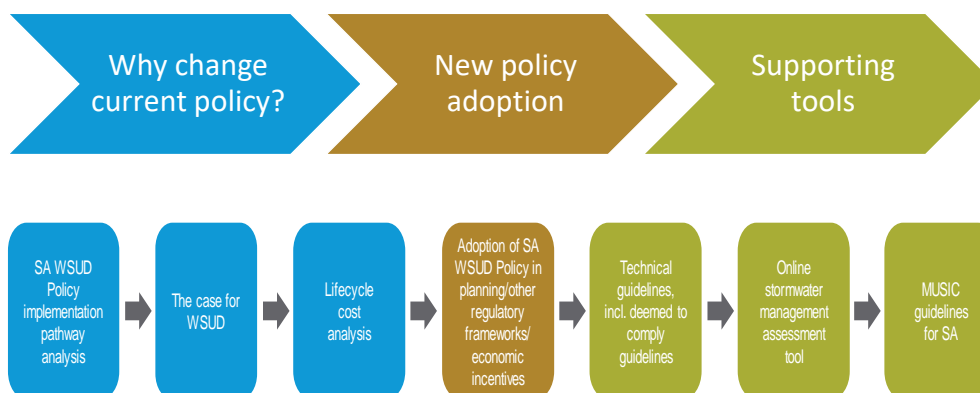
Source: Levesque & Derrick Architects, lada.com.au



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Water Sensitive SA



Priority Project (PP)	Due Date	Funding partners
PP1 – Cost-benefit analysis framework and tool for WSUD and green infrastructure	Dec 2018 (Tool) Dec 2019 (SA case study)	CRC Water Sensitive Cities
PP2 – Lifecycle cost analysis	Dec 2018	CRC for Water Sensitive Cities
PP3 –WSUD Guideline for small-scale	April 2018	Stormwater Management Authority
PP4 – Online stormwater assessment tool for small-scale development.	April 2018	Stormwater Management Authority
PP5 – SA Model for urban stormwater improvement conceptualisation (MUSIC) Guidelines	Yet to be funded	
PP6 – Review of WSUD Technical Guidelines	Yet to be funded	
PP7 – Green infrastructure and WSUD planning policy review.	July 2018	DEWNR , City of West Torrens

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Upcoming training

13 **Permeable paving & Infiltration systems**
MAR 18 13 MARCH - 9:30am to 5:00pm

11 **Water Sensitive SA Business Partners workshop**
APR 18 11 APRIL - 9:00am to 5:00pm

Industry events

WIA: Smart Water Summit 2018
 22 MARCH - 8:30am to 23 MARCH - 4:00pm

AWA: OzWater'18
 08 MAY - 8:00am to 10 MAY - 5:00pm

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Further reading



A Fresh History of the Lakes:
Wellington to the Murray Mouth,
1800s to 1935.

By Terry Sim and Kerri Muller