

# Business Plan 2018/2019

Western Regional Advisory Panel  
December 2018



CRC for  
Water Sensitive Cities

## About the Western Regional Advisory Panel

Regional Advisory Panels (RAPs) are a key component of the CRC for Water Sensitive Cities' (CRCWSC) management structure. These Panels enable state-level coordination of end-user priorities and involvement in CRCWSC research activities, as well as tailoring of capacity building activities.

The Western Regional Advisory Panel (WRAP) is composed of officers from government, councils, water utilities, developers, consulting organisations and capacity building organisations who are invested in transforming their city into a water sensitive city. Many of the WRAP members are also participants or stakeholders of the CRCWSC. The purpose and role of the Panel is outlined in its Terms of Reference which states it will act as an advocate and steering committee for CRCWSC programs to advance the transition to water sensitive cities and towns in their region. They are responsible for providing strategic guidance to the CRCWSC Regional Managers, Executive and Board to ensure that the CRCWSC program activities address the priorities of regional CRCWSC Participants and stakeholders to enable water sensitive city outcomes.

The WRAP is connected to a network of other groups, both within and outside of the CRCWSC who are pursuing a water sensitive Perth. These groups are illustrated on the diagram below:

## WA WSCs stakeholder groups

State government committees:  
 Waterwise Perth Steering Committees  
 • DGs group DWER, DQC, DPLH, WC, LC & DLGSC  
 • Working group

Other External committees:  
 UDIA Urban water committee  
 • subcommittees on alternative supplies  
 • subcommittees on approvals  
 Swan NRM  
 Sustainable Health Community of Practice  
 CAUL Indigenous Advisory Group

New Water Ways Board – WA’s capacity building program for water sensitive cities

Water Sensitive Transition Network WSTN

- WSTN subcommittee - Community Engagement & Communication
- WSTN subcommittee - Research
- WSTN subcommittee - Policy & Governance
- WSTN subcommittee - Technical Capacity and Partnerships

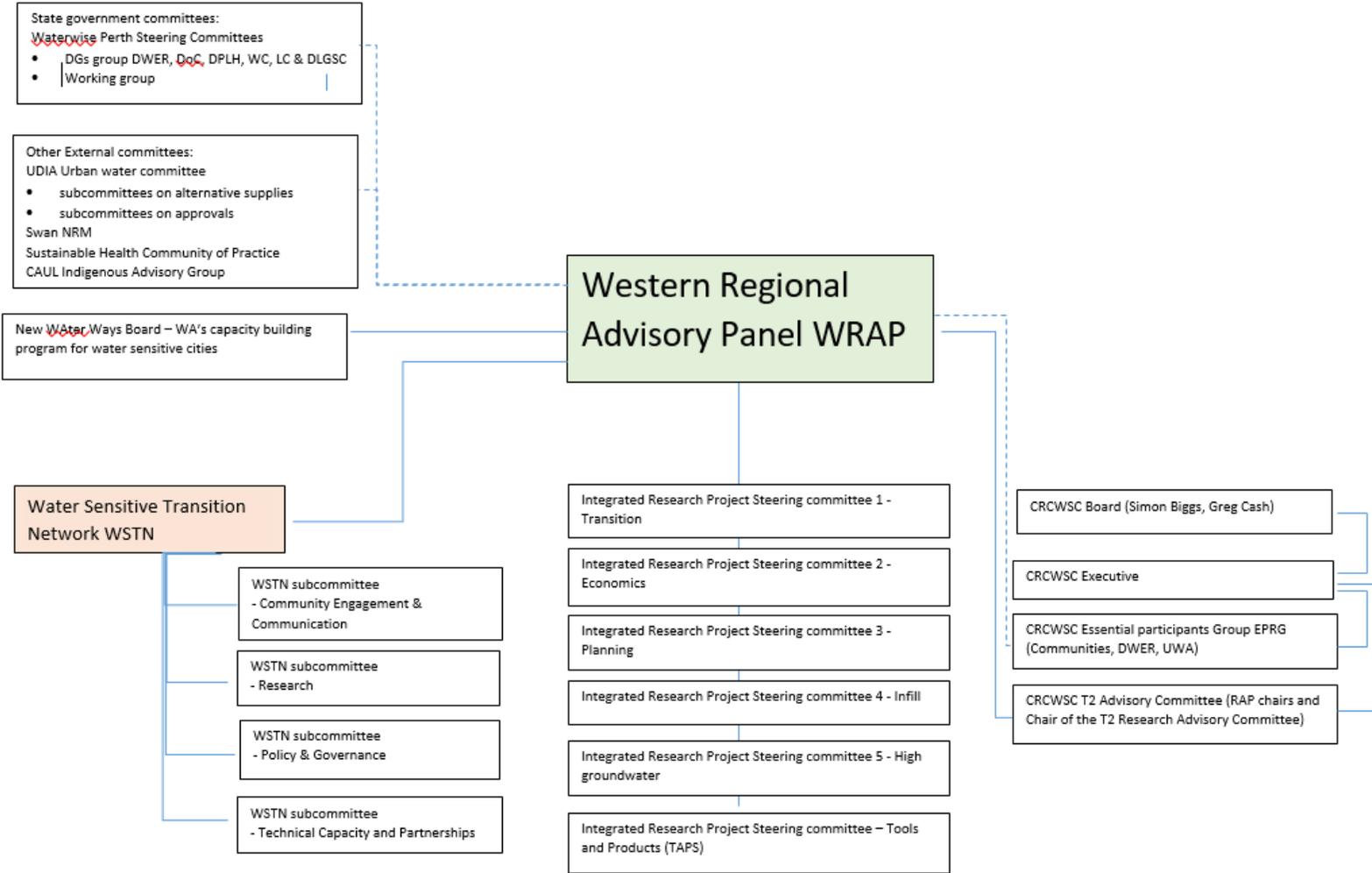
## WA CRCWSC Committees

Western Regional Advisory Panel WRAP

- Integrated Research Project Steering committee 1 - Transition
- Integrated Research Project Steering committee 2 - Economics
- Integrated Research Project Steering committee 3 - Planning
- Integrated Research Project Steering committee 4 - Infill
- Integrated Research Project Steering committee 5 - High groundwater
- Integrated Research Project Steering committee – Tools and Products (TAPS)

## National CRCWSC committees

- CRCWSC Board (Simon Biggs, Greg Cash)
- CRCWSC Executive
- CRCWSC Essential participants Group EPRG (Communities, DWER, UWA)
- CRCWSC T2 Advisory Committee (RAP chairs and Chair of the T2 Research Advisory Committee)



## Goal of this business plan

In 2018/19, the emphasis is on the delivery of Tranche 2 Integrated research programs and development of commercial products including the Tools and Products (TAPs), WSC Index, Economic tools, Transition Dynamics Framework and Synthesis workshops. At the same time the Water Sensitive Transition Network (WSTN) is identifying priority actions to help Perth transition to a water sensitive city whilst supporting key stakeholders in their organisational goals. This business plan is for the WRAP only. Key objectives for the WRAP include:

- improve access to knowledge from Tranche 1 and Tranche 2 generated to date;
- improve pathways for the CRCWSC research to influence 'on-ground' projects;
- demonstrate end-user value from the investment in research;

In addition, through the WSTN the WRAP aspires to the following objectives:

- improve governance, regulatory, policy and delivery frameworks in WA;
- establish research collaborations that endure beyond the life of the CRCWSC
- build technical capacity and develop partnerships with stakeholders to deliver a water sensitive city
- engage the broader public so that they demand a water sensitive city of their leaders
- mainstream water sensitive practices across multiple scales.

## Relationship to other plans

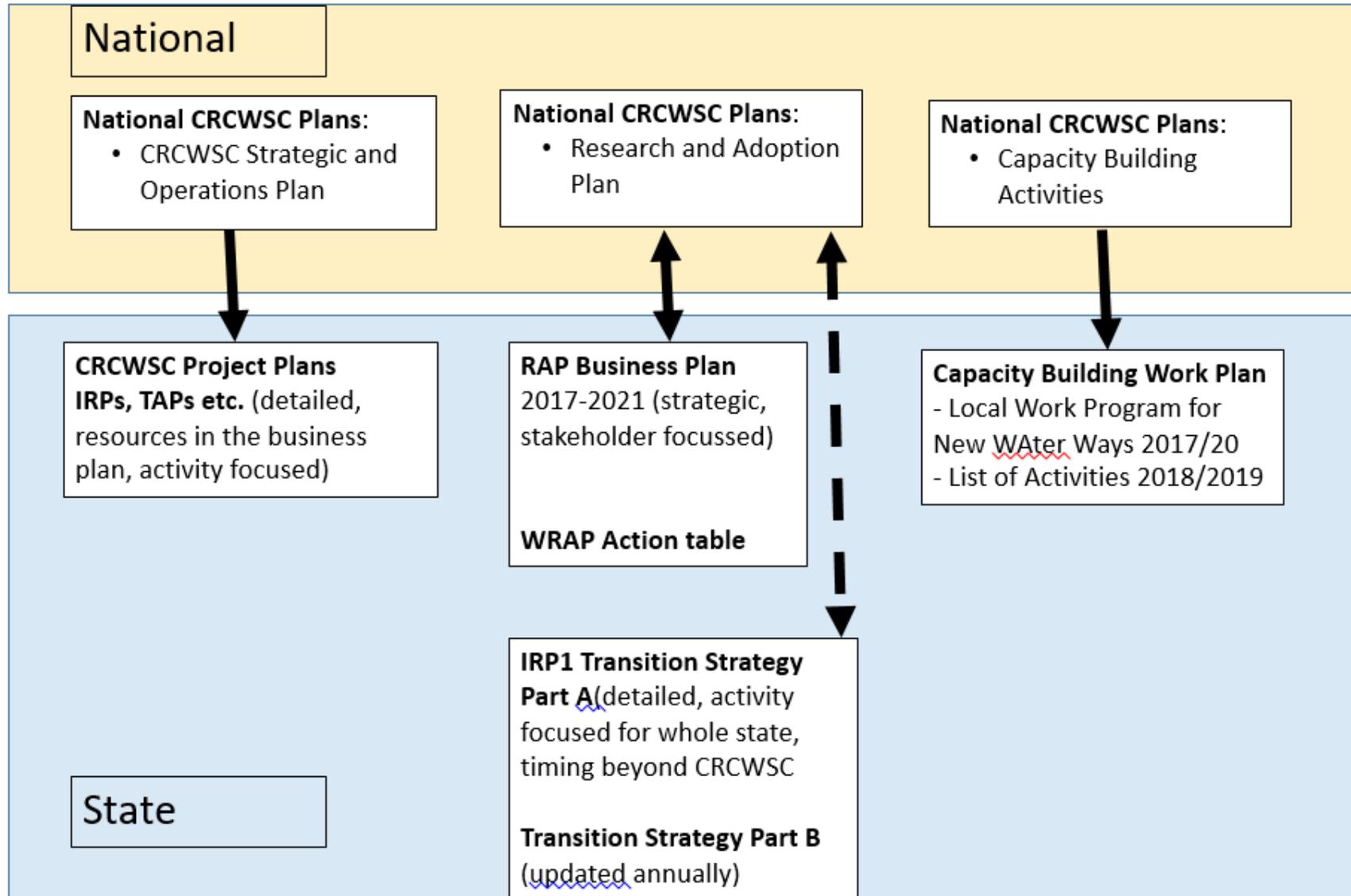
The Plan articulates what the partnership between the CRCWSC and its end-user organisations aspires to deliver in WA, provided adequate resources are identified. It achieves this by providing a set of outcomes (success measures) and outlining high-level actions that will deliver them. This plan will guide the efforts of the WRAP, which in turn provides advice to the CRCWSC on research and adoption.

The plan will be guided by National plans:

- CRCWSC Strategic and Operations Plans.
- Research and Adoption Portfolio Action Plan (2017-2021) - a national scale plan including actions and performance targets.

This Business Plan will also provide a high level strategic framework linking other CRCWSC planning documents developed for WA as illustrated in Figure below, including:

- The WA Research and Adoption Plan (February 2016), which provides a detailed list of activities and outcomes that the WRAP identified as priorities to enable Perth's transition to a water sensitive city. This has been superseded by The Tranche 2 research plans and this Business Plan.
- Vision and Transition Strategy for a Water Sensitive Greater Perth Part A (CRCWSC 2018) and Implementation Plan Part B (2019) including priority action lists developed by the Transition Network four subcommittees: Policy and Governance (TNSC-PG), Community Engagement & Communications (TNSC-CE), Research (TNSC-R), Technical Capacity and Partnerships (TNSC-CP).
- Western Region Capacity Building Work Plan and Activities 2017-2021. This includes:
  - CRCWSC Communications and Adoption in WA – Local Work Program for New Water Ways 2018/19;
  - List of Communications and Adoption Activities for 18/19;



# Resources available to deliver the business plan

The proposed activities of the CRCWSC in WA will be delivered through a mix of:

- CRCWSC Tranche 2 activities and services which include integrated research projects, tools and products, regional projects and the WA Transition Strategy and Implementation Plan;
- A CRCWSC budget for capacity building activities in the Western region;
- Commercial products including fee-for-service CRCWSC activities (e.g. “Ideas for” workshops, application of the Transition Dynamics Framework, WSC Index benchmarking workshops, etc.);
- CRCWSC staff including the WA Regional Manager;
- In-kind contributions and participation or partnerships with end-user organisations.

In addition there are resources within the Transition Network and their subcommittees.

### **Integrated Research Projects and Regional Projects**

The CRCWSC is delivering its 2016 - 2021 research program through 5 Integrated Research Projects (IRP1- IRP5) and a Tools and Products (TAPs) project. Each project has a Project Steering Committee comprised of CRCWSC member organisations. The Projects include a mix of case study projects nominated by the Regional Advisory Panels. WA case studies within the IRPs potentially include:

- Perth Transition Strategy
- Belle View Estate wetlands
- Subiaco strategic resource precinct
- Knutsford Museum site
- Brabham development

In WA we also have at least 5 Regional Research Projects:

- REG 6-1 Eric Singleton Wetland Data Analysis
- REG6-2 Protection of urban waterways: Eric Singleton Wetland and Heron Park sediment discharge
- REG6-3 Green walls in Mediterranean climates: improved liveability and lower water and energy use
- REG6-4 Hydrological monitoring, water balance and hydrological performance Anvil way living stream and Wharf street wetlands
- REG6-6 Hydrological nutrient modelling of Swan Canning.

## Capacity Building, Knowledge Brokering and Adoption Budget

Under the Knowledge and Translation (KATs) program there is financial support for participant states to undertake capacity building with their local stakeholders. The WRAP has engaged New Water Ways (NWW) to deliver capacity building and research adoption activities and products. NWW was formed in 2006 and incorporated in 2014 with the aim to build the water sensitive urban design capacity of government and industry. Activities are guided by the NWW Board agencies, who also contribute funding and in-kind resources. In the 2018/2019 Financial Year, the CRCWSC through the WRAP will provide \$40,000 to NWW to undertake additional capacity building on its behalf. The activities delivered by NWW on behalf of the CRCWSC are consistent with the *CRCWSC Communications and Adoption in WA – Local Work Program for New Water Ways 2018/19* and endorsed by the WRAP.

There is also funding at the national level for capacity building activities which may include an exemplar development roadshow or nationally relevant activities.

## Targeted services such as the WSC Index and Research Synthesis projects

The CRCWSC offers a range of services to support the implementation of integrated water management. These services are offered to benefit individual organisations (whether CRCWSC members or external organisations) to draw upon the research and adoption activities developed within the CRCWSC. Examples of projects delivered to date include:

- **Benchmarking** - the water sensitivity of cities and municipalities using the WSC Index Tool;
- **Visioning and transition strategy** – creating stakeholder alignment and an implementation strategy around the agreed vision from the 'Shaping Perth as a water sensitive city' report (project A4.2), as well as facilitating local governments and/or regional cities/towns through a transition planning process (IRP1);
- **Research Synthesis** projects – co-design, with researchers, water sensitive city designs and solutions for specific locations;
- **Investment Framework For Economics of Water-Sensitive Cities (INFEWS)** – non market valuation tool and the Cost Benefit Analysis tool
- **Demonstration projects** – e.g. Detailed case studies and short case studies published on the CRCWSC's website
- **Consulting projects** – for instance facilitating workshops, where CRCWSC may be the lead consultant or a sub-consultant.

## **The Regional Manager**

The Regional Manager has been funded part-time by the CRCWSC until the end of 2019. The key activities of the WA Regional Manager include:

- Provide support to WRAP Chair and WRAP;
- Support the industry interface with CRCWSC programs including Tranche 2 (T2) projects, Synthesis workshops, TAPs, KATs and CRCWSC forums;
- Influence and inform through supporting NWW, the Technical Capacity and Partnerships subcommittee and through direct stakeholder engagement with key sectors: development, Local Government, and Water Utilities
- Contribute to the strategic direction of the Transition Network and provide connections between the various TNSCs.
- Influence and inform transition and adoption opportunities including:
  - Policies and guidelines through the Policy and Governance subcommittee;
  - General public and community engagement through the Community Engagement and Communications subcommittee
  - Research beyond the CRCWSC through the Research subcommittee;
  - Regional projects, demonstration and other project opportunities.

## **CRCWSC stakeholder engagement activities**

Occasionally the CRCWSC undertakes targeted stakeholder engagement activities to advance the adoption of water sensitive cities. These are supported by CRCWSC staff including the Regional Manager, Adoption Manager, Chief Research Officer and CEO as well as support staff. Examples include:

- workshops with key stakeholder groups communicating the CRCWSC research, products, tools or services;
- preparing submissions on key issues on behalf of participants and key stakeholder organisations;
- leading round table discussions or workshops; and
- convening working groups on strategic issues.

## **Transition Network**

The Water Sensitive Transition Network (WSTN) is a group of CRCWSC participants and non-CRCWSC participants who support the transition to a water sensitive city in greater Perth. Membership of this group is open to all CRCWSC participants in WA, as well as other engaged stakeholders not formally part of the CRCWSC.

The Western Region has developed a Transition Strategy through Integrated Research Project 1 with support of the Transition Network. The Transition Implementation plan will be finalised in late 2018 early 2019 and will outline a shared pathway towards achieving water sensitive city outcomes for the greater Perth region. It will be influenced by the priority actions developed by the Transition Network subcommittees related to Policy and Governance; Community Engagement and Communications; Technical Capacity and Partnerships; and Research.

## **Contributions by participants and partners**

CRCWSC participants also support the objectives of this business plan independent of the Transition Strategy by attending CRCWSC forums (WRAP, Essential Participants Reference Group (EPRG), CRCWSC Board and IRP Project Steering Committees), providing venues and cash contributions. In addition, they continue to support and facilitate actions that support a water sensitive city including:

- Department of Water and Environmental Regulation: Leading development of a water wise Perth strategy, supporting Waterwise Council Program (a joint initiative with Water Corporation) and supporting New WAtEr Ways
- Department of Communities (Housing): Undertaking water sensitive developments including Bentley greenwalls and Brabham urban development
- LandCorp: Undertaking exemplar developments incorporating water sensitive principles, including Knutsford and Hamilton Hill urban developments
- Water Corporation: Supporting their newly created Waterwise Cities team, implementing their Board's strategic objectives and ambition for Perth to become a leading Waterwise city, and supporting the Waterwise Council Program (a joint initiative with the DWER)
- Department of Biodiversity, Conservation and Attractions: Funding research including around water quality in the Swan Canning catchment and supporting New WAtEr Ways.
- Eastern Metropolitan Regional Council (EMRC): Providing linkages to CRCWSC activities and services to their members.

The WRAP also partners with non-CRCWSC participants both directly and via the NWW board who actively support WSC principles, including:

- Department of Planning, Lands and Heritage: Incorporating of WSC principles into State Planning Policy 2.9 Water Resources, Design WA, etc, participation in CRCWSC processes and supporting New Water Ways
- Urban Development Institute of Australia (UDIA): Supporting co-branded capacity building events and the UDIA Urban Water Committee, which is tackling Alternative water supplies and Smoothing Approvals.
- Western Australian Local Government Association (WALGA) and non-participant local governments: Providing access to their network of local governments to facilitate knowledge sharing and supporting New Water Ways.

### Cash contributions from the CRCWSC

The table below provides the cash contributions made to the Western Region by the CRCWSC excluding research and centralised activities such as commercial, communications and operations.

Activity for 17/18 Financial Year	CRCWSC funding for WA in 2018/2019
WRAP operations	\$10k
Regional Manager	\$90k
Capacity Building <ul style="list-style-type: none"> <li>• New Waterways</li> <li>• National activities</li> </ul>	\$40k (WA only) Approx. \$100k (Nationally)

# Examples of activities delivered in FY17/18

- T1 projects and outputs
  - B4.2 Adaptation Tipping Point workshop
  - C5.1 Implementation of Irrigation analytics on smart meter data for enhanced customer engagement workshop
  - D5.1 urbanisation in high groundwater environments, subsurface flows in urban scenarios workshop
  - B2.4 research findings and recommendations
  - Demonstration projects: detailed case study for White Gum Valley Waterwise Development Exemplar and scoping of a demonstration project for Wanju
- T2 projects and outputs:
  - Participation in T2 Project Steering Committees, workshops and development of project proposals
  - Integrated Research Project 1 (IRP1): workshops held in Perth for: Transition Dynamics Framework and networks; Policy Influencing. Development of a transition strategy through the Transition Network and subcommittees: Policy & Governance, Technical Capacity and Partnerships, Community Engagement & Communications and Research. Vision and Transition Strategy for a Water Sensitive Greater Perth published in August 2018
  - Integrated Research Project 2 (IRP2): based around two case studies for Subiaco and Belle View with workshops on the two Economics tools
  - Integrated Research Project 3 (IRP3): planning workshop for WA participants, submitted draft IRP3 proposal and explored linkage with Brabham and Knutsford urban development projects
  - Integrated Research Project 4 (IRP4): planning workshop and tour for WA participants progressed Knutsford case study
  - Integrated Research Project 5 (IRP5): Planned scope through a series of workshops (B2.4, planning sessions, and Project Steering Committee meetings) established stage 1 including delivery of the report. Planned for stage 2 including scoping of action research component for Brabham through an “Ideas for” workshop

- Tools and Products (TAPS): Established contract to integrate the TAPs with WAs groundwater issues and hosted a number of workshops including WSC Toolkit workshop, and planned TAPs prioritization and sandboxing sessions.
- Capacity building other activities:
  - CRCWSC Conference Perth 2017 activities: wetland tours in Perth City, White Gum Valley, training sessions on high groundwater
  - Water Sensitive Urban Design (WSUD) 2018 Conference run by Institution of Engineers: showcased many CRCWSC partners and projects
  - Presentations: to Waterwise Development and Waterwise Councils program, Lunch and Learn for Landcorp development managers, Councils, Water sensitive city networking event with Tony Wong hosted by Water corporation, Water and wellbeing event,
  - Local work plan for 2017 to 2020
  - Speaker series talks: (1) Cost effective strategies for reducing P & N in Canning and (2) Non-Market values of WSUD: potential for benefit transfer, with videos available on YouTube;
  - Bus tour: Better drainage solutions for parks, car parks and infill
  - Industry Notes: Non-Market Values of WSUD.
  - City of Armadale local planning policy on Water Sensitive Design
  - WSC inter/intra agency forums including workshops with (1) Public Transport Authority (PTA)/ Metronet; (2) Melville Street trees workshop; (3) House Institute of Australia HIA) builders forum, and (4) PLA conference workshop;
  - Training/sessions: biofilters, managing groundwater and local water management strategies,
  - Debate on WSUD in parks or streets,
  - Community involvement day by NWW
  - Creation of short videos of WSUD concepts which include:
    - Anas Ghadouani – Contamination in the Water Cycle
    - Giles Pickard & Allison Hailes – Benefits of Green Space

- Giles Pickard – Native vs Exotics
  - Giles Pickard – Urban Heat Surface Temperature Differences
  - Josh Byrne – The Urban Forest
  - Josh Byrne – Urban Heat
  - Nadja Kampfhenkel - A Connected Water Cycle
  - Nadja Kampfhenkel - Keeping Green in a Changing Urban Environment;
- e-newsletters and links to CRCWSC resources on NWW website.
- Community Engagement with public
  - Market research to improve understanding of community attitudes to Water Sensitive cities in WA
  - Developed community messages through the Community Engagement & Communications subcommittee
  - TED talks by Anas Ghadouani on the water footprint of food
  - ABC radio by Josh Byrne about water sensitive cities
  - Gardening Australia by City of Bayswater on Eric Singleton
- Commercial products
  - Water Sensitive Cities Index workshops: Including workshops for Canning, Mandurah, Mundaring, Victoria Park and an information session with Lindsey Beck. Supported a process for accreditation of local participant Small Medium Enterprises (SME) Expressio to deliver the WSC Index
  - Synthesis Workshops: Subiaco Strategic Resource Precinct and Brabham
  - Economic Tools: tested non market valuation tool and the Cost Benefit Analysis tool with WA stakeholders
  - Negotiations with local councils interested in applying the Transition Dynamics Framework

- Collaboration with consulting partners:
  - Expression of Interest (EOI) for commercial activities in general for SME and private participants
  - International work EOI: based around Andhra Pradesh
  - Accreditation for WSC Index workshops
  - Urbaqua delivery of NWW and accredited to deliver WSC Index workshops
  - Gutteridge Haskins & Davey(GHD) and Water technology delivery of stage 1 IRP5
  - University of WA (UWA) delivery of TAPs and REG6-2, REG 6-3 and REG6-4;
  - Josh Byrne and Associates accredited to deliver WSC Index workshops
  - Kellog Brown and Root (KBR) a member of the WRAP
  - Contacted Alluvium with new office opened in Perth
  
- Stakeholder engagement
  - Western Suburbs Regional Organisation of Councils (WESROC) and Gosnells left the CRCWSC but WA gained Josh Byrne and Associates as a new participant
  - Ministerial meetings: Minister attended the Transition Network
  - Director Generals: during Tony Wong's visit and ongoing engagement by our participants through the water wise Perth Strategy and METRONET meetings
  - Collaborative Workshop for Montario Quarter (former Shenton Park Hospital)
  - Collaboratively developed strategies for development sector with actions prioritised by key stakeholders. Developed a developer brochure including key facts
  - Collaboratively developed strategies for local government with actions prioritised by LGA participants. Developed the value proposition for Local government

- Water Corporation Waterwise Cities team and through the WSC Index which informed the “Water for Life” strategic plan. Water Corporation board briefing by Tony Wong,
- Developed stronger connections with the Waterwise Councils program including an agreement for cross promotion of activities, and financial support for Councils interested in undertaking the WSC Index.
- UDIA via the Urban Water Committee, UDIA staff and WRAP
- Local governments including information sessions with Joondalup, and attendance of workshops at Mandurah, Canning and involvement of City of Swan with IRP5 and individual meetings with all other councils.
- Engagement with researchers: verges, health, law, community engagement, urban design, Curtin Univeristy for the Knutsford development
- Involvement in partner projects
  - The Bentley Green walls project that will monitor green walls in a Mediterranean climate and Bentley 360 which will implement water sensitive cities principles.
  - Montario Quarter workshop to promote alternate water supplies.
  - Knutsford which will minimize water discharge offsite.
  - Hamilton Hill School unfortunately wasn’t awarded a smart cities grant but it is still progressing as a Landcorp project
  - Urban Monitor that will map tree canopy and other water related data. The CRCWSC convened various workshops that eventually lead to WA Local Government Association sharing shape files on their Enviro tool database.
  - METRONET workshop resulted in DWER is running a series of workshops.
- Policy Influence
  - List of priority policy initiatives agreed by WRAP
  - Policy and Governance subcommittee identified priority areas in short, medium and long term
  - Stakeholder meetings for State Planning Policy (SPP) 2.9 (including 2.1 Peel-Harvey and Swan Canning) and Design WA and CRCWSC representation on the Stakeholder committee

- Planning documents
  - Developed draft WRAP Business Plan
  - Regional manager work plan developed and priority actions endorsed by WRAP
  - Agreed on capacity building activities for 2017/2018.

## Value proposition - what does success look like in 2021?

The CRCWSC will have provided value to its WA participants if it has delivered the following outcomes by July 2021:

Transition Network	For developers	For consulting organisations
<p><b>Information:</b> Key research relevant across all Transition Network stakeholders is available and targets multiple stakeholders</p> <p><b>Policies:</b> The short and medium term priorities of the Policy and Governance subcommittee have been achieved and processes are established to reach long term policy goals.</p> <p><b>Benchmarks:</b> Perth is on its way to becoming Australia's most water sensitive city</p> <p><b>Practice:</b> A group of WSC champions is established across the Transition network and linked to outside champions. Collaboration between the key stakeholders has been fostered and supported.</p>	<p><b>Information:</b> Key research relevant to developers has been translated, synthesized and summarised for use.</p> <p><b>Policies:</b> Solutions to overcome barriers to WSC have been identified and proposed by the CRCWSC or IRP3 research. Appropriate policies and guidelines exist to support decision making during the assessment of developments.</p> <p><b>Benchmarks:</b> Leading developers and exemplar developments have been showcased to set new benchmarks.</p> <p><b>Practice:</b> Developers can implement WSUD through access to case studies, examples, tools</p>	<p><b>Information:</b> Consulting organisations have ready access to CRCWSC research, skills and/or market pathways as a market advantage.</p> <p><b>Policies:</b> Appropriate policies and guidelines to support decision making during the assessment of developments.</p> <p><b>Benchmarks:</b> Consulting organisations are accredited by CRCWSC to deliver WSC benchmarking tools and products (e.g. WSC Index workshop) and ensure ongoing outcomes</p> <p><b>Practice:</b> Consulting organisations have supported the design and implementation of WSUD.</p> <p><b>Leadership:</b> Consulting organisations obtain a market advantage in creating liveable, resilient,</p>

Economic evaluation framework has been developed and implemented

**Leadership:** The Transition Network holds influence across WSC sector and is seen nationally and internationally as a role model

**Outcomes:** Perth is a water sensitive city that is both liveable and affordable in the long term.

and networks of early adopters. On ground projects that are tested and trusted are established.

**Leadership:** Leading developers obtain market advantage in creating liveable communities and are acknowledged amongst their peers and the broader community

**Outcomes:** Developers are creating liveable, resilient, sustainable and productive communities that new home buyers are willing to pay for.

sustainable and productive communities for their clients.

**Outcomes:** Consulting organisations have generated additional revenue on the basis of CRCWSC research and/or collaboration.

For Water Utilities	For State Agencies – DWER, DBCA, DPLH	For Local Government
<p><b>Information:</b> Tranche 1 and 2 research relevant to water utilities has been translated, synthesized and summarized for use.</p> <p><b>Benchmarks:</b> The WSC Index is used to inform strategy and policy for water utilities</p> <p><b>Policies:</b> Policy and regulation relevant for WSC have been informed and influenced, where appropriate.</p> <p><b>Practice:</b> Collaboration between the key stakeholders has been fostered and supported. Economic evaluation framework has been developed and implemented.</p> <p><b>Leadership:</b> Water Corporation is recognized as a leading water utility and other water utilities (Aqwest, Busselton Water and Water West) support the vision and are committed to progress towards a WSC.</p> <p><b>Outcomes:</b> Water utilities support the creation of liveable, resilient, sustainable and productive communities for all customers.</p>	<p><b>Information:</b> Tranche 1 and 2 research relevant to water policy makers has been translated, synthesized and summarized for use.</p> <p><b>Benchmarks:</b> Benchmarks related to WSC are reflected across a range of policy instruments.</p> <p><b>Policies:</b> Policy and regulations support implementation of WSC principles and standards have been influenced by the CRCWSC and its research. Policies support use of CRCWSC tools/solutions.</p> <p><b>Practice:</b> There is strong alignment across government and commitment to a shared vision. There is a strong across- sector network and community of practice. Solutions to overcome barriers to WSUD have been identified and tools have been developed and implemented in mainstream use. Tools are tested and trusted by end users.</p> <p><b>Leadership:</b> WA is a leader in progressive policies that support a Water Sensitive City.</p> <p><b>Outcomes:</b> State agencies create policies and programs that facilitate liveable, resilient, sustainable and productive communities for the broader community. Perth metro area is highly ranked on the WSC Index both in status and score.</p>	<p><b>Information:</b> Key research relevant to LGAs has been translated, synthesized and summarised for use.</p> <p><b>Policies:</b> Local government strategies and policies for water, WSUD and urban planning have been influenced by the CRCWSC and its research.</p> <p><b>Benchmarks:</b> Exemplar local government best practice has been showcased and councils have used the WSC Index to set new benchmarks.</p> <p><b>Practice:</b> Local governments can access case studies, examples and tools, networks of early adopters and then implement on ground projects influenced by the CRCWSC. The Transition Dynamics Framework (TDF) is used to prioritise actions.</p> <p><b>Leadership:</b> Leading local governments and exemplar projects have been showcased and champions are supported.</p> <p><b>Outcomes:</b> Local governments are creating and supporting liveable, resilient, sustainable and productive communities for their residents.</p>

# FY2017/18 focus – Local Government

## What does value look like?

By 2021, the CRCWSC will have:

- A. Translated all the Tranche 1 and 2 research outputs for a local government (LG) audience. Including:
  - Synthesis of key reports
  - Tools and Products that help LGAs make informed decisions
  - Industry fact sheets
  - NWW capacity building
  - Information/starter guides to support non-technical people (Elected Members etc.) in understanding concepts
- B. Influenced LG land use planners and engineers to support water sensitive principles and practices
- C. Built the profile of LG best practice in water sensitive cities – exemplars of best practice.
- D. Increase understanding of roles amongst Local Government sector professionals in supporting WSUD.

## 2017/18 focus

- a) Translate relevant Tranche 1 research into highlights, summaries and synthesis for a LG audience. Including:
  - Economics research
  - Cooling and green infrastructure
  - Alternative supply options
  - WSUD in high groundwater environments
  - Community engagement research.
- b) Find ways to deliver more targeted communications with LGs around CRCWSC activities including articles in LG updates, waterSENSE and WALGA newsletter.
- c) Deliver Tools and Products Adoption workshops to provide training and answer questions
- d) Engage directly with participant LGs to provide an overview of information and explore opportunities including through the Waterwise Councils Program.
- e) Support the Waterwise Council (WWC) Program both directly and indirectly through Water Corporation and DWER.

**2017/18 focus**

- f) Encourage and support LGs to undertake WSC Index workshops (through WWC) and use these events to engage more broadly around Water Sensitive Cities
- g) Engage with LGs to communicate CRCWSC research through partner organization forums (WALGA including Sustainability Officers Network Group (SONG), WESROC, Institute for Public Works Engineers (IPWEA) and EMRC, etc.).
- h) Inform and refer to other programs that support LGs (including NWW, Waterwise Council Program, EnviroDevelopment certification, switch your thinking, etc.).
- i) Stakeholder engagement with land planning professions within state and local government to ensure CRCWSC research is embedded in policy, guidelines and standards. This may target particular councils in growth areas or undertaking strategic planning.
- j) Support inclusion of Urban Monitor data in TAPs and other accessible formats.
- k) Support LGs in financial planning related to maintenance of water sensitive assets.

**2017/18 focus**

- l) Engage local LGs to influence the delivery of synthesis, case studies and regional projects with the following to be investigated further: Subiaco Strategic Resource Precinct, METRONET and METROHUBS, Brabham precinct, Subiaco Oval redevelopment, Canning City centre, Bentley Regeneration, Batavia Coast, Redcliffe Reconnect, Bentley- Curtin Structure Plan, Bayswater Town Centre, Ashfield, Forrestfield North, Beaconsfield.
- m) Undertake capacity building activities through NWW targeting land use planners and engineers – seminars, tours, discussion forums, training as required.
- n) Identify and support champions working in LGs.
- o) Develop case studies, designs or tools for small-scale water sensitive city initiatives and Council best practice in integrated water management (IWM).

# FY2017/18 focus - Consulting Organisations

## By 2021, the CRCWSC will have:

- A. Created a market for water sensitive city services/products (e.g. to make the implementation of WSUD easier or better).
- B. Enable the CRCWSC commercial partners to be market leaders by being early-adopters of new practices and tools to implement WSUD.

## 2017/18 focus

- a) Capacity building and training for consulting staff including accreditation to deliver the WSC Index.
- b) Maintain industry network opportunities (Incl. WRAP) to stimulate information sharing and networking, including sharing of lessons from IWM projects.
- c) Provide opportunities for involvement in IRP and TAPs Project Steering Committees, project teams, case studies and testing.
- d) Provide opportunities to deliver (or co-deliver) CRCWSC capacity building, IRP leadership, adoption and servicing activities.
- e) Translating CRCWSC research outcomes into tools, guidelines and frameworks for industry use – i.e. operationalising and standardising practice.
- f) Co-design and testing of CRCWSC tools.
- g) Embed CRCWSC experts within consulting project teams.

## FY2017/18 focus – State Agencies

### By 2021, the CRCWSC will have:

- A. Developed Strategy for Perth as a WSC and an economic valuation framework.
- B. Translated the outcomes of Tranche 1 and 2 research and support use of tools by policy makers and actively influenced the policy and regulatory environment.
- C. Identified the barriers to WSUD in the Western Region and proposed solutions.
- D. Developed water sensitive city case studies demonstrating the successful implementation and benefits of WSC.
- E. Supported making Perth a Water Sensitive City.

### 2017/18 focus

- a) Engage key stakeholders around a water sensitive METRONET including: METRONET Taskforce, Department of Transport, Public Transport Authority, Main Roads WA, Metropolitan Redevelopment Authority, Department of Water and Environmental Regulation, Department of Planning, Lands and Heritage and Department of Finance.
- b) Engage policy and industry stakeholders in developing the business case for WSUD.
- c) Supporting the Water Corporation and DWER through their joint Waterwise Council program.
- d) Supporting accreditation by CRCWSC of WA based CRCWSC participants to deliver the WSC Index through the Waterwise Councils program and individually.
- e) Foster collaboration (learning by doing) of CRCWSC and industry partners in research projects especially targeting IRP1, 2, 3, 4 and 5.

**2017/18 focus**

- f) Co-design and co-test (using WA case studies) new CRCWSC TAPs to ensure it is applicable to the Swan Coastal Plan context.
- g) Research summaries and synthesis for policy application including:
  - Governance, regulatory and planning best practice
  - Community engagement and water literacy
- h) Apply water literacy and community engagement strategies.
- i) Identify ways to influence other policies
- j) Hold an interagency workshop to bring together state agencies.
- k) Undertake regional projects that support improved management of the Swan Canning System.
- l) Develop policy paper on Water and Health that facilitates a cross government approach to Health.

**2017/18 focus**

- m) Support CRCWSC stakeholder input (including through WSTN-PG) into:
  - METRONET and METROHUBS
  - State Planning Policies 2.1, 2.2, 2.3, 2.7, 2.9 and 2.10
  - Design WA including Neighbourhood Design (formerly Liveable Neighbourhoods), Precinct Design and House Design and Apartment Design (to replace R- Codes) policies
  - Water Resources Management Bill
  - Review of Better Urban Water Management
  - Perth waterwise strategy
  - Subdivisional guidelines
  - Perth and Peel @ 3.5 Million Water Supply Strategy

# FY2017/18 focus – Water Utilities

## By 2021, the CRCWSC will have:

- A. Supported all Western Australian utilities to make WA water sensitive,
- B. Support the Water Corporation in making Perth a leading Water Sensitive city by 2023
- C. Actively influenced and informed the relevant policy and regulatory environment to support WSCs.
- D. Identified the barriers to WSUD in the Western Region and propose solutions to these barriers.
- E. Translated the outcomes of Tranche 1 research for water utilities.
- F. Developed tools that make WSUD easier to implement – and these tools are in mainstream use.
- G. Developed water sensitive city case studies demonstrating the successful implementation and benefits of WSC.

## 2017/18 focus

- a) Engaging with Busselton Water and Aqwest around CRCWSC and transition network participation.
- b) Supporting the Water Corporation and DWER through their joint Waterwise Council Program including the accreditation of WA based CRCWSC participants to deliver the Index.
- c) Supporting the Water Corporation through other Waterwise programs, including Development, Business, Office and Schools
- d) Supporting the Water Corporation Board, when requested, with their strategic planning and stakeholder engagement.
- e) Research summaries and synthesis for utility application including:
  - Economic evaluation framework
  - Technologies including smart metering
  - Resource recovery
  - Strategic Resource Precinct workshops.

**2017/18 focus**

- f) Co-design and co-test new CRCWSC TAP1 city shaping platform.
- g) Co-design and co-test (using WA case studies) new CRCWSC TAPs to ensure they are applicable to the Swan Coastal Plan context.
- h) Foster collaboration (learning by doing) of CRCWSC and industry partners in research projects and WA water industry projects targeting:
  - o IRP1 Index and Transition Strategy
  - o Alternative supply options in IRP5
  - o Subiaco Strategic Resource Precinct including Montario Quarter (IRP2).
- i) Engage policy and industry stakeholders in developing the business case for WSCs.
- j) Deliver policy paper on “The utility of the future”.

# FY2017/18 focus – housing and development industry

## By 2021, the CRCWSC will have:

- A. Translated CRCWSC research outcomes into standards designs, policies and guidelines used by professionals.
- B. Created a market demand amongst residents for water sensitive developments.
- C. Investigated ways to support assessment of innovative water sensitive developments.
- D. Increased the understanding of actual risk, costs and benefits and other barriers of Water Sensitive Developments.
- E. Built the profile of best practice in water sensitive cities in private and State developers – showcasing exemplars of best practice.
- F. Increase understanding of roles amongst urban development sector professionals in supporting WSUD.

## 2017/18 focus

- a) Translated the Tranche 1 research outputs for an industry audience including:
  - o Economics;
  - o Alternative supply options;
  - o Cooling and green infrastructure;
  - o WSUD in high groundwater environments.
- b) Stimulate information sharing and networking across development sector networks. In particular using the UDIA Urban Water Committee and subgroups on alternative water supplies and smoothing the approvals process.
- c) Delivery of capacity building (including targeted presentations) and training (including INFEWS) of developers, their consultants and growth councils in which they work. This includes through NWW, co-branded training with UDIA and potentially Continuing Professional Development undertaken by Industry associations.

**2017/18 focus**

- d) Deliver CRCWSC adoption activities (e.g. capacity building, training etc.) and servicing activities (e.g. “Ideas for” workshops and TAPs case studies).
- e) Co-design and testing of Water sensitive approaches on IRP5 Brabham case study.
- f) Increased use of INFEWS through undertaking and disseminating findings from case studies at Bell View Estate, Subiaco and Wungong.
- g) Greater recognition of Water Sensitive projects and ‘early adopter’ developers by raising the profile of innovative projects, e.g. through an exemplar development roadshow on Lightsview urban renewal project in South Australia and Aquarevo residential development in Victoria.
- h) Support Champions working within development related organisations.

Identify opportunities to present key ‘urban growth for water sensitive cities’ concepts at a minimum of two relevant planning and urban development conferences, seminars and workshops.

# Action plan – what does the WRAP aspire to implement?

## High priority actions

Action – High Priority	Status	Delivery	Who leads
<b>We will support the translation of T1 and T2 research:</b>			
1. Disseminate research and TAPs through NWW program, including short videos, speaker series, industry notes, bus trips, interagency forums, etc.	OG	18/19 Q4	NWW, TAPs IRP PSCs,
2. Provide input into the development of TAPs so that they are relevant to the Swan coastal plain context by engaging a consultant or researcher to assess opportunities to integrate groundwater interactions into TAPs	IP	2021	TAPs PSC, RAP
3. RAP members, particularly the Chair, Regional Manager and Project Steering Committee members (as appropriate), will actively support the dissemination and facilitate the application of knowledge and research outputs to industry end users.	OG	2021	RM, RAP, IRP PSC, TAP PSC, WSTN
4. Provide Tranche 1 and 2 research findings in a targeted way through partnerships with other industry organisations to:			
the urban development sector (at least 2 conferences a year across T1 and T2 in addition to UDIA breakfasts and other approaches); and	OG?	2021	RM, RAP, UDIA, UDIASC, TN reps from Dev, NWW
the local government sector.	OG?	2021	RM, RAP, EMRC, WALGA, TN reps from LG
<b>To build capacity amongst practitioners we will:</b>			
5. Develop local capacity building activities that provide training on CRCWSC tools targeting key sectors including:			
Facilitate training on TAPs	IP	18/19 Q4	TAPs, RAP
Facilitate Benefit Cost Analysis Tool and Benefit Transfer Tool training (1 day followed by 2 hours of “tutor” time to be delivered by CRCWSC SME)	IC	18/19 Q4	IRP2 PL, IRP2 PSC, RAP
6. Develop local capacity building activities that create multi-functional urban spaces including:			
Promote understanding amongst urban planners, designers and development professionals about their role in delivering water outcomes	IP	2021	NWW, TN
Inter-agency workshops x 2	IC	18/19	NWW

## Medium Priority Actions

Action – medium Priority	Status	Delivery	Who leads
<b>We will support the translation of T1 and T2 research:</b>			
10. Provide input via the CRCWSC IP Management Framework to identify priorities for knowledge translation and development with draft priority list by October 2018	IC	18/19 Q2	PSC, NWW, RAP, RM
11. Identify influencers and provide information on case studies and demo projects through:			
Develop targeted presentations for key decision makers, e.g. a presentation to Western Australian Planning Commission (WAPC) or a METRONET taskforce meeting, or UDIA or consultants	IP	18/19 Q2	RM, CM, RAE, and EU
Face to face adoption products tour	IP	18/19 Q2	RM, CM, RAE, and EU
12. Engage CRCWSC participants and stakeholders in IRP case studies (Belle View Estate, Subiaco Strategic Resource Precinct, Knutsford, Brabham etc.).	IP	2021	RM, IRP2,3,4,5 PSC
13. Provide input and direction into TAPs through prioritization and sandboxing sessions.	C	18/19 Q1	TAPS PSC, RAP, EU
14. Influence and support the trial of CRCWSC tools from IRPs and TAPs in research synthesis and consulting projects.	IP	2021	IRP PL TAPs PL, RAP, CM
<b>To build capacity amongst practitioners we will:</b>			
15. Support national initiatives and implement locally including:			
Hold a national best practice development road show with UDIA	IP	18/19 Q3	NWW, RAP
Host Leadership training x 1	IC	18/19 Q4	NWW
Develop Short videos on microclimate projects, supporting fact sheets and later training by the TAPS in the Microclimate tool.	IC	18/19 Q4	TAPS PL, TAPS PSC, NWW
Hold a workshop/forum to assist LG officers to get sufficient funding allocated for WSUD maintenance.	C	18/19 Q1	NWW
16. Develop local capacity building activities that create multi-functional urban spaces including:			
Researcher Videos uploaded on youtube x 2	IP	18/19 Q4	NWW
Relevant experts to be sent to conferences x 1	IC	18/19 Q4	NWW
fact sheet/ industry note x 3	IC	18/19 Q4	NWW
speaker series which are also uploaded on youtube	IC	18/19 Q4	NWW
17. Encourage participation at the Brisbane CRCWSC conference March 2019 and inform the councils about the subsidies.	IP	18/19 Q2	RM, RAP
<b>We will establish structures to support the transition to a Water Sensitive City:</b>			
18. Identify funding source (e.g. CRCWSC, partner, stakeholder budgets) to support the Regional Manager position until mid 2021.	C		RAP, RM
19. Revise and update this Business Plan and particularly this WRAP action plan	IP	18/19 Q1	RM, RAP

<b>Action – medium Priority</b>	<b>Status</b>	<b>Delivery</b>	<b>Who leads</b>
20. Support the WRAP and WSTN (including subcommittees) through strategic coordination across the groups and cross membership between the groups	OG	2021	RM, RAP Chair, TN Chair, TNSC Chairs
<b>To deliver WSC commercial products : Index workshops, Synthesis workshops, Transition strategies, economics tool, business case, Regional Projects and other commercial products we will:</b>			
21. Support Waterwise Councils through access to accredited facilitators, cross-promotion and engagement of stakeholders around WSC Index workshops undertaken by their local government.	OG	18/19 Q1	RAP, RM, CM
22. Conduct accreditation training sessions for WA based consultants and ‘super users’ (e.g. Water Corporation) to deliver or support WSC Index workshops.	C	18/19 Q1	RAE, RM, CM
23. Develop a rolling prioritised list of potential Research Synthesis workshop opportunities and host organisations	C	18/19 Q1	RM, RAP
24. Implement Research Synthesis workshop opportunities	IP	18/19 Q4	RAP, RM, CM
25. Program for delivery of Transition strategy including use of TDF by either different scale (e.g. Local government) or different region (e.g. regional city/town)	IP	18/19 Q2	RM, RAP
26. Influence stakeholders to uptake Regional Projects (e.g. Eric Singleton, Anvil way monitoring, DBCA monitoring, Greenwalls, etc)	C	18/19 Q4	RM, RAP
27. WSC Economic evaluation framework and tools are used to develop a business case for Bentley green walls or other Regional project. Sharing of this will promote the understanding of amenity values of water related assets and to appreciate the complex picture	IC	18/19 Q4	REG PL, RM, RAP
<b>To assist consulting partners to commercialise their investment in the CRCWSC, we will:</b>			
28. Provide networking opportunities in the WRAP, CRCWSC Conference, IRPs, TAPs etc.	OG	18/19 Q4	RAP, IRP PSC, TAP PSC, RM
<b>To showcase best practice in WSC we will:</b>			
29. Develop evidence based case studies of successful water sensitive city projects that provide quality urban spaces and disseminate knowledge including:			
Disseminate findings of the Economic Valuation tool (Belle View Estate Living Stream, Subiaco Strategic Resource Precinct)	IP	18/19 Q4	IRP2 PSC, RAP, RM
<b>To support the Transition network policy and governance subcommittee to influence water policy and practice we will:</b>			
30. Support Policy and Governance subcommittee, encouraging input through the Transition Network (including subcommittees)members, CRCWSC researchers and RAP into at least three of the following:			
Water Resources Management Bill	IP	18/19 Q4	RAP, TNSC – PG, TN

Action – medium Priority	Status	Delivery	Who leads
Suite of State Planning Policies and associated guidelines (BUWM)	IC	18/19 Q4	RAP, TNSC – PG, TN
Design WA, including Liveable Neighbourhoods and precinct guidelines	IP	18/19 Q4	RAP, TNSC – PG, TN
Water wise Perth strategy	IP	18/19 Q4	RAP, TNSC – PG, TN, DWER
Subdivisional Guidelines for Local Government	IC	2021	RAP, TNSC – PG, TN
31. In consultation with Policy and Governance subcommittee, identify ‘hot topics’ that could be appropriate for CRCWSC Policy/Industry Notes and develop two every year on priority or key issues identified by RAPs and national strategic policy challenges. This may consider development of a CRCWSC policy note on health and water sensitive cities; alternative water supplies; or LGA sustainability strategies.	IP	18/19 Q2	RM, TNSC – PG, RAP, TN
<b>To support partners in the transition network we will:</b>			
32. Support the Waterwise Council program through DWER and Water Corporation including:			
Supporting their forums, meetings, lunch time seminars, etc.	IP	2021	WWC, RAP, RM, EMRC,
Providing support with use of CRCWSC tools such as the Index and Transition Dynamics Framework	IP	2021	CM, RM
33. Share information with Local governments through regular email updates to key stakeholder groups (LGAs, RAP)	C	18/19 Q1	RM, RAP or TN reps from LG
34. Share information with Local governments through partnerships with:			
NWW – training, seminar, vlogs etc.	IP	18/19 Q4	NWW, TN rep LG, EMRC
EMRC and possibly other regional councils(South West Group) – workshops and other events.	IP	18/19 Q4	NWW, EMRC, TN rep LG
IPWEA - meetings and annual conference.	IP	18/19 Q4	NWW, IPWEA, TN rep LG, EMRC
WALGA – CEO meetings, environews, CEO e-bulletin, “Local government week”, LGA conference, social media, compulsory LGA training.	IP	18/19 Q4	NWW, WALGA, TN rep LG, EMRC
35. Implement key actions in developer engagement strategy including :			
Identify ways to remove barriers and reduce risks faced by developers wanting to undertake WSUD	IP	18/19 Q4	RM, IRP3 PL, UDIASC, RAP
Influence standard designs, policies and guidelines used by professionals	IP	2021	TNSC – PG, NWW
<b>To identify and overcome barriers to WSC, we will:</b>			
36. Support UDIA Urban Water Committee “smoothing approvals process” through active participation by the Regional Manager	IP	18/19 Q4	RM, UDIASC

Action – medium Priority	Status	Delivery	Who leads
37. Support the UDIA Urban Water subcommittee, “alternative supplies for non potable sources” to develop a position paper that addresses barriers and solutions and or a CRCWSC policy note through the Regional Manager. This committee includes the Water Corporation. It may later be developed into a CRCWSC policy note on alternative supplies scaled at state or national level.	IP	18/19 Q4	RM, UDIASC, TN, TN-PG,

Codes

WRAP takes lead role or is a key partner
NWW takes lead role or is a key partner
Regional manager takes lead role or is a key partner

18/19 q1 – July to September 2018

18/19 q2 – October to December 2018

18/19 q3 – January to March 2019

18/19 q4 – April to June 2019

2021

C - complete,

IC - incomplete,

IP - in process,

OG - ongoing

# List of Acronyms

AWA – Australian Water Association

CM – Commercial Manager (CRCWSC (Malcolm Eadie)

CRCWSC – Cooperative Research Centre for Water Sensitive Cities

D1.4 PL - Case study project (Celeste Morgan)

DBCA – Department of Biodiversity, Conservation and Attractions

DoC – Department of Communities

EMRC – Eastern Metropolitan Regional Council

EPRG – Essential Participants Reference Group

EU – End users

GWIG - Greywater and Wastewater Industry Group

IPWEA – Public Works Engineers Australia

IRP – Integrated Research Project in Tranche 2

IWA – International Water Association

LG – Local Government

LGA – Local Government Authority

NWW – New WAter Ways (Shelley Shepherd)

PL – Project lead

PSC – project steering committee

RAE – Research Adoption Executive (Barry Ball)

RAP – Regional Advisory Panel (Chair: Mike Mouritz)

REG – Regional project

RM – Regional Manager (Emma Yuen)

SIA - Stormwater Industry Association

SONG – Sustainability Officers Network Group

SPP – State Planning Policy

SWWS – Small Water and Wastewater System

TAPS – Tools and products

TN – Transition Network (Chair: Ashely Vincent, EO: Winsome MacLaurin)

TNSC – Transition Network Subcommittees

TNSC-CB – Transition Network Subcommittee -Technical capacity and partnerships (Chair: Emma Monk)

TNSC-CCE – Transition Network Subcommittee - Community engagement and communications (Chair: Winsome MacLaurin)

TNSC-PG – Transition Network Subcommittee -policy and governance (Chair:Sergey Volotovskiy)

TNSC-R – Transition Network Subcommittee – research (Chair: Mike Mouritz)

UDIASC – UDIA subcommittee of urban water committee

UWA –University of WA

WALGA – Western Australian Local Government Association

WSAA – Water Services Association of Australia

WSC – Water Sensitive Cities

WSUD – Water Sensitive Urban Design

WWC - Waterwise Councils



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