

# ENABLING THE TRANSITION TO WATER SENSITIVE CITIES - AN INDUSTRY PERSPECTIVE

*TEN INDUSTRY PLAYERS SHARE THEIR VISION  
AND COMMITMENT TOWARDS ACHIEVING WATER  
SENSITIVE CITIES.* Author: Melissa Cordy, Katia Bratieres, Jackie Bowe and Raffaella Crupi

Government and industry investment to drive the transition to Water Sensitive Cities has never been stronger. In 2012 the Federal Government committed to match nine years of industry funding with the establishment of the Cooperative Research Centre (CRC) for Water Sensitive Cities. Last year also marked the launch of the Office of Living Victoria, an organisation that aims to further Integrated Water Cycle Management.

With the momentum around Water Sensitive Cities intensifying, Clearwater set out to investigate how the water industry is managing the transition.

#### **Envisioning Water Sensitive Cities**

According to Professor Tony Wong, CEO of the CRC for Water Sensitive Cities, "Water Sensitive Cities

are resilient, liveable, productive and sustainable. They efficiently use the diversity of water resources available within towns and cities; enhance and protect the health of urban waterways and wetlands; and mitigate against flood risk and damage."

From a practical perspective, Melbourne Water's Senior Water Resources Planner Jamie Ewert likes the definition that "A Water Sensitive City is what you get when you implement Integrated Water Management and Water Sensitive Urban Design. They can be day-to-day activities that include raingardens and stormwater harvesting. The outcome is Water Sensitive Cities."

Monash Water for Liveability CEO Rob Skinner touched on the holistic aspect of a Water Sensitive

City, where "water is treated as an integrated part of the whole bio-physical development of the city." Mike Waller, Acting CEO of the Office of Living Victoria also acknowledged this point. He defined a Water Sensitive City as one that "understands the intersection between water services and the way in which we plan, build and manage the places where we work, live and play."

City West Water's CEO Anne Barker highlighted the importance of a water literate community or "a community that starts to see the different values that water can deliver." Ralf Pfleiderer, City of Melbourne's Water Sensitive Urban Design Coordinator, shared the same view, and emphasised the need for community to feel a strong connection to water in everyday life. "Many cities in Europe

*Clearwater is a Victorian based, non-profit capacity building program that provides the water industry with the knowledge, tools and skills to enable the transition to Water Sensitive Cities. Recognised for its adaptive and innovative approach, Clearwater promotes collaboration and knowledge sharing across the urban water and planning sectors.*



*Left page: Water Sensitive Cities contributes to healthy communities Above: Building a raingarden – community demonstration day. Image source: Melbourne Water*

have disconnected downpipes, which means that there is a lot of surface runoff when it rains. Brining stormwater to the surface and making it visible is a good way to make the community more aware of the whole water cycle.”

Our interviewees all discussed the benefits of Water Sensitive Cities. Many linked increased areas of green space with not only providing urban amenity for the community but helping to mitigate urban heat island effects. They highlighted that Water Sensitive Cities enhance biodiversity and support waterway health through improved water quality and flow regimes that mimic natural waterways. Keysha Milenkovic, Project Leader of Melbourne Water’s 10,000 Raingardens Program, summed up the multiple benefits through the simple vision of “a more liveable environment.”

It’s one thing to envision a water sensitive future, but another to actually achieve it. After exploring the multiple facets of Water Sensitive Cities, our questioning turned to how each interviewee and their organisation are contributing to the water sensitive journey. A number of recurring themes started to emerge...

### **Collaboration**

One of the strongest themes to emerge from our conversations was the importance of collaboration – across disciplines, teams and organisations.

The CRC for Water Sensitive Cities has established its foundation on interdisciplinary collaboration in a research context. The CRC has 74 partner organisations from around Australia and overseas which span the fields of water engineering, urban planning, the law and economics of water, ecology, climate science, social and institutional science, risk management, community health and organisational behaviour and change management.

One local government example comes from the City of Kingston. Tony Barrett, Environmental Projects Officer, referenced a series of stormwater harvesting projects that involve multiple council departments – many not traditionally involved in water management projects – to help promote the Water Sensitive Urban Design message.

This widespread acknowledgment of the value of collaboration has led to the formation of a number of council networking groups across Victoria. “We all

have a common focus and use the network to build relationships, share project ideas and learnings”, explained Ralf Pfeleiderer, a member of an inner Melbourne council network. “Hearing what’s been done before, what’s working and what’s not, is indispensable in a rapidly changing industry.”

### **Engagement**

As part of an international study tour in 2012, Barwon Water’s Senior Planner Nicole Sexton looked at projects showcasing Water Sensitive Cities in European countries. She discovered that regardless of the country, “All successful projects had a strong theme of up-front engagement that secured buy-in from key project stakeholders.”

Our other interviewees agreed. Engaging with different stakeholders, in particular community engagement and education was considered one of the most crucial steps in driving the transition to Water Sensitive Cities. “How can we ask the community to act if they don’t understand that there is a problem?” explained Keysha Milenkovic. Part of the 10,000 Raingardens Program’s latest marketing campaign installing life-sized cross section models of raingardens in bus and tram stops across Melbourne.

*This life size raingarden is a creative approach to educate the community around the impacts of stormwater. The slogan reads "If we can build a raingarden here, then you can build one at home" Image source: Melbourne Water*



Community engagement is also integral to City West Water's Greening the West initiative. One example is the proposed implementation of green walls in two primary schools in Altona North and Footscray North. Learning components from this project will then be incorporated into the Water – Learn it! Live it! education program, which is made available to primary and secondary schools within metropolitan Melbourne.

From a developer perspective, Stockland's Regional Manager Residential Mike Davis explained, "You can have all the infrastructure and best practice principles but you need your community to value



*Moonee Valley Transfer Station Living Wall. A similar wall will be implemented in two primary schools by City West Water's Greening the West Program. Image source: City West Water*

the social elements around the use of water." He believes the development industry has a large role to play in educating and engendering a strong focus on the importance of water conservation in the communities they create.

### **Integrated Planning Approaches**

With water such a precious resource, it is generally accepted that our cities need to become their own water supply catchments, driving integrated and whole-of-catchment planning approaches.

According to Mike Waller, this shift in water planning thinking requires us to "understand the water services system and how it fits into the urban planning environment. The creation of Water Sensitive Cities is as much about town planning as it is about water."

Jamie Ewert believes that integrated planning will lead to "a city living within its own means, utilising the water falling inside the catchment instead of discharging high volumes of water back into the environment and using water from other sources to pipe into the city." This approach provides long term economic benefits in relation to centralised and decentralised systems, reducing the need for large scale and costly infrastructure.

The City of Kingston's Integrated Water Cycle Strategy is a great example of how our cities are starting to adopt this thinking. The water balance presented in the Strategy estimates that the community's water demands can be met 20 times over with water sources derived from within the City of Kingston boundary. Treating the city as its own water supply catchment provides water security for the community and ensures that our parks, gardens and playing fields can be kept green and safe to use. Tony Barrett emphasised, "The next step is to implement a whole-of-catchment approach, which will require collaboration across administrative boundaries".

### **Leadership and Innovation**

Our interviewees all recognised that the transition to Water Sensitive Cities is full of challenges, which is why strong leadership and innovation are essential.

education integrated water cycle management water security  
 reduce urban heat island effect city as catchment waterway health  
 diversity of scale protection of ecosystems public health  
 liveability resilient community engagement managing risk  
 innovative multiple benefits sustainable  
 urban planning efficient

Left: Water Sensitive Cities – A vision  
 Image source: Clearwater

Below: Water Sensitive Cities – A concept  
 Image source: CRC for Water Sensitive Cities



The Office of Living Victoria (OLV) is a prime example. Mike Waller explained that the OLV will act as a facilitator and catalyst rather than a regulator, and recognised that many of the answers are already out there. “We are not starting from scratch, but the exemplary projects need promotion. That’s what our Living Victoria Fund is all about. There is still a lot of concern about cost and other risks. People need to see how others have overcome those barriers.” This leadership approach focuses on working with existing organisations to provide a legacy. “Five years from now, I think that a good outcome would be that there is no need for the OLV to exist.”

It is also through thought-leadership and innovation that research organisations will contribute to the transition towards Water Sensitive Cities. Tony Wong explained that, “As a research organisation, the CRC is committed to provide the proof-of-concept and the scientific evidence to enable the implementation of Water Sensitive Cities. The CRC as such will not be able to build Water Sensitive Cities – it is the way we influence policy, help build capacity and the way we provide a platform for innovative thinking which will help deliver Water Sensitive Cities.”

Nicole Sexton from Barwon Water added, “Innovation involves testing new concepts and new technologies. On-ground demonstration

projects are a key driver for change and always offer learning opportunities.” Prototype developments such as Stockland’s Mernda Villages in Victoria are a prime example. Constructed six years ago, the development incorporated a series of pocket raingardens as well as the first Aquifer Storage and Recovery System of its kind in northern Melbourne.

#### Key Learnings

Without exception, all our interviewees are committed to achieving Water Sensitive Cities. And while each is contributing in different ways and through their own projects, they are open to collaborating with others to achieve common goals.

Through this process, we have also witnessed first-hand the enormous enthusiasm that individuals and organisations have for Water Sensitive Cities and the significant investment that is being made to support the transition process. There is a real momentum around embracing new and emerging concepts, and a willingness to move outside traditional comfort zones.

Looking to the future reveals a similar picture for all of our interviewees: A future where the philosophy of Water Sensitive Cities and its applications are embedded across all disciplines in the water sector, when it simply becomes business as usual.

#### Acknowledgements:

We would like to thank our interviewees:

Anne Barker – CEO, City West Water

Tony Barrett – Environmental Projects Officer, City of Kingston

Mike Davis – Regional Manager, Residential, Stockland

Jamie Ewert – Senior Water Resources Planner, Melbourne Water

Keysha Milenkovic – Project Leader, 10,000 Raingardens Program, Melbourne Water

Ralf Pfeleiderer – Water Sensitive Urban Design Coordinator, City of Melbourne

Nicole Sexton – Senior Planner, Barwon Water

Rob Skinner – CEO, Monash Water for Liveability

Mike Waller – Acting CEO, Office of Living Victoria

Professor Tony Wong – CEO, CRC for Water Sensitive Cities

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