

Water Sensitive Urban Design Assets

Pre-feasibility assessment

June 2016



Background

TAMS owns the stormwater assets in the ACT and is responsible for operation and maintenance. EPD is the area of ACT Government (ACTG) responsible for environment and planning.

EPD commissioned a report by Marsden Jacob (MJ) to consider the ongoing management and funding of WSUD assets.

EPD are motivated to ensure there are robust arrangements in place to maintain the additional \$85m Commonwealth investment in ACT WSUD assets via the Basin Priority Project.

Existing ACT WSUD assets are valued at ~\$0.6b, approximately 25% of the whole stormwater system valued at ~\$2.4b.

Customers pay via general rates, however the MJ report found the rate is not sufficient to fund management of existing and future WSUD assets.

MJ recommended that funding arrangements will need to be recalibrated.

MJ identified a number of potential management arrangements:

1. Transfer WSUD assets to Icon Water
2. Create a stormwater utility
3. Refine existing BAU arrangements within TAMS (including no cost-reflective charge).

Compelling case for alternate arrangements

Key findings of Marsden Jacobs WSUD Options Study

- TAMS invests less than 1% of WSUD asset value on O&M (industry average is 3-5%)
- >\$4.3m p.a. O&M funding gap for WSUD assets
- Asset underperformance due to lack of funding
- Incomplete asset and financial frameworks may result in undetermined liabilities
- Need to look broader to whole stormwater system
- Icon Water presented the most favourable of all options in the multi-criteria analysis

Icon Water's pre-feasibility review

IW undertook a prefeasibility review including:

- A review of stormwater arrangements in other jurisdictions,
- Analysis of the pros and cons of a range of options, and
- Identify the arrangements that provide the best opportunities and least risk.

ACTG review process

The ACTG has re-engaged MJ to undertake a prefeasibility assessment of the refined options. The ACTG will present the MJ Options Study to Cabinet in August 2016 to seek endorsement to proceed to a feasibility assessment.

If endorsed, the ACTG feasibility is expected to commence in November 2016.

A strategic opportunity for reform

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Icon Water views stormwater as an integral element of modern, integrated urban waterways. This view is not new; it is shared and supported by several bodies relevant to water strategy in Australia. Water utilities in Sydney, Melbourne, South Australia and Western Australia are already delivering waterways and drainage services in partnership with state and local Government.



Australian Government

December 2015

Senate committee on environment & communications inquiry into stormwater resources in Australia

Recommendation 4

the committee recommends that the Australian, state and territory governments **consider new funding models and financial incentives that would facilitate improved stormwater management outcomes** in an economically efficient way.

Chapter 6improved stormwater management outcomes potentially could be realised if water monopolies had broader objectives that allow them to become more involved in best practice stormwater management.

Across the water industry, stormwater is shifting from flood management to a broader concept of **integrated urban waterways management which offers greater diversity for water resources and benefits to the community.**



WATER SERVICES
ASSOCIATION OF AUSTRALIA

May 2015

Stormwater – a lost opportunity?

The opportunities from integrated planning and management of stormwater includes:

- More efficient and streamlined planning and delivery processes
- Improved social amenity and attractiveness
- Improved engagement through recreation and creating places that bring people together
- Health benefits through passive cooling and a reduction in the heat island effect
- Increase in property values and economic activity through improved aesthetics

Critically, we must engage our customers to determine which of these opportunities align with their preferences as well as their willingness to pay.

This strategic view of integrated urban waterways is the foundation of this presentation and our approach to the WSUD asset opportunity.

Analysis – Stormwater system frameworks

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As part of the pre-feasibility assessment, Icon Water engaged with numerous industry experts.

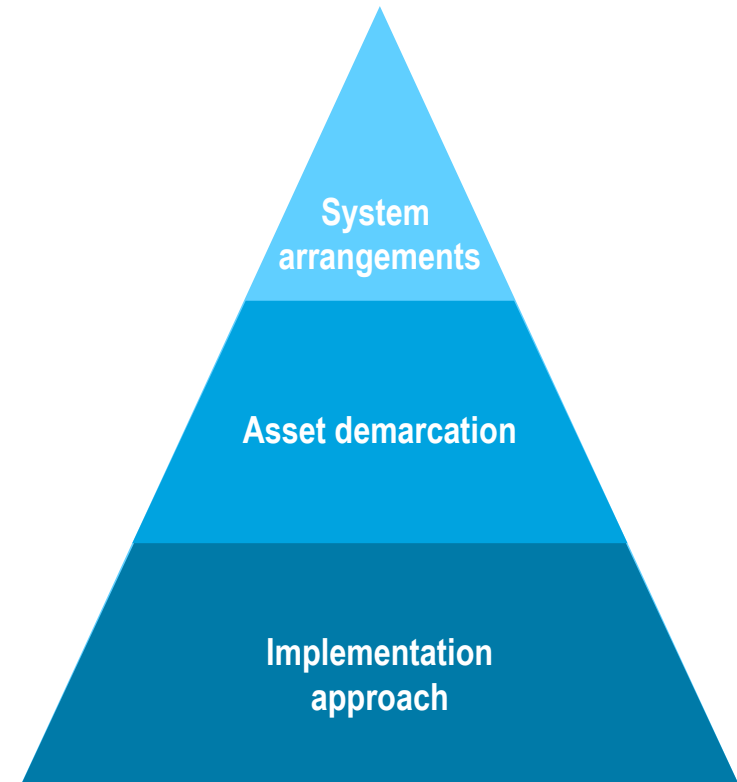
Subject matter expertise

- ✓ Tony Kelly
Member of the Victorian Water Minister's Expert Water Panel, former CEO Yarra Valley Water, Third Horizon consultant
- ✓ Melbourne Water (MW)
Integrated Water Management Branch, managers from Maintenance, Environment and Regulatory Affairs teams
- ✓ Rob Skinner
CEO Monash University Liveability, former CEO MW
- ✓ Chris Chesterfield
Director Strategic Engagement CRCWSC, former General Manager Waterways and Drainage MW
- ✓ Ray Beaton
Manager Strategic Projects, Yarra Valley Water
- ✓ Alan Andrews
Strategic Stormwater Engineer, Manningham City Council, National President of Stormwater Australia
- ✓ Chris O'Neill
Director Hydronumerics, input to ACT Government Basin Priority Project Business Case
- ✓ Kaia Hodge
Manager Liveability Solutions, Sydney Water Corporation



Prior to evaluating the potential management and funding arrangements, it is crucial to consider the entire framework.

Analysis of whole of system arrangements in the ACT and other jurisdictions can be summarised under three categories



Key considerations in any feasibility study:

System arrangements

- › A **Stormwater Strategy** entity or group needs to be established and given responsibility for holistic long-term strategy formulation.
- › A **sustainable funding** and revenue stream must be established, such as a dedicated, cost-reflective stormwater charge per property and developer charges.
- › A clear and transparent **performance management framework** is needed to help define goals and activities aligned with strategy.
- › Stormwater asset manager(s) must be able to **influence the policy** and funding mechanisms.

Asset demarcation

- › Asset demarcation must respect the integrity of the value chain and **avoid unnecessary interfaces**. For this reason, transferring only the WSUD assets to Icon Water could compromise its ability to control and perform.
- › A **due diligence** of the stormwater assets is essential to determine actual operational, maintenance and backlog funding needs.
- › Flood-mapping audits are required to **understand flooding risks** and liabilities for property owners and government entities.

Implementation approach

- › Improved catchment-wide waterway and stormwater management under “**soft**” **regulatory** and **collaborative** arrangements is deemed most effective in improving environmental and amenity outcomes for the ACT community.
- › Focus should shift from traditional drainage engineering to a focus on **environmental sustainability**, amenity and **community satisfaction**.
- › The ACTG should stage the **transition of asset management** over a 6-12 month period to ensure focus on environmental engineering and stakeholder relationships, building relevant culture and talent capability.

System arrangements: Icon Water’s preferred framework

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System arrangements

Asset demarcation

Implementation approach

OPTIMAL STORMWATER SYSTEM ARRANGEMENTS FOR THE ACT	
WATERWAYS ADVISORY BOARD (EPD, IW, TAMS, NCA, Access Canberra, Community Groups)	
STRATEGY The utility would develop the whole-of-system integrated waterways and drainage strategy endorsed by the Waterways Advisory Committee. The Strategy identifies the long-term outcomes for waterways and drainage and the roles and responsibilities for all asset owners.	
REGULATION & POLICY The utility would be regulated by the ICRC. EPD continues to develop WSUD, Flood and stormwater design codes. The utility would enforce that developers meet codes and standards and has veto powers for non-compliant projects. The EPA and UTR (Access Canberra) would oversee compliance of the system and the utility with environment and utilities legislation.	
PERFORMANCE MANAGEMENT The performance management framework considers broad targets such as community satisfaction and stormwater recycling. Combination of outcomes and activity/input based KPIs . The utility would oversee and monitor the performance of the whole stormwater system.	
FUNDING Pricing policy and regulation is the responsibility of the ICRC. The utility collects and allocates funds to the assets it owns, and has the ability to run incentive programs to drive investment throughout the stormwater system, e.g. upstream solutions to minimise downstream issues.	
ASSET DEVELOPMENT Partnership approach to design, procure, build: EPD is developing Basin Priority Projects, Developers, the utility and TAMS would invest in capital works as required to meet system needs. The utility and TAMS perform asset acceptance for their areas of the network.	
MELBOURNE’S STORMWATER SYSTEM	
> Melbourne Water has the responsibility for developing the long-term holistic and integrated water strategy for all waterways and drainage across Melbourne > Funding is set by an independent regulator and collected as a stormwater levy by local water utilities > Melbourne Water collaborates with local councils to manage the performance of the upstream assets to control the downstream outcomes > Performance management is based on a combination of inputs i.e. number of GPTs cleaned and community satisfaction, not just water quality	
The diagram illustrates the stormwater management process in Melbourne. It starts with 'COUNCILS' at the top, showing a house and trees with rain falling on them. A label indicates 'Street gutters and street drains collect stormwater run-off'. An arrow leads down to 'MELBOURNE WATER', which shows 'Retarding basins, wetlands and litter traps slow and clean storm-water'. Another arrow leads down to 'BAYS', where a label states 'Stormwater flows to larger drains, then to rivers and creeks or directly to bays'.	
ASSET DEMARCATION > Local councils manage local drainage network including the road drainage. > MW install and maintain the regional drainage network, including large drains, stormwater infrastructure that connects to the rivers, creeks and bays. > Infrastructure is demarcated along catchment sizes, with the local councils taking authority over catchment areas <60ha	

Melbourne’s stormwater system arrangements could lift and shift into the ACT, offering greater value for the community.

System arrangements: Assessment of ownership options

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System arrangements

Asset demarcation

Implementation approach

Icon Water has considered the three proposed operation, asset management, and ownership options. As discussed our firm preference is for full ownership.

Long-term Leadership

The asset owner can take the lead in achieving the vision for healthy waterways in the ACT. The more responsibilities become devolved through contractual arrangements, the less control and less flexibility there is to realise outcomes.

Customer and community relationship

The asset owner can plan and deliver long-term outcomes in consultation with the community. Icon Water has a direct relationship with the community through its existing business of providing high quality water services to the region.

Item	O&M only	O&M and asset mgmt.	Full ownership
Performance of operations & maintenance	✓	✓	✓
Long-term asset strategy work	✗	Partial	✓
Alignment of interests	Poor	Moderate	Best
Ability of ownership model to deliver integrated water mgmt.	Poor	Moderate	Best
Incentive to deliver leading solutions for the community	Poor	Moderate	Best
Transaction Costs*	60% (\$2m)	80% (\$2.5m)	100% (\$3m)

* Transaction costs such as due diligence, legal and set up costs are unlikely to vary greatly between options. Difference in costs will depend on employee impacts.

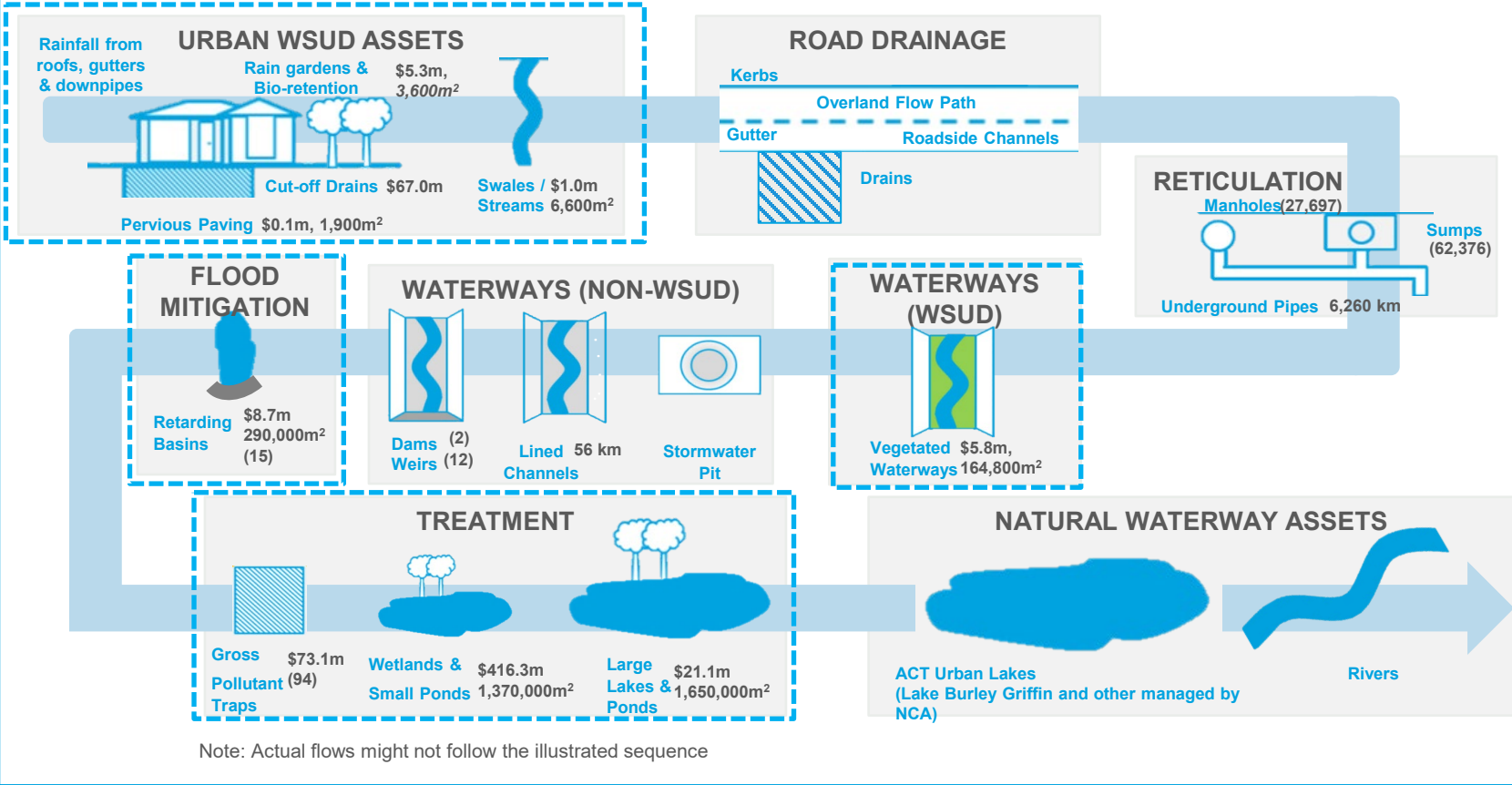
Full ownership enables the greatest opportunity to provide leadership and offer community value. Icon Water is not interested in a restricted O&M model that fails to exploit our expertise in water management.

Asset demarcation: WSUD in the stormwater value chain

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- System arrangements
- Asset demarcation
- Implementation approach

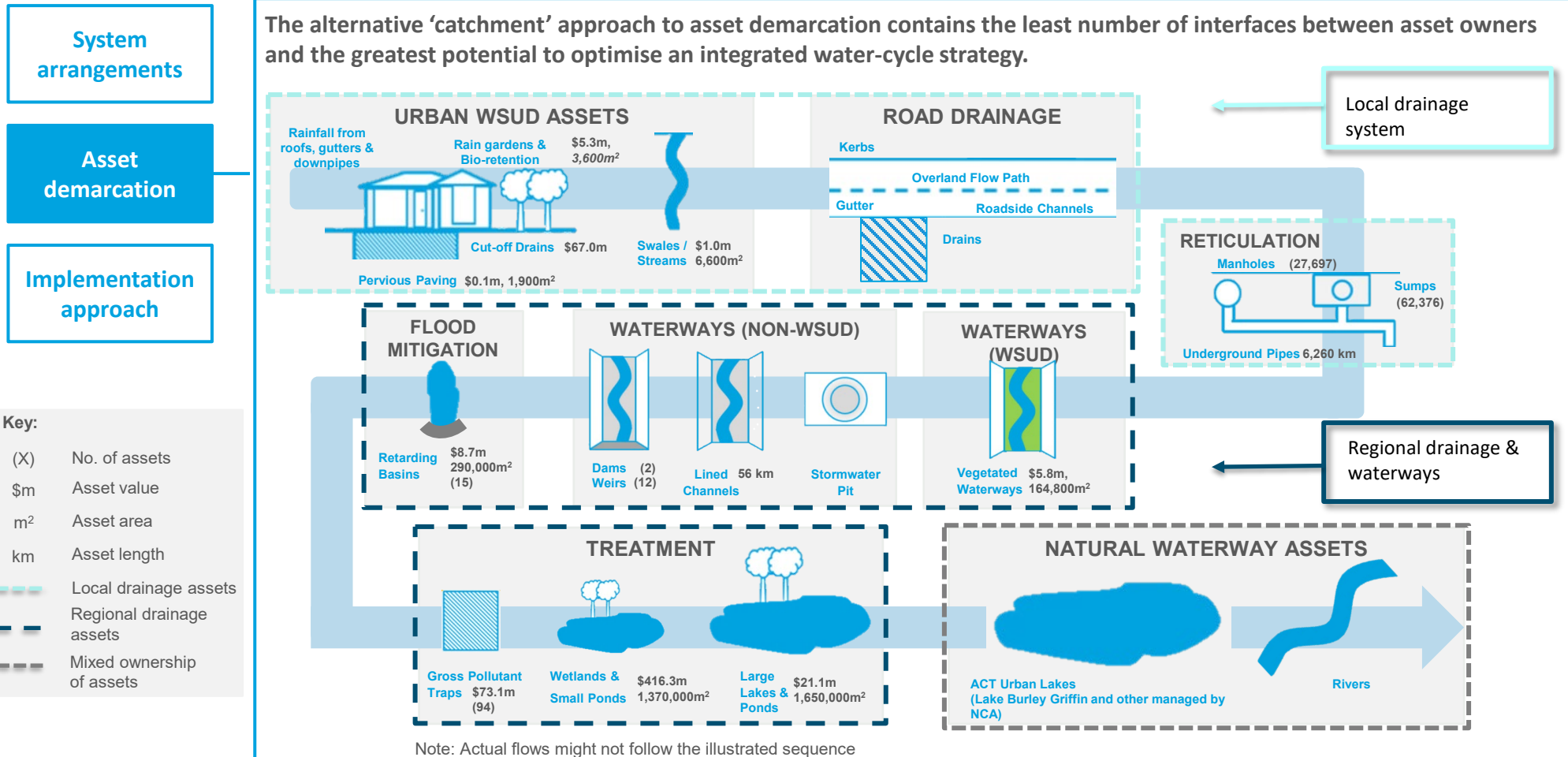
The current scope of consideration, restricted to WSUD assets, imposes multiple complicated interfaces between owners through the stormwater value chain.



The focus on WSUD assets has highlighted opportunities to improve management of the whole stormwater value chain. The ACTG Feasibility Study could broaden the scope of assets to be considered, to achieve the best outcomes.

Asset demarcation: An alternative 'catchment' approach

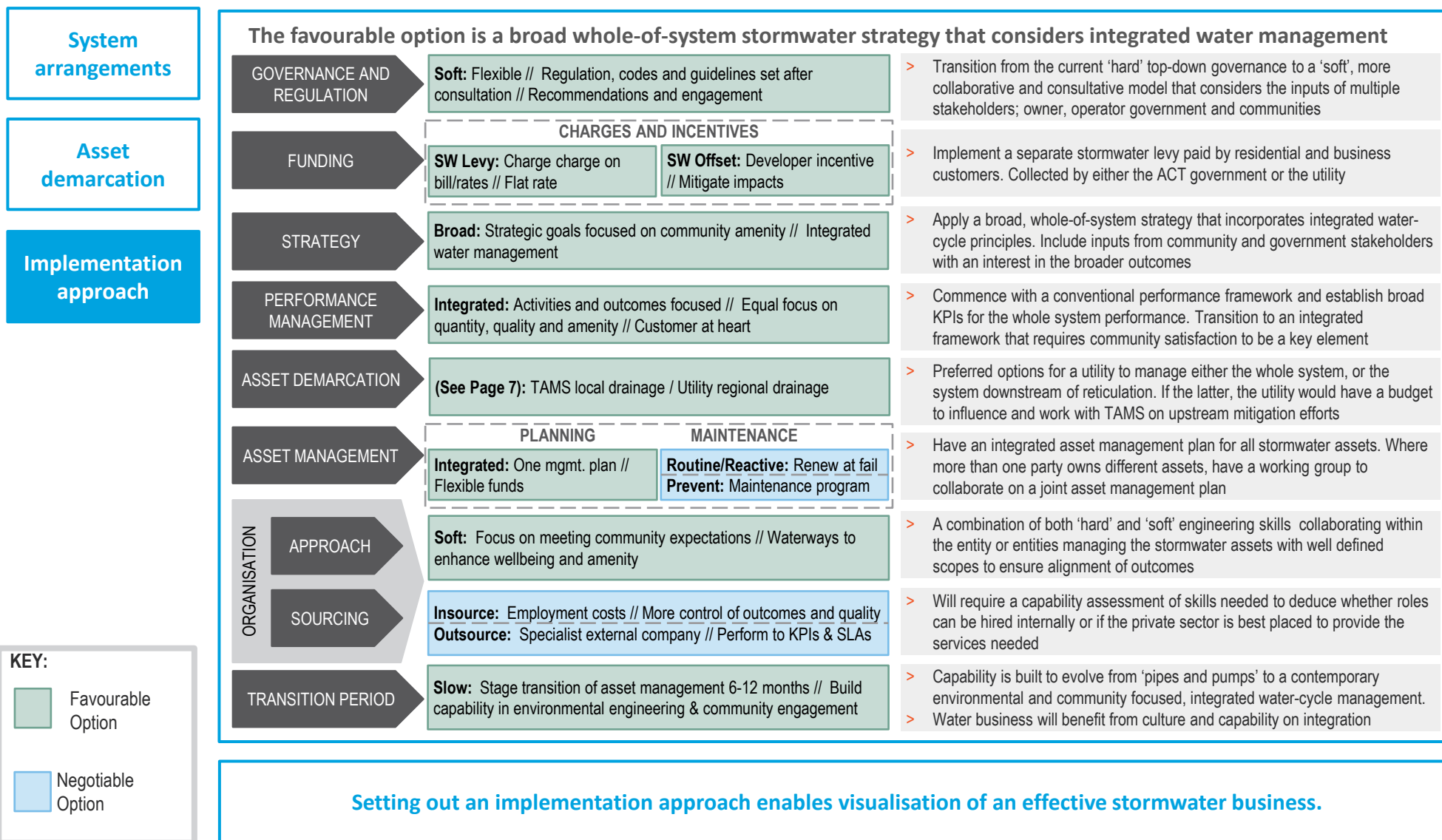
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Icon Water prefers a local and regional catchment demarcation along the stormwater system. The ACTG should consider this alternative to the current scope, to achieve more efficient and sustainable outcomes for the system.

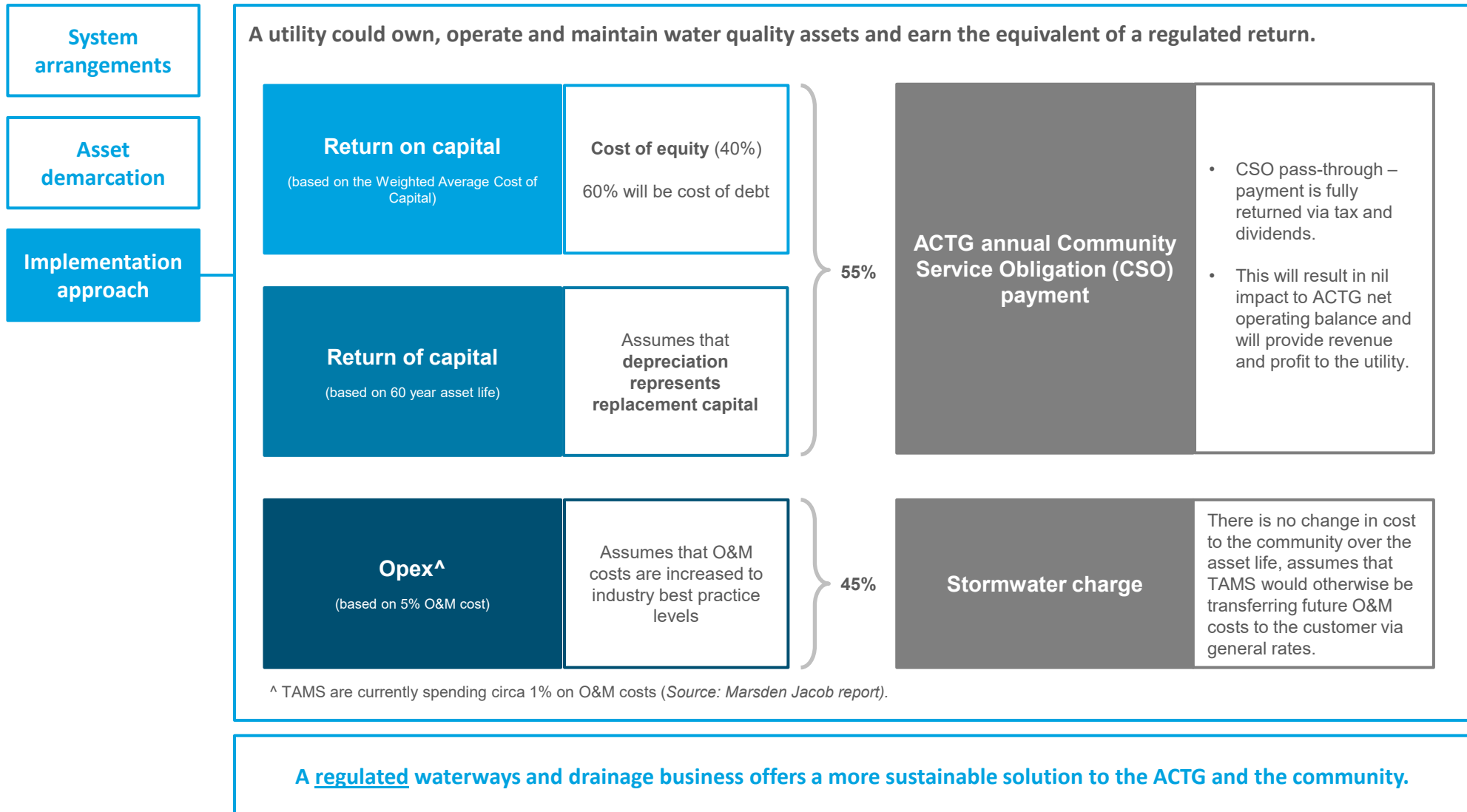
Implementation approach: Strategy

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Implementation approach: Funding sources

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Implementation approach: Community engagement approach

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System
arrangements

Asset
demarcation

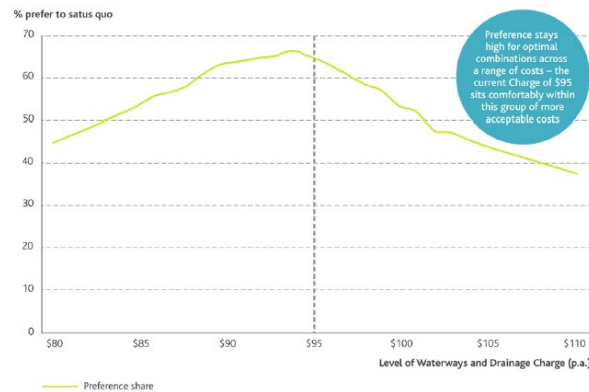
Implementation
approach

To meet challenges and realise the opportunities for stormwater there needs to be engagement of customer and the community in determining a vision for a city and also their needs, preferences and willingness to pay around the opportunities for stormwater – WSAA Submission to the Senate Inquiry into stormwater services in Australia.

It is important to define the value of improved waterways and drainage for the ACT community. A willingness to pay study would facilitate an improved understanding of the value of improvements to stormwater services.

Willingness to pay studies will assist in justifying future capital and operating expenditure levels. These data points would enhance any likely regulatory process and ensure prudent and efficient investment is balanced against community outcomes. Case Study: Melbourne Water

Figure 19: Customer preferences for waterways and drainage services (2015/16 Real Dollars)



Note: This chart shows the percentage of the community who prefer the optimal combination of activities at each cost to the status quo (current activities funded by the charge).



Community engagement will provide an informed view on the willingness to pay for improvements to water quality, recreation, and other outcomes based on the likely improvement in services.

Case Study: Realising benefits for the Cooks River community



The Cooks River was lined with concrete in the 1940's to reduce flooding. In the mid-2000s Sydney Water observed sections were starting to fail structurally. This provided the opportunity for naturalisation of 1100m of the river by Sydney Water in 2014-15.

This project replaced the failing concrete riverbanks with more gently sloped banks, stabilised with sandstone and native plants. More than 80% of the community surveyed were in agreement with the investment in this project.

Safety benefits: flood mitigation

Community benefits: direct property value uplift by between 4.8% and 8.9%, improved amenity with new cycle paths, wetlands, ongoing engagement in maintaining and protecting the river, education and appreciation of saltmarsh with signposted viewing platform.

Environmental benefits: renaturalised river, wetlands, threatened saltmarsh vegetation reintroduced, flood mitigated

Staff benefits: capability expanded through exposure to new economic assessment models and top-end research

Icon Water's firm preference is to only have a stormwater charge on its bill where it is the asset owner and able to engage directly with the community regarding a shared benefit model.

Implementation approach: Facilitation legislation

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System
arrangements

Asset
demarcation

Implementation
approach

Enabling or facilitation legislation can be used to implement the desired outcome for future management of WSUD assets.

Recent examples of facilitation legislation within the ACT include:

Capital Metro

Planning and Development (Capital Metro) Legislation Amendment Act 2015 - modify development application requirements for proposals related to light rail.

ActewAGL

ACTEW/AGL Partnership Facilitation Act 2000 – facilitate the implementation of the ActewAGL joint venture.

Inter-Territory asset transfer

Financial Management Act 1996 (Amendment 2006) – to permit the relevant Territory Authority to transfer ownership of assets to the ACT Government.



Stormwater Management Facilitation Act 2016

Heading title

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New legislation could overcome some identified implementation issues:

- Transferring ownership of assets between entities
- Setting or revising existing asset values
- Enabling secondment of employees between entities
- Managing the application of any ACT taxes on changed institutional arrangements

Key benefits of this approach:

- Clearly identify transaction scope
- Reduced transaction costs
- Reduce implementation time
- Manage transaction risks

The primary focus of the review should be on which option produces the best solution for stormwater management. Facilitation legislation can assist to smooth the implementation of the best option.

Conclusion and next steps

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Conclusion:

- Improved catchment-wide waterway and stormwater management will deliver better environmental and amenity outcomes for the ACT community. Currently it seems that no entity is responsible for such a system wide strategy.
- Melbourne Water has been operating a regulated stormwater business for more than 15 years and playing this strategic role for Melbourne waterways with recognised success.
- Similar utility-scale assets have been transferred in the ACT (i.e. the ACTEW under ActewAGL enabling legislation).
- If Icon Water acquired part of the stormwater system, it could operate as a regulated business and would be best placed to take the lead on an ACT catchment-wide stormwater strategy.

Proposed next steps:

