



## Dobsons Creek Stormwater Disconnection Project

Restoring high value waterways through reducing direct connected imperviousness (DCI)

The Basin, Dandenong Ranges, Knox City Council, Victoria



WATERWAY ECOSYSTEM  
RESEARCH GROUP



### Key Messages

- A multi-partner delivery model encourages collaboration, allowing organisations to draw on a variety of expertise that can address technical issues and deliver efficient community programs.
- Having a central coordinating role and governance structure (either working group or officer) is critical to ensure consistency and momentum across the lifespan of the project.
- Review and evaluation is critical to capitalising on learnings in further stages of the project and design of future projects.

### Project Overview

Dobsons Creek has the highest ecological value of any waterway within the Knox City Council area, and is one of the highest value waterways in the wider Dandenong Creek catchment. In 2010, Melbourne Water and Knox City Council initiated a pilot program to retrofit the Dobsons Creek catchment with stormwater disconnection measures on public and private land. The aim was improve the health of Dobsons Creek by disconnecting impervious surfaces to reduce runoff reaching the creek, restore catchment hydrology towards predevelopment levels and improve the ecological health and water quality. It also aimed to engage the community in stormwater management to protect their local waterway.

This project was delivered by key partners Melbourne Water, Knox City Council, South East Water and the University of Melbourne and serves as an important demonstration of a multi-agency/government approach to catchment scale stormwater disconnection.

Living Rivers funding has primarily supported Council to plan, design and construct precinct and streetscape WSUD on public land in the catchment. These systems have complimented delivery of lot scale private rainwater tanks. The tank program was delivered through South East Water, Melbourne Water with support from Knox council and additional funding from State Government. Living Rivers continue to support the project through the appointment of a Council based Dobson's creek Project Officer



Wick's Reserve



### Project Stages

Stage 0 -Development of the Knox Stormwater Strategy and Project conception 2009-2010

Stage 1 -Construction of Wicks Reserve Biofiltration System 2011

The project commenced with construction of the Wick's Reserve bio-infiltration basin. This 1900 m2 asset treats a large 11.5ha portion of the Dobsons Creek catchment contributing important baseflows for the nearby creek and providing a stormwater harvesting supply for the local community and bushland.

Stage 2 - Streetscape WSUD & Tanks for helping our Creek program 2012-14

The Tanks for helping our creek program focused on delivery of lot scale interventions with over 150 residential properties across the catchment receiving rainwater tanks. Concurrently three streetscape WSUD treatment train systems comprising simple, cost effective assets were installed by Knox City Council.



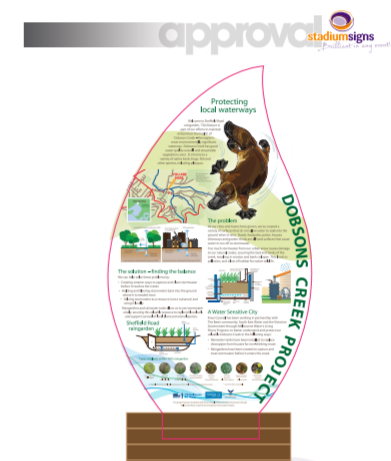
Stormwater treatment system and brochure explaining tanks program

Stage 3 Tanks for Helping our Creek Round 2 – MBI & Streetscape WSUD 2015 to present

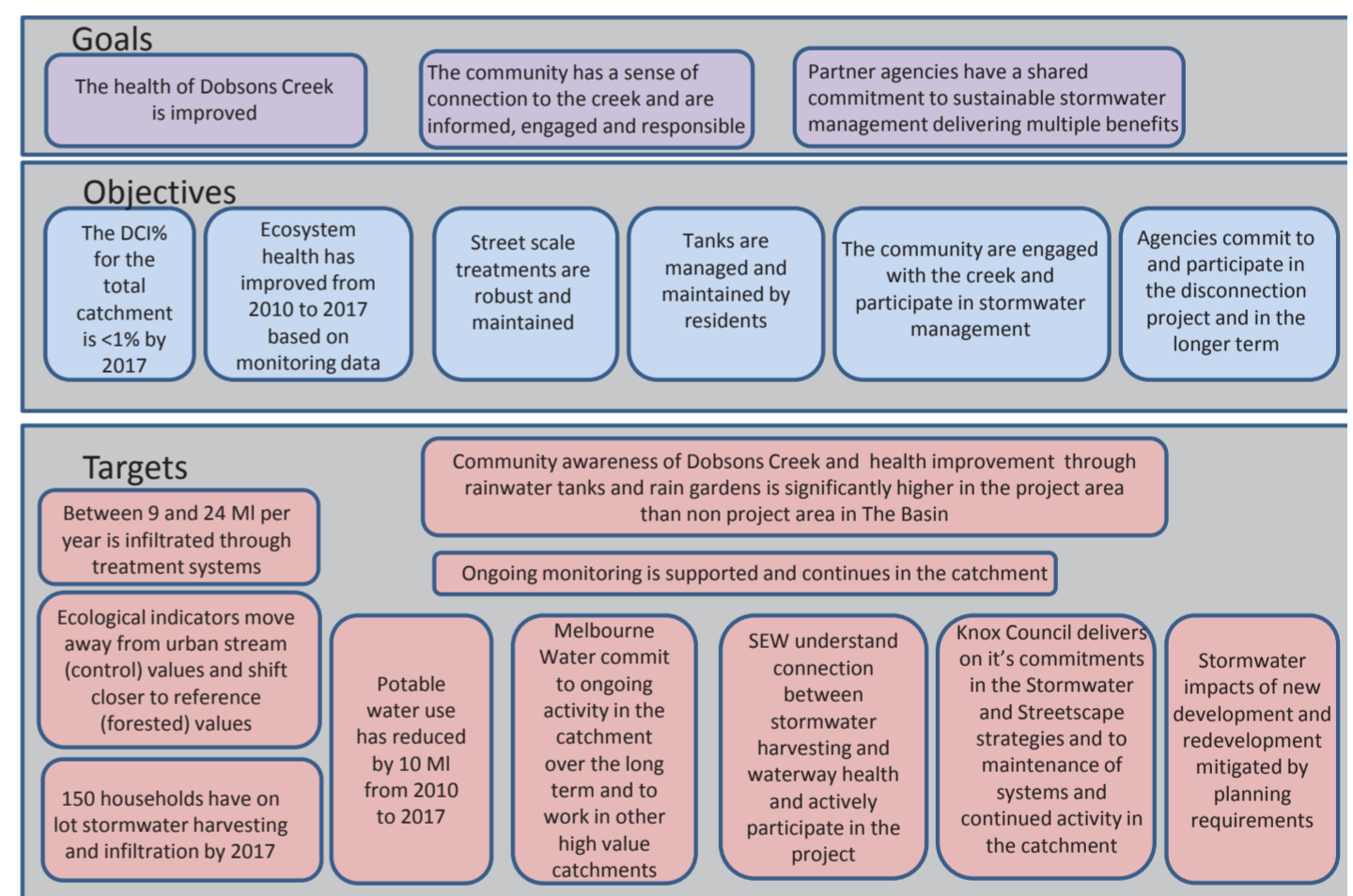
A second round of Tanks for Helping our Creek program tested a market based instrument (MBI) approach resulting in an additional 33 properties receiving tanks. Council constructed additional streetscape systems and reviewed and improved existing systems.

### Evaluation 2016 onwards

Key elements of the project, currently being evaluated include the agency delivery model, project economics and lifecycle costs, water consumption savings, community participation and perception. Catchment hydrology, water quality and stream response to stormwater interventions are currently monitored by the University of Melbourne and are being evaluated.



Rainwater tanks installed as part of this project and informative signage produced for a raingarden



The project was guided by a governance structure and project logic.

### Outcomes

#### Stormwater Disconnection

Interventions across the greater catchment have reduced directly connected imperviousness (a percentage measure of total impervious area directly connected to waterways via formal drainage) to below an estimated 2% threshold considered necessary for waterway improvement. Detailed investigations are underway to determine an accurate measure of catchment disconnection.

#### Community Benefit

Initial concerns around engaging private landowners to participate in the tanks programs, were largely overcome through a relatively direct communication strategy and delivery model. The presence of an 'on-the-ground' contracted plumber helped establish trust in the community resulting in significant uptake of on lot rainwater tanks. Preliminary data indicates potable water use has reduced among residents who have received tanks.

#### Industry

The project has produced numerous research papers, presentations and conducted industry events. The evaluation stage will provide guidance and tools to facilitate future disconnection projects.

#### More Information

For more information visit <https://www.melbournewater.com.au/livingrivers>

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