

# Sustainable Water Challenge 2006

**Council:** Marrickville Council

**Project Title:** Urban Stormwater Integrated Management (USWIM)

**Project Category:** Planning and Policy

## Project Summary

The USWIM project seeks to develop a new sustainable water management process that is multi-disciplinary, participatory and locally focussed. This project involves extensive community engagement but has also had far-reaching impacts on planning and policy within the organisation. The vehicle for this change has been the formation of an Integrated Urban Water Management (IUWM) Group

## Project Objectives

Marrickville Council has implemented the IUWM Group to implement a number of objectives, namely:

- to ensure all seventeen subcatchment water management plans are developed and implemented within a set of IUWM guidelines;
- to identify areas where Council can improve its corporate water management and demonstrate best practice;
- to ensure WSUD principles are incorporated into all new capital works projects and that these are used as opportunities to develop skills in WSUD;
- to share information and skills between sections enabling team and capacity building across Council;
- to engage with the community and promote the implementation of WSUD and IUWM on private land; and
- to remove existing barriers to the implementation of sustainable water management and provide incentives through the review of Development Control Plans and relevant Strategic Planning documents.

The group's success is based on the development of working partnerships across all divisions and sections of Council.

## Project Outcomes

### *Environmental*

Council's IUWM group bases decisions on four principles of sustainable water management:

- A reduction in reliance on potable water brought in from outside the catchment
- Fit for purpose water use
- A reducing in the impact of stormwater on waterways
- A reduction in the amount of waste water leaving a catchment which may cause pollution in other locations (e.g. ocean outfalls)

The group is broken down into four smaller working groups that address the following four areas of sustainable water management:

- Strategic Water and Energy Team (SWET) – Corporate  
Environmental benefits: potable water savings
- Sustainable Water Planning & Doing – Community  
Environmental benefits: changes in behaviour and attitude towards water
- Sustainable Water Planning & Doing – Public domain WSUD  
Environmental benefits: stormwater harvesting and water quality improvements
- Planning Controls – Private Domain  
Environmental benefits: removal of obstacles to the implementation of WSUD

By incorporating a monitoring and evaluation plan at the initial stages of project development, Council puts itself in a position where it is able to learn from mistakes made, leading to a gradual build up of capacity within all sections to effectively implement sustainable water management.

### ***Technical***

In a multi-disciplinary framework such as the IWM group, Council staff are able to link social and land-use data with water data, allowing the calculation of catchment based water budgets. Calculating the water budget provides a framework for addressing and prioritising all water concerns including consumption, conservation, reuse, quality, groundwater, flooding and drainage issues.

By combining the water budget with software modelling, Council is able to:

- compare future scenarios to assess the impacts of decisions on flooding, river health, water consumption and wastewater generation;
- question and test assumptions, assessing impacts of on-ground works, policy changes (e.g. BASIX) and partnerships;
- direct involvement in decision making by community, non-technical staff and Councillors; and
- improve reporting, evaluation and communication with internal and external stakeholders.

Since the implementation of the IUWM group in early 2006, a number of innovative projects have commenced development including a sustainable irrigation strategy for Council's riverside parks, the resurfacing of one of Council's car parks with permeable paving, two bio-filtration devices on Hills Street Marrickville South, the harvesting of rainwater from Council's depot and a demonstration of sustainable water management at Tom Foster Community Centre.

Council continues to work with the consultancy Ecological Engineering and Monash University to maintain up-to-date knowledge of new innovation in WSUD and bio-filtration.

### ***Transferable***

The development of the USWIM Project was influenced by research which identified that a single discipline approach to water management was only providing part of the solution.

By working together in a multi-disciplinary framework such as the IUWM group, Council staff is able to:

- maximise the use of resources;
- improve efficiency;
- combine skills;
- assist Council to work smarter on complex urban issues;
- prepare Council for future State demands; and
- position Council to more confidently influence the State agenda.

The benefits of this approach are transferable to other local governments, particularly those in urban environments.

### ***Difficulties Encountered***

The development of this framework was designed to overcome some of the difficulties encountered in the implementation of sustainable water management. These difficulties are primarily:

Knowledge gaps related to:

- existing water technologies (e.g. grey water reuse and bio-filtration systems);
- effective gathering of community data and demographics;
- methods for integrating social profiling data with technical knowledge; and
- community research and engagement.

Lack of communication and confusion with regard to:

- the primary responsibility for water management;
- whose role it is to address certain water issues and whose role it is to collaborate with the community and how, thus perpetuating the single focused water planning approach;
- how far staff can go with water related issues: e.g. the resources to check drainage designs in detail are limited and so Council relies on the certification of appropriately qualified consultants engaged by development applicants; and
- how to / who can provide advice on water quality-related matters (e.g. greywater reuse, rainwater tanks) for private development or public projects.

The implementation of the IUWM group has opened up communication across Council, leading to the development of collaborative partnerships, the sharing of knowledge and a more integrated approach to sustainable water management.

### **Team and Team Leader Details:**

#### ***Project team:***

Ken Hawke - Director, Development and Environmental Services  
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# Policy and Planning for Sustainable Water Management in Marrickville

