



# MEMORANDUM

**To:** Councillors

**From:** Manager Strategic Planning

**CC:** Senior Management Team

**Date:** 8 November 2011

**SUBJECT: DCP Review – mandatory rainwater tanks in commercial and industrial developments**

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## Introduction

A report will be presented to the Council Meeting scheduled for 22 November seeking a resolution to place the amendments on public exhibition. The issue of rainwater tanks in industrial and commercial developments has been reviewed by staff. This memo details the implications of a number of options for rainwater tanks within the Industrial and commercial zones.

## Background

A “housekeeping” review of Camden DCP has been undertaken. Issues being reviewed include:

- Car parking rates and requirements;
- Road profiles for Spring Farm and Elderslie;
- Minor map inconsistencies; and
- Minor amendments to rectify grammatical and spelling errors to clarify intent of the controls.

## Rainwater tanks in industrial and commercial developments

A request has been made for controls for mandatory rainwater tanks in industrial and commercial developments. These controls were previously in the Camden DCP 2006; however they were removed from the current DCP 2011.

There are four (4) potential options that are discussed below

## Options

- 1. On-site Detention – detaining water and releasing it slowly; or**
- 2. Water Re-use – for water landscaping, toilets; or**
- 3. Ecologically Sustainable Development – a holistic approach; or**
- 4. No controls.**

### **1. On-site Stormwater Detention – detaining water and releasing it slowly**

On-site Stormwater Detention (OSD) is a temporary, water storage facility that is created as a depression in the landscape or an underground tank or a combination of both. This facility detains an amount of stormwater for duration of time, whilst slowly releasing a portion of this through small stormwater outlets.

The aim of an OSD system is to delay and reduce stormwater flows or discharge from a site, thus reducing flood risks and subsequent infrastructure damage.

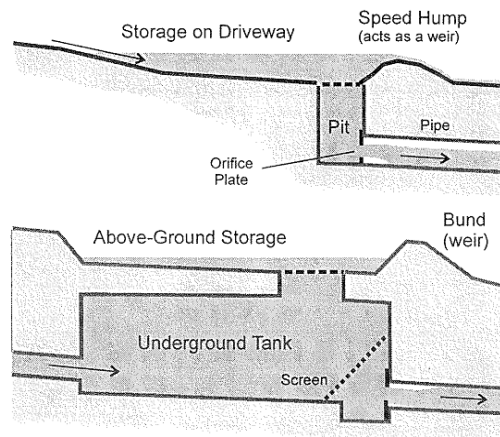


Figure 1 Typical OSD Systems

### Advantages

- OSD ensures that development does not contribute to downstream flooding
- Aids with additional runoff at the source
- It is a user-pays system, so charges are not passed on to the community
- Preserves the effectiveness of existing flood mitigation and drainage works
- Avoids the need for upgrading downstream drainage systems.

### Disadvantages

- Requires higher construction standards than are usual for stormwater, adding to the cost of developments
- OSD systems will require regular inspections by Council
- It can often be difficult to get owners to maintain OSD systems
- Not overly effective compared to other options

### Recommended:

That this approach is not supported due to infrastructure costs and topographical and landscape constraints common to industrial and commercial developments. There is also no environmental benefit gained from implementing this system – benefits lie in Council infrastructure not being overloaded during peak rainfall periods.

## 2. Water Re-use – for water landscaping, toilets, etc.

Rainwater is collected from the roof surfaces and upper level terraces of a development and transported into lower level storage tanks. The water is filtered through a screen filter and is then pumped under pressure to be used for landscaping purposes.

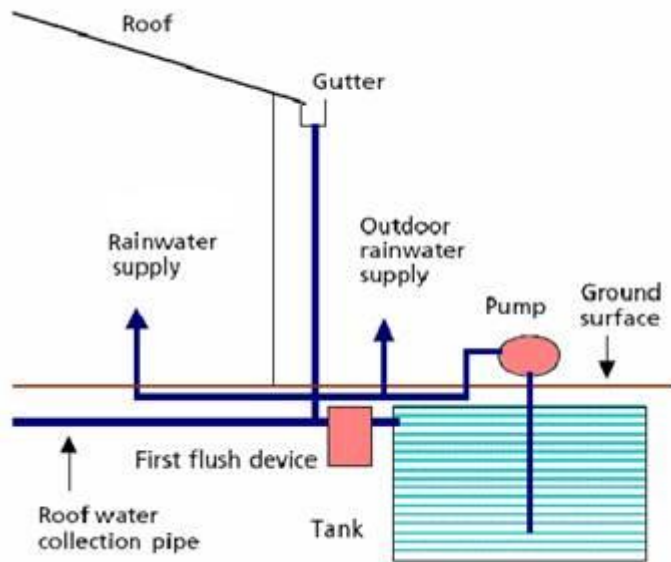


Figure 2. Configuration of an underground re-use system

#### Advantages

- Water collected is considered 'clean' as the end use requires low quality water.
- Reuse of the rainwater captured and stored on site is environmentally sustainable
- Reduces demand on natural water resources

#### Disadvantages

- Topographical and landscape constraints means difficulty in installing and maintaining the tank
- Minimal opportunity to use the water collected as little to no landscaping in industrial and commercial developments.
- It may be difficult to provide an appropriate location for the tank on site. In many circumstances, the tank will need to be located in front of the site and may be unsightly. (Built examples are provided at the end of this Memo)

#### Recommended:

That this option is not supported as there is minimal opportunity for water re-use within industrial and commercial developments as infrastructure associated with meeting the standards required for industrial purposes is expensive, therefore not cost efficient.

### 3. Ecologically Sustainable Development – a holistic approach

An ESD chapter could be inserted into the DCP that identifies the following objectives:

- Improve energy efficiency through the design and siting of buildings; and
- Ensure that developments are environmentally sustainable in terms of energy and water use and management of waste and discharge.

With respect to rainwater conservation controls, consideration should be given to measurements that reduce consumption and conserve water through recycling systems. Developments may be required to implement total water management systems by including measures that reduce consumption of potable water for non-potable uses, minimize site run-off and promote stormwater re-use.

## Advantages

- Flexibility of measures that are suitable to the site

## Disadvantages

- Potential for significant costs associated with implementing infrastructure and use of consultants if required
- Difficulty in measuring controls that are qualitative in nature
- Uncertainty surrounding appropriateness of controls and impact of measures overall to the environmental objectives of Camden Council

## **Recommendation:**

That this option is not supported as the cost outlay and environmental impact is not known.

## **4. No controls**

There is difficulty in preparing a development control for mandatory rainwater tanks that would be suitable for all or even most industrial and/or commercial developments throughout the Camden LGA. Further, it is likely that this form of development will require a Water Industry Competition Act (WICA) license from IPART, as they will be operating a water supply in competition to Sydney Water. IPART indicates that the WICA application process can take up to six (6) months and cost approximately \$100,000. This is before any works are approved.

## **Recommendation:**

It is therefore recommended that mandatory rainwater tank controls for industrial and/or commercial developments not be included in the review of Camden DCP 2011.

Please do not hesitate to contact me on 4654 7802 if you require any further information.



**Chris Lalor**  
**Acting Manager Strategic Planning**

**Photo Examples:**



Two above ground rainwater tanks within the front setback of Bunnings Warehouse on Hoxton Park Road. these detract from the streetscape and aesthetic values of the adjacent buildings.





Rainwater tanks clearly visible from the public domain which detracts from the aesthetic value of the adjacent structure. It is costly and difficult to obtain tanks of this capacity within a similar colour pallet to the structure therefore bringing the prominence of the tanks to attention.

