

Chapter 12 Rainwater tanks



Slim-line rainwater tank

12.1 Introduction

The core sustainability objective of using **rainwater tanks** is to conserve mains water. In addition to conserving mains water, rainwater tanks help to protect urban streams by reducing **stormwater** runoff volumes, particularly from small storms, and associated stormwater pollutants from reaching downstream waterways. Rainwater and stormwater harvesting on individual allotments are some of the initiatives that can be implemented to deliver such a potable water conservation objective.

Another important household initiative to conserve water is the use of AAA plumbing fittings and AAA and AAAA appliances. These are often adopted as a first priority in water conservation initiatives as they are easy to adopt, have high cost effectiveness and broader environmental benefits such as reduced wastewater **discharges**. Recent research (Melbourne Water 2001) has found that the adoption of AAA rated showerheads and dual flush toilets can reduce indoor water use by 15%–20% (11%–15% of total internal and external water use). Following improving the efficiency of water use within a household, finding supplementary sources for water is fundamental to further reducing demand on mains water. The use of rainwater tanks to collect roof runoff is an accepted means of supplementing mains water supplies which is simpler to implement than other potential alternative water sources such as greywater or surface stormwater.

There are no quantitative performance targets (e.g. size of tank, targeted reductions in potable demand) in any existing local government and state authority policies and guidelines regarding the use of rainwater tanks. However, it can be inferred from the various policies and guidelines that do exist that a performance target for rainwater tanks (or any other form of rainwater and stormwater harvesting, storage and reuse scheme) is to provide a ‘reliable’ supply of suitable quality water to meet the demand requirements of a stipulated preferred ‘end-use’ (e.g. toilet flushing).

This design procedure focuses on factors associated with selecting and using a rainwater tank, including sizing rainwater tanks such that they will provide a reliable source of water to supplement mains water supply. Variables that need to be considered in sizing a rainwater tank