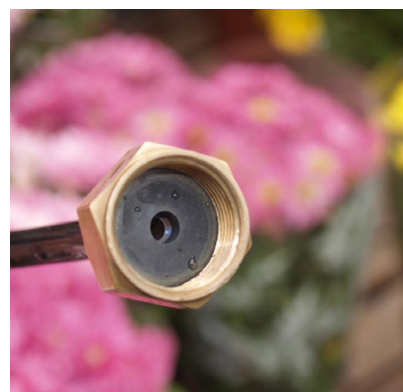


# Massbuild installs rainwater-harvesting tanks to grow plants in its nurseries

*South Africa is among the 30 driest nations in the world. With a growing population of citizens and burgeoning demand for food and living facilities, water is fast becoming an increasingly precious resource. Already so much of our everyday lives depends on access to fresh water, so the pressure is on to find creative ways to cut down on water usage and minimise water wastage.*



## Saving water one raindrop at a time

Massmart’s Massbuild division is making inroads in cutting down on its operational water usage by installing rainwater-harvesting tanks at Builders Warehouse stores. The project started in March 2010 but already all Builders Warehouse outlets have tanks and pumps linked to their gutter systems. Next up, Builders Express outlets will be receiving theirs.

On average the system of tanks, the pump, the piping and a

protective palisade cage to house the unit takes two weeks and R80 000 to install at a store. The idea behind the project is to capture as much of the rainwater as possible that flows through each store’s gutter system during the rainy season. This water is captured, safely stored and is made available for use in certain areas of the store when required. Because Massbuild is in the building and home improvement retailing industry, having access to the right components has not been a problem. Each Massbuild store uses a slightly larger version of the

tanks and pumps it sells to customers in building rainwater harvesting facilities. Durable outdoor JoJo water storage tanks and motorised pumps move the water from the storage tanks to the gardening centre for use in watering plants. During the heavy rain period when the tanks have reached their maximum, rainwater flows down to the ground, as it normally would without the system in place, from gutters around the stores.

## How much water can be saved?

- The next step for Builders Warehouse is to install meters to gauge how much water is being used from the rainwater harvesting tanks. These meters will allow the chain to determine savings in its monthly water usage.
- Now that all Builders Warehouse stores have tanks installed, smaller neighbourhood Builders Express stores will get theirs.
- The Massmart group, to which the Builders chains belongs, is investigating including a filtration system to allow harvested rainwater to be safely used in other functions of the store, for example cleaning or in toilets.
- Stores that have air-conditioning plants are also able to capture and reuse condensate water from the air-conditioning system. Builders Warehouse stores in Port Elizabeth, Cape Town, Nelspruit and Durban are among these. During the recent drought period in Port Elizabeth, the store's garden centre avoided using any municipal water while water restrictions were active.

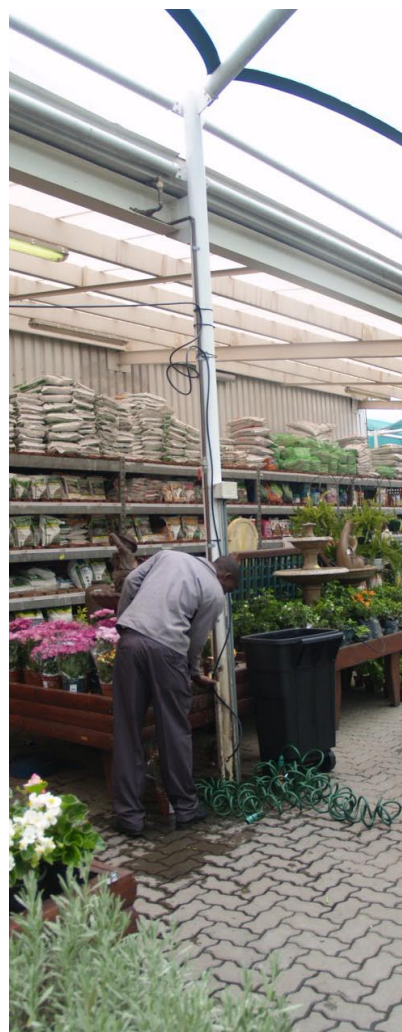
### Case study: Builders Warehouse Glen Eagles

The Builders Warehouse store in Glen Eagles, Johannesburg was one of the first stores to trial the rainwater harvesting project. Piping linked to a portion that's less than a third the size of the site's 10 000ft<sup>2</sup> roof is enough to fill two 10 000l tanks. The motor on the pump provides the pressure to pump water from the tanks to the main pipe in the nursery.

Just over one year into the project and the store is seeing an impact. The store had been discarding numerous trays of plants that had died as a result of many factors including under-watering. One year later and nursery sales are up 14% over April to November 2009 figures.

The municipal water supply tap has been permanently closed since the rainwater tap was installed. The store's nursery, which is a massive 1 008m<sup>2</sup>, houses 300 plants in including growing herbs, ferns, flowering shrubs and small trees. Watering is done first thing in the morning when temperatures

are still low, allowing the water to sink in before being burned off under the summer heat. Early watering also gives the water a chance to drain off the nursery floor so that the sales area is ready for customers when they arrive to shop. Since March 2010, the rainwater tank at Builder Warehouse Glen Eagles has never been empty, even throughout the dry winter months. ■



### Facts on rainwater harvesting at Builders Warehouse Glen Eagles

- The store sells over 300 plants, which contribute approximately 1.5%, to the store's total sales.
- Since the installation of the rainwater tank, write-offs of dead plants have noticeably declined as a result of better care and better-managed watering.
- Plant sales for the period April 2010 to November 2010 improved 14% compared to plant sales for the corresponding period in 2009.
- The municipal water tap in the gardening section has been permanently closed and replaced with a hose for rainwater pumped from the storage tanks.