

CASE STUDY



Draincel® 30mm | mastaTANK® Modular Units

Westfield Shopping Centre, Doncaster VIC

Project Overview

NewGrow is a civil landscaping specialist in Victoria, who was recently contracted to complete a large scale commercial project for Westfield shopping centre in Doncaster.

The major shopping precinct in Melbourne is undergoing significant expansion to its retail footprint, along with 18,000sqm of new commercial office space, improved pedestrian access and additional car parking.

As part of this \$500 million project, the NewGrow team were engaged to provide hard landscaping including efficient and reliable drainage for large planter boxes scattered around the centre.

Challenges

The team was engaged to construct large planter boxes for the outside of the centre, which required smart drainage solutions. Designed for the long term, the planter boxes needed to be resistant to seepage and water damage issues whilst also providing a moist and healthy environment for plants to thrive.

The contractors required a polypropylene drainage cell system that could create a large volume permeable subsurface layer. Using a geosynthetic solution for the planter boxes would reduce disruption on site, as well as reducing soil volume and subsequent weight.

This would also ensure a fast and easy installation without the need for special equipment, speeding up the project delivery.

The Solution

The NewGrow team chose a combination of Polyfabrics Draincel® and MastaTANK® modular drainage cell units for this project. Both of these products provide a lightweight structural system specifically designed for planter box applications.

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Using drainage cells in place of bulk soil not only saves cost and weight, but it also allows optimal growing conditions for vegetation through ideal moisture conditions and aeration. Only excess water is removed which means the soil profile retains a high moisture content.

The profile of this polypropylene cell features water storage cups used for passive irrigation. Due to the structural design of the cell, a void space is created, providing aeration and promoting growth for root systems.

It also functions as a protective membrane for waterproofing on concrete slabs and walls, which when combined with Polyfabrics TerraStop® nonwoven geofabric, provided a complete drainage solution for the project. Mature trees and understory plants could be installed quickly and easily, helping the NewGrow team to complete the project on time and within budget.

Benefits of using a purpose-designed drainage cell system

Choosing Polyfabrics Draincel® & mastaTANK® subsurface drainage for planter boxes has a range of benefits. With various cell depths and modular tank kits available, it is easy to achieve the best result with a product that precisely fits the space.

Both Draincel® & mastaTANK® provide high compressive strength, offering excellent load-bearing capacity whilst reducing earthworks, installation cost and site disruption.

Polyfabrics Draincel® & mastaTANK® both comply with the principles of Water Sensitive Urban Design and offer best-practice environmental management for Council approvals. These environmentally friendly products offer less carbon footprint than competitor products, whilst still offering better serviceability performance under dead load and vehicular traffic.

For further technical assistance, please contact Polyfabrics on 1300 287 484 or take a look at the specifications for Draincel® and mastaTANK® online.

