



# Working with the environment

## SMART WATERING CASE STUDY: PAK N' SAVE RANGIORA

Rough & Milne Landscape Architects were brought in to tackle the landscaping of a new site owned by Foodstuffs South Island, to be developed into a new Pak n' Save supermarket, designed by McCoy Wixon Architects.

All of the landscaping on the site was done with the environment top of mind.

"Management at Foodstuffs South Island feel strongly about sustainability, and water preservation is a big part of this," says Chris Owen, Project Landscape Architect.

Four rain tanks were positioned around the new building to capture rainwater off the large roof. The stored rainwater is used to irrigate the newly planted trees and shrubs. The rain tanks were made a feature of the building, and are on display to raise awareness of their purpose. "The tanks have been specifically positioned as part of the building façade rather than being tucked away, which is great," says Chris.

Waterforce was engaged by Rough & Milne to prepare an irrigation plan at the start of the detailed design process. Chris says that it is always re-assuring to know of their involvement. "It means the irrigation will be well thought through and professionally designed. Having a detailed irrigation plan means that the right volume of water is applied to planting and avoids wasting water where it's not needed."

Chris explains that when designing the site they also used hardy and mostly native trees and plants which don't require large amounts of water. "We used Kowhai and Ribbonwood trees planted in tree pits to protect them from heavy foot and car traffic; and in the shrub areas we used Broadleaf, Flaxes, tussocks and Astelias among others."

To feed the newly planted trees and shrubs, irrigation pipes run underground from the rain tanks to the 'tree pits' and planted areas around the site. The pipes feed into small drip irrigation tubes which apply water directly to each plant. Rainwater from the tanks is also applied with drip lines to riparian planting on a stream's edge which runs along the boundary on one side of the site.

The stream created further environmental challenges to the project's consultant team, because it split the site into two by running through the middle. In the project's first stage, Rough & Milne worked closely with Aurecon Civil Engineers and Aquatic Ecology Ltd. This team was tasked with finding a sympathetic way to divert the stream to allow for the new building and carpark – without harming the aquatic life.

Aquatic Ecology caught the fish live prior to earthworks commencing, and a portable tank was used to house the fish while the stream was diverted toward the site's boundary. In order to ensure a healthy environment for spawning, special gravel was used on the river bed plus the riparian planting was put in along the edges to protect the stream. The old stream was then filled in compactly and reinforced so the building and carpark could be constructed.

As a result, the new supermarket provides a generous parking area, an attractive planted stream which acts as a haven for aquatic life, and an intelligent irrigation system which does not rely heavily on mains water. A win-win for everyone.



*Tree pit in the Pak N' Save Carpark*

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