



# Clever watering combinations result in effective water use

## SMART WATERING CASE STUDY: LINCOLN LIBRARY COMMUNITY GREEN

Construction of a new library facility\* in the heart of Lincoln created an opportunity to provide a range of community services, and has led to the development of a multi-use public open space, the Lincoln Green.

Selwyn District Council's concept for Lincoln Green, developed after community consultation, was to offer locals an inviting space to relax and hang out, which could also host community events and a weekly market. This means the lawns need to look good and be resilient.

Mindful of Lincoln's status as an 'enviro-town', Rough and Milne Landscape Architects considered it part of their brief to ensure the lawn and garden areas were developed, managed and watered sustainably.

"We decided to keep irrigation to a minimum for planting, and instead focus irrigation on the lawn areas," says Chris Owen, project landscape architect from Rough & Milne.

Irrigation for the lawn areas was carried out on a design-build basis by Waterforce and a hardy drought-tolerant seed, PGG 'sports oval seed', was specified for the grass.

To ensure a pristine but not overwatered lawn during the day, irrigation is set to timers which only come on at night for short periods of time. Sprinkler type and placement is designed to work with the multifunction lawns and still give high uniformity to minimise water requirements.

For the planted areas, 'rain gardens' were introduced to utilise rainfall instead of irrigation. These were designed against the edge of the library's existing paving, with the paving sloping toward the planted area. "This means stormwater can naturally run off the paving into these gardens, where it can return to the water table and also irrigate plants," says Chris.

The design of rain gardens also provides an alternative way of managing storm water, preventing the need for traditional sumps or drains. To stop flooding in peak flows, sub soil drainage was constructed, which means any excess stormwater runoff would enter the council stormwater system.

Because stormwater was essentially returning to the water table, chemical fertiliser, which would leach into the aquifers, couldn't be used to feed the new plants during the plants maintenance. A stone mulch was also applied instead of bark, which would float away in heavy rain events.

To ensure that the plants could survive only on seasonal rainfall rather than regular irrigation, attractive natives like Muehlenbeckia axillaris, Apodasmia similis, coprosma acerosa, Carex virgate and Dianella nigra were specified, amongst others. Although not irrigated, these areas were initially carefully hand watered during a one-year maintenance period, with careful application to help each plant bed in.

Now, the fast increasing population of Lincoln can enjoy the new library and gastro-pub which frame the Green, with new gardens to read in, gather in, have picnics in and walk through, knowing that it's all designed with a 'sustainable' philosophy.

\*The library was designed by Warren and Mahoney.



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