



Marae introduces irrigation to create native sanctuary

SMART WATERING CASE STUDY: HAKATERE MARAE

On a dry, windswept block of almost two hectares next to State Highway One about eight kilometres north of Ashburton sits Hakatere Marae. Just over forty years ago this was the site of Fairton School. It is now a large complex available for use by the whole Ashburton community. Today, a group of passionate locals including committee member Janet Benfell hope to create a native sanctuary around the former school buildings. The plantings will shelter the marae from the district's notorious norwester gales, reduce traffic noise from adjacent State Highway One and will eventually support their vision of being part of a native corridor for birds to visit and feed from across the Plains.



To help them with this goal, the marae committee recognized the need for a more sustainable water supply. Until recently the several hundred native plantings, grasses and trees planted on the site, alongside a large vegetable garden, were watered by hand using the Fairton town supply. With a limited water allocation, marae gardener Rikki Hollis says it became clear an alternative supply was needed. "Anything we use over the 1000 litres we have to pay for and that is what really gave us thought."

So after successfully applying for a grant from Environment Canterbury's Biodiversity Fund, the marae purchased a 30,000litre RX Plastics water tank and is now investigating a drip irrigation system which will distribute rainwater which they will trap on the roof of their whareniui (meeting house).

"It's just logical. We've got a big roof and we are only allocated so much water from town supply, and we don't want to be using that, especially when we get to 'no watering days (council-imposed restrictions). We want to be self sufficient," says Janet.

The next step in the process is identifying the best type of irrigation system. The soils under the marae, typical of this part of Mid Canterbury, are light and stony. Spring winds strip the land of moisture and rainfall can be limited during summer. A drip or soak irrigation system makes sense because of its highly-focused application, unlike sprinkler systems which are less targeted and where water distribution can be affected by wind. The marae committee is being helped in its decision-making by staff from local irrigation company Waterforce and local water provider Rangitata Diversion Race Management Ltd (RDRML). They hope to have the irrigation system up and running before Christmas.

RDRML CEO Ben Curry says irrigation expertise will be crucial to the success of the native sanctuary as the land area is extensive, and with little shelter, any plantings will be buffeted by wind and stripped of moisture. The company will provide a cash contribution towards the design of a new irrigation system by Waterforce.

"We've come onboard to support the project as a way of giving back to the community. We saw a need to provide technical assistance to ensure what-ever was designed would irrigate this area efficiently and sustainably," says Mr Curry.

Waterforce Irrigation designer Daniel McLaughlin is working with the RDRML to come up with the design of the system. "Every irrigation project poses its own unique challenges and this development at Hakatere Marae has a few to overcome. The value of irrigation in Canterbury is not limited to increasing agricultural production, but creating a better place for everyone to live and this is something we are very excited to be a part of."

Janet says one of the big benefits of moving to an irrigation system will be a reduced workload for volunteer marae gardener Rikki. Having automatic timers to start the irrigation, rather than having to walk around the two-hectare site, with hose in hand will make a real difference. And consistent water application, aided by regular mulching, will gradually improve the quality of the marae's soil.

"It will definitely pay off over the long term," says Rikki.

Additionally, Janet says a more reliable water supply through drip irrigation will boost the health of the fledgling native boundary that encircles the marae, in particular the Atea, or spiritual area in front of the meeting house. Being able to provide more shelter from the norwest winds for visitors coming onto the marae and for ceremonial gatherings will make the area more attractive.

"It will take time but we are looking forward to it," says Janet.



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