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Council improves wastewater treatment

► **Hugh de Lacy**

The result of ongoing wind damage to a wastewater pond-irrigated pine forest near the township of Amberley was for the Hurunui District Council (HDC) a motive to find a new means of wastewater disposal.

The treated waste-water was initially disposed to ground through irrigation to grassland and pine trees via fixed-line sprinklers and K-line irrigation, serving the district's southern communities of Amberley township, Amberley Beach, Leithfield and Leithfield Beach.

Ongoing wind damage rendered the irrigation system unworkable on an 8ha block of pines, so in 2020 a large-scale clearance of the felled trees and stumps, followed by significant earthworks, was undertaken.

"The HDC installed a centre-pivot irrigation system, planting the area in ryegrass and engaging a contractor to maintain the land and carry out a cut-and-carry operation for us," council engineer Paul Thornton says. "The contractor is able to harvest the grass and sell it on in a mutually beneficial arrangement."

At the same time, the Waste-Water Treatment Project (WWTP) was upgraded, and now comprises a mechanical influent screen, aerated facultative pond and a secondary maturation pond, with the treated wastewater discharged to the land.

HDC has recently applied to Environment Canterbury (ECan) for a new resource consent to continue to discharge the waste-water to the land. While this application is being dealt with, HDC has continued making improvements to the plant and its systems.

"We are currently in the process of adding a further centre-pivot irrigator along with fixed posts and sets to the remaining 7.2ha," Paul says. "This area will also become part of the cut-and-carry grass operation."

He said this work has included adding a new wet-well for the collection of the treated water, and a new treatment shed for better control and monitoring of the irrigation systems in place, while new up-to-date drum screens will be installed to help with any maintenance issues.

As part of the new consent conditions it's seeking, HDC has committed to continuing the improvements on this site, including the installation of a new sequencing batch reactor (SBR) plant.

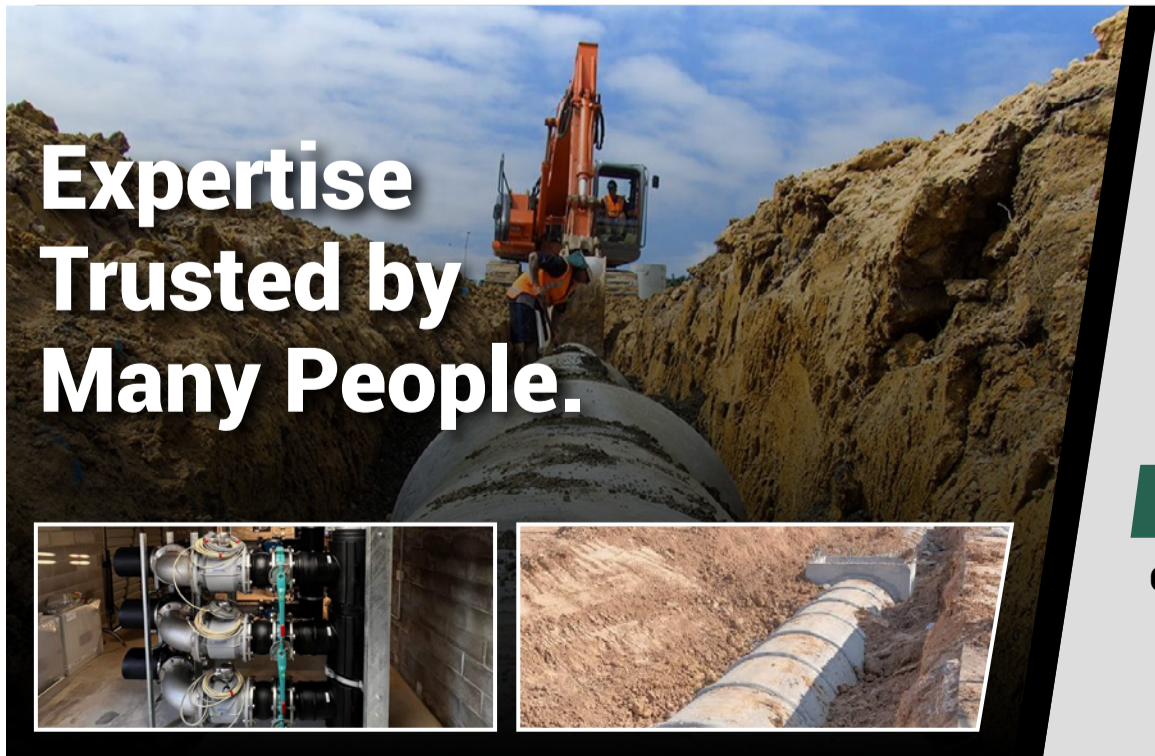
"This area will be within the footprint of Pond Two, and involves the construction of a

new SBR and effluent buffer lagoon with an estimated 4000m³ active storage volume, and an irrigation lagoon of the same size," Paul says.

He adds that HDC will also modify the WWTP inlet and screen system to divert screened wastewater to the influent buffer lagoon. This, and pipework modifications, would need to be completed within 36 months of the resource consent application being approved.

These WWTP upgrades will future-proof Hurunui District's fastest growing areas of Amberley township and its nearby settlements, while at the same time ensuring quality treatment and disposal of wastewater.

"Following these upgrades, the WWTP will have the capacity to treat about 2000m³ a day to a higher quality," Paul says.



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