

Sludge-free process delivered by sludge-free performance

Hastings District Council's new \$27 million domestic waste water treatment plant at Clive is the first to use a unique locally developed process.

Disposing of sludge by-product from conventional treatment plants is costly and detrimental to the environment. Sludge processing is abrasive, shortening equipment life.

But sludge production has been eliminated at the new type of plant, generating interest from other local bodies in New Zealand.

There was no room for trial and error on the high profile project because of the absolute deadline for completion due to the resource consent for discharging sub-standard domestic waste expiring on June 30 this year.

Napier's Falcon Electrical Ltd started work on the project in the middle of last year with up to nine staff on site in the final stages of the electrical installation and process control contract.

With the pressure on, Brad Jarvis Falcon Electrical's site foreman, says the biggest risk was missing project milestones which meant approaching the project with a simple philosophy.

"You've got to get it right first time and make sure everything is reliable," he says.

According to Jarvis the requirement for full system redundancy added multiple levels to the job because every single motor had to have local control, remote control and PLC control. On critical plant there had to be a plus-one sensor system giving a minimum of two sensors for any process input.

Specifying the equipment was up to Falcon.



CSL's Geoff Thomson (right) provided technical advice on signal isolation for Andrew Stiver of Stewarts Electrical Supplies and Brad Jarvis of Falcon Electrical. This led to Weidmuller WavePak and ITXPlus signal isolators being installed throughout the Clive waste water treatment plant

"We were given the process narrative and generic drawings and we did the rest," he says.

"Our need to get it right first time meant finding process control solutions that had the right specifications and were quick and easy to install and configure. We needed reliable products but also suppliers who would be there to support the products if something did go wrong."

Jarvis says signal conditioning was a good example. He was looking for 3-way isolation between the field sensors, the power supply

and the PLC device, and had very limited space in the panel.

Working together, Weidmuller distributor Cuthbert Stewart Ltd (CSL) and the Napier branch of wholesaler Stewarts Electrical Supplies put forward a Weidmuller solution that would meet all these needs.

This led to Weidmuller WavePak DC/DC configurable signal isolators for current loop isolation and Weidmuller ITX-Plus universal programmable signal isolator/amplifiers for various motor temperature sensor conversion being installed throughout the plant. The signal conditioners are used with a variety of sensors for flow, level and pressure measurements.

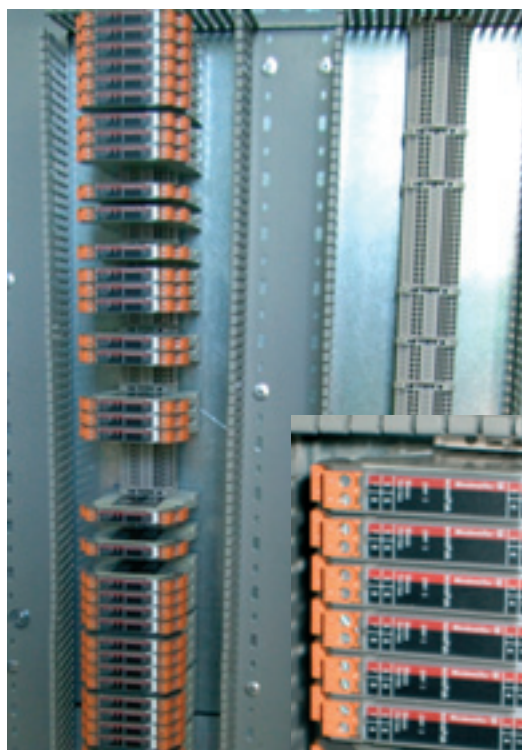
"It was important to be able to loop power devices from the signal isolator. Having extra terminals and being able to configure it either by jumpers or push buttons made it a lot easier.

"The units have 2kV rated isolation and are only 12.5mm wide saving us critical real estate in the panel," he says.

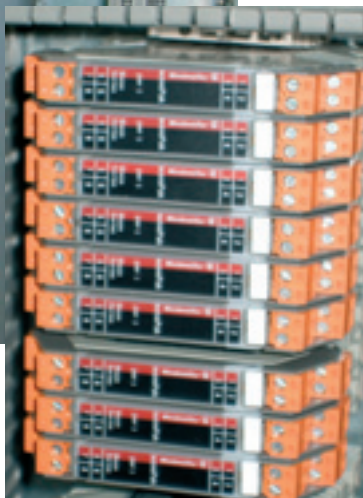
According to Jarvis the CSL and Stewarts approach saved him time because CSL did the detailed research on the problem and came back with a solution.

"My first call was to Stewarts because they were already supplying Weidmuller product from CSL such as standard DIN rail mount terminals, Z series tension clamp versions and application specific terminals for DeviceNet," he says.

"Stewarts would pop in and see us on site two or three times a week to see if there was anything we needed. They would bring



52 Wavepak Isolators and hundreds of Weidmuller Z Series tension clamp terminals were chosen because panel space was at a premium



ing he called on support from CSL straight away because it needed specialist knowledge.

“In this type of situation we need to build a line of communication that can quickly put us in touch with the people who can help sort out the best solutions for the job,” says Stiver.

“I called CSL and Geoff Thomson, a Weidmuller trained interfacing and signal conditioning specialist, came down and talked with Brad Jarvis to identify exactly what Falcon needed.”

“We knew that a face-to-face meeting on site was going to be worth more than a pile of emails and phone calls,” he says.

“We took the same joint approach with CSL on identification. Together we approached Brad Jarvis with a system that would take care of the project labelling requirements. As a result

Falcon completed the installation using a customised Partex identification solution.”

Stewart’s Stiver says it wasn’t the cheapest price but it was the lowest cost solution. “It fitted Falcon’s budget and it saved time.”

Phil Elliott, CSL national sales and marketing manager says the Clive treatment plant project shows the CSL approach to distribution works.

“We add technical and application advice and expertise to support the relationship between wholesalers and customers.

“The value for contractors, integrators and panel builders comes from the time saved when searching for the best solution. We also give confidence that the products will be the right solution for the application – they will



CSL’s Alan Hall (middle) with Daniel Huynen (left) and Josh McKenty of Stewarts made sure the lines of communication and product supply worked well to help bring the project in on time

work properly first time.

“End-users can access application information, specifications and training to ensure a trouble-free install and we provide support throughout the products’ life.”

Elliott says CSL is increasing support through technical field specialists who get out in front of customers looking for solutions in hazardous areas, industrial, industrial data, identification and other areas.

“This means you can quickly access the right people who understand the industry and have a depth of knowledge to give you prompt answers in their specialist areas.

“They’ve had factory training in all product ranges and this is refreshed by regular visits from overseas specialists, so their expertise is up to date.”

According to Elliott each time the technical specialists are involved in a project it builds their industry knowledge and this can only benefit other customers in similar industries – in this case irrigation, water quality or water reticulation projects.

But back on the project site, as Jarvis sees the first water flowing through the plant, he says there is a reason it has been a good project to work on.

“We’ve had good communication through the right channels and we got the support we needed.” ■

us options and also furnish quotes and we went from there.”

Andrew Stiver, Falcon’s account manager at Stewarts, says they made sure everything went smoothly and helped keep the project moving by anticipating the need for product and information.

But when it came to signal condition-



An innovative new water treatment process combined with time pressure to complete the project meant CSL and Stewarts Electrical Supplies had to make sure their recommendations performed faultlessly from the outset

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