



# WHITIANGA'S NEW WATER SUPPLY ON STREAM

...for a simple, complete package!

Municipal water supply systems don't have to be large complex projects. Talk to us about a simpler way!

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COMMUNITY WATER SOLUTIONS SYSTEMS WALLACE & TIERNAN Lecortrim HACH TIMBERBANK ENTERPRISES LTD

Photo shows the new treatment plant for Whitianga's water supply. FILT17/201

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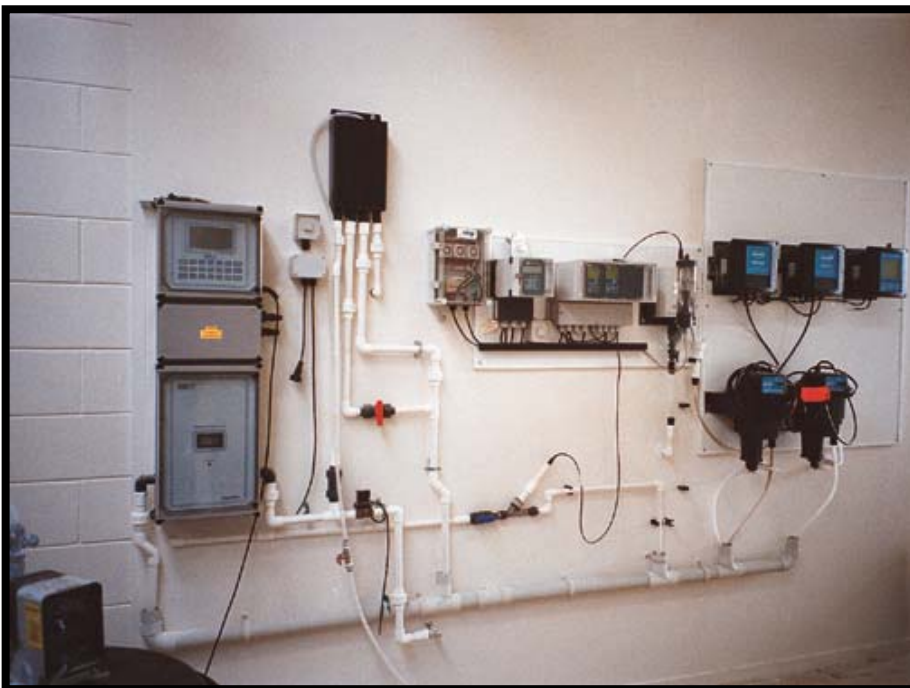


The first stage of Whitianga's new water treatment plant has gone on stream, and commissioning trials show that it's running right up to specifications.

Whitianga has had difficulties providing water of a quality that meets the New Zealand Drinking Water Standards for human consumption, but the new system, which is only the first stage of the total development, is already providing the township with top-quality water.

The raw water supply comes from the nearby Whangamororo River, which is prone to flooding, and which has a colour problem.

The water can be anything from 1 NTU up to several hundred and the contract specification for the first stage development called for less than 0.1 NTU clarity. Currently, the plant is consistently producing at 0.05, at the rate of 220 m<sup>3</sup>/h (5000 m<sup>3</sup>/day).



### ***Chemical Control Equipment***

The plant, which is designed and built by Filtration Technology Ltd, provides two-stage treatment, with the first stage consisting of a clarifier which uses live flocculation zone/blanket with outer sludge removal. Sampling of the raw water for pH

adjustment dosing and turbidity monitoring is automatic via a Lasertrim system to optimise chemical usage.

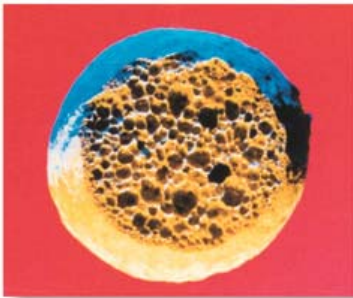
Chlorine dosing is controlled by an automatic Wallace & Tiernan Depolox system.

The open top clarifier has been built to cope with flows of 7500 m<sup>3</sup>/day with the addition of further filters to allow for future expansion.

## **Macrolite Media Filters**

The second stage is a filtration plant using two filters operating in parallel. These filters are the revolutionary new Kinetico pressure filtration system, which incorporate Macrolite ceramic spheres as a filtration media, which provides high log removals of *Giardia* and *Cryptosporidium* cysts. The turbidity of each filter is monitored to provide confirmation of water quality.

### **Macrolite Media**



Kinetico's new Macrolite media is created through a very complex manufacturing process which results in a chemically inert media, that is

compatible with all types of acids, caustics and oxidants, and which has an indefinite service life, and normally never needs to be replaced. The media depends on physical straining as the primary removal mechanism.

The 70 mesh media used in the Whitianga plant has a diameter of approximately 0.125 mm and a specific gravity of 2.5.

A new reservoir with a storage capacity of 3 million litres (3000 m<sup>3</sup>) has also been built as part of the new treatment plant.

The plant went on stream in January and has been effectively achieving the contract objectives. Filtration Technology Ltd won a design and build tender for the treatment system as part of a staged development that will eventually provide up to 15,000 m<sup>3</sup>/day.



**For further information, contact Graeme Thacker,  
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