

PROJECT UPDATE Te Whare Wai Para Nuku Moa Point Sludge Minimisation Facility

April 2025



NEWS & PROGRESS

The site continues to be a hive of activity as the Main Process Building reaches skyward. Drainage is near completion, and concrete slabs footings for tanks and equipment are being poured.

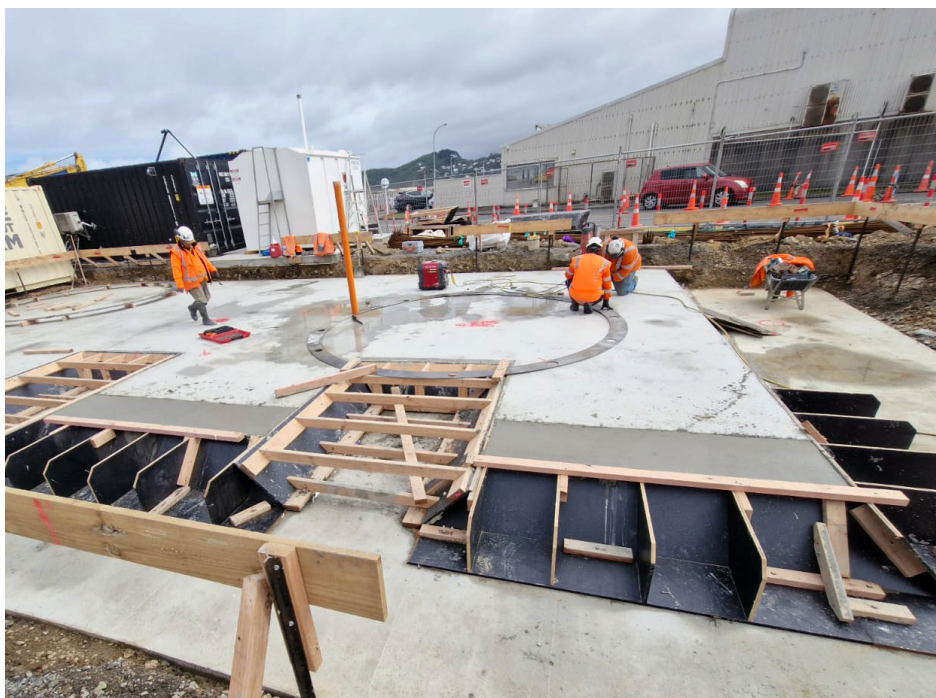
The team are literally laying the foundations ready for all the specialist equipment arriving.

The primary structural steel for the Main Process Building is now at the full height of 26 metres across the majority of the building. Inside, crews have completed complex concrete pours for the second and third level floors.

On the southern side of the site, a crew is painting the inner walls of the two anaerobic digester tanks. This will protect tanks from the bacteria, that are a welcome part of the digestion process, but will eat away at the concrete walls.

Work on drainage systems around the base of the digesters is also nearly complete. The plinths and pads that will support the pumps and pipes that will move the sludges around, are also under construction. At the front of the site the first section of the concrete floor slab for the Odour Control Facility has been poured. New fibreglass odour treatment tanks will sit here.

Up the hill from the worksite another team are building the new pipes that will transport sludge from the Moa Point Wastewater



The team working on concrete foundations - you can still see the wooden formwork in places

Treatment Plant down to the new facility.

You will also see tanks that have been produced either on or offsite turning up in the storage area, ready to move across to the main site.

Fast facts

- a 26 m tall steel building for mechanical equipment
- two 16 m high digester tanks
- 10 km of new pipework
- more than 20 different mechanical systems, need to be procured and installed,
- with 2,100 valves
- and 52 km of cabling.



Beams and columns being lifted



A Leader in Sustainability

When complete Te Whare Wai Para Nuku, will be the most technologically advanced wastewater facility in New Zealand. The first to use the world-leading 'thermal hydrolysis' method which will:

- reduce sludge volumes by 80%,
- create biogas to power the plant
- & support the city goal to reduce its carbon footprint.

The critical new stage of the process 'thermal hydrolysis' uses hot water, steam and heat to sterilise, dehydrate and reduce the volume of sludge. The end product is a dry, odourless product that takes up less space in a landfill.

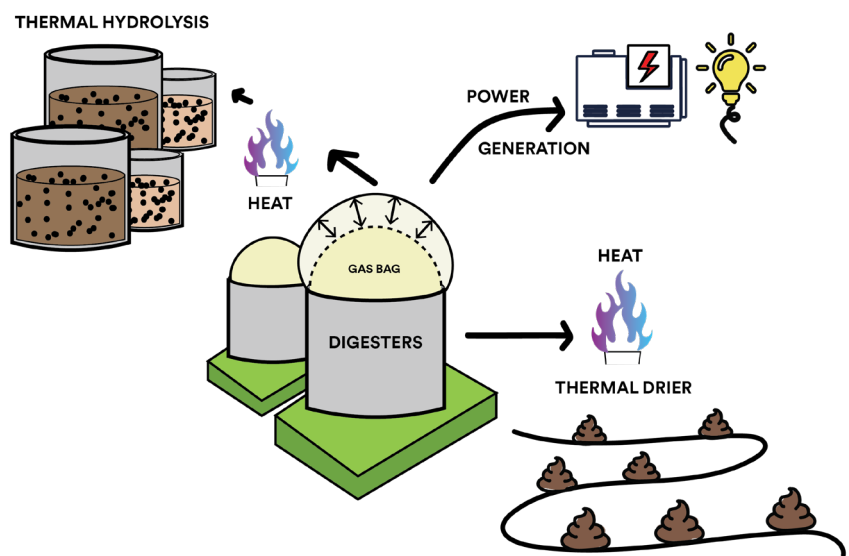
Two types of boilers are used in this innovative process; a steam one to heat the sludge, kill bacteria and sterilise it, and a hot water boiler to heat the thermal drier, a big oven, to dry the sludge.

The boilers are made in Lyttleton, near Christchurch, and will be installed in the main building while construction is underway so crews can continue installing the associated equipment, pipework and controls.

As the sludge decomposes in the concrete digester tanks it releases a mixture of methane and other gases. These will be captured and treated to produce a clean biogas that will be used to heat water to produce steam and hot water for the thermal drier. Being able to use biogas makes the

plant more efficient and sustainable. Biogas is stored in bags, fixed to the digesters, and leftover gas is used to produce electricity that helps power the plant.

As well as the energy benefits, the new plant will reduce the carbon emissions produced by our wastewater treatment by 60%. We currently transport wet sludges to landfills where they decompose and release greenhouse gases. Capturing and reusing some of those gases will be much better for the environment.



The new facility will be able to use the biogas produced by bacteria during treatment to heat the Thermal Drier, and generate electricity to help power the plant.



What's happening



April: Huge Bioscrubbers from Dubai arrived



April: a sneak peek at all the valves, pipework and mechanical work underway inside

Meet the Team



Peter Hodgson, Project Director,
McConnell Dowell/HEB Joint Venture
Construction Team & his favourite
alpaca 'Hacidena Alchemist'.

Peter brings more than 25 years' experience in design, operation and construction of wastewater facilities across the United Kingdom and New Zealand to the project.

This includes leading construction on some of the largest wastewater projects in New Zealand over the last 15 years.

On site at Te Whare Wai Para Nuku Peter leads a team of more than 120 people.

At home, he enjoys spending time with his wife, two daughters and his 21 alpacas!