PROJECT UPDATE

Te Whare Wai Para Nuku
Moa Point Sludge Minimisation Facility

May 2025

NEWS & PROGRESS

The site continues to evolve as the roof structure goes on the Main Process Building, and deliveries of specialist international equipment arrive.

Inside the building, preparation for pouring concrete for the fourth and final floor is underway. Painters are also now on the ground floor applying coatings to protect the structural steel having finished the first floor.
The process takes time with a crew of around 15 painters applying a series of specialised products with an undercoat, a middle 'intumescent' fire protective coat and a topcoat.
Outside, the steel work that forms the structure for the roof of the building is nearing completion.

Meanwhile, the three boilers made in Lyttleton, a critical part of the thermal hydrolysis process, have arrived and will be installed inside the building while construction is still underway as an efficiency measure. Two of these boilers will heat the sludge, to kill bacteria and sterilise it, and the last will heat the thermal drier, a big oven, to dry the sludge.

Four fibre glass tanks for the Odour Control Facility have arrived from Dubai. The two 11.5 m high tanks will hold the biological odour treatment media and the two shorter ones (4.5 m) will contain activated carbon. These tanks will sit on the recently completed concrete foundation for the facility located at the front of the site.

This view from the southeast shows some of the work underway inside, the protective wrapping going up to protect the painting and preparation for the new roof.

The northwestern view of the Main Process Building shows the new stainless steel Disinfected Final Effluent Tank or DFE.

Activated carbon filters are layered in the shorter tanks to adsorb odorous compounds. Because it is so porous and has a large surface area activated carbon is excellent at capturing and retaining odour-causing molecules. Technical experts have interesting terms for this chemical process like "polishing" or "scrubbing".

On the southern side of the site, the insides of the two anaerobic digester tanks are being painted with a specialised product to protect the concrete from the sludge. Work on drainage systems around the base of the digesters has also been finished and the plinths and pads that will support the pumps, critical to the process, are under construction.

Up the hill from the worksite another team is continuing to work on building the new pipe corridor and connections that will transport sludge from the Moa Point Wastewater Treatment Plant down to the new facility.
Crews are also working on the access road to form a slab for the future gas flare - an enclosed flame that will be used infrequently to assist in balancing capacity at the plant.

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Meet the Team - a new generation

Te Whare Wai Para Nuku is providing a great learning experience for our talented group of young graduates as they work under the guidance and mentorship of a highly experienced and specialised team. Lizzy, KK and Leap have kindly agreed to share their journeys with us.

Left to right: Lizzy Cohr, Leap Khun and Keketso Phamotse.

Graduate engineers

Elizabeth (Lizzy) Cohr – Lizzy 22, is enjoying her first full-time job working on this project since completing her Degree in Mechanical Engineering at the University of Canterbury.

She started on site in February this year and is working with the team at Moa Point treatment plant installing pipes and connections to the sludge facility.

"It's awesome to be involved in this major project and the first of its kind in New Zealand. I'm learning so much every day. It's absolutely where I want to be now."

Keketso (KK) Phamotse – KK, 25, studied engineering at Weltec in Petone. Prior to working at Te Whare Wai Para Nuku he worked at CentrePort and was also involved in finishing up at the Omāroro water reservoir worksite.

KK has worked on the project since February 2024. He worked on the foundations for the Main Process Building and is now involved in structural work for the Odour Control Plant,

"I love the complexity of this project, from structural, to mechanical. It requires a lot of planning."

Leap Khun – Leap, 22, graduated from Weltec with a Diploma in Engineering in 2023. This is his first full-time job. Since starting in February 2024,

Leap has been involved in installing concrete foundations and structural steel for the Main Process Building. He is now working on the concrete foundations and pipework for the Odour Control Plant.

"This is a fantastic project to be involved in. There is so much variety across all engineering disciplines. You get exposed to it all. I'm learning so much every day."

Coming up on site

All of the primary structural steel for the Main Process Building will be completed by the end of June. The building will also be fully wrapped to protect it from the elements while the pre-cast concrete and Kingspan facade is installed piece by piece from the bottom up.

In late June the thermal drier is expected to arrive from Germany. The 'Cambi' equipment - that completes the thermal hydrolysis or 'pressure cooker' part of the treatment process - will also leave the UK in June. This gear is critical to the new plant and more efficient sludge management.

Video update

Scan the QR code below with your phone's camera app to watch as Project Managers and Engineers describe the project's progress.