

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

JULY 2025



News & Progress

With the Main Process Building almost fully shrink wrapped, work has started installing the external facade and putting the roof in place, whilst the main connecting pipe work is starting to snake across the facility.

Crews are pouring the concrete 'nibs' around the edges of all four floors of the Main Process Building that will support the Kingspan outer facade of the building. As these nibs are being poured, work has started installing the facade on the bottom of the south-eastern corner.

Inside, the building two gantry cranes have been installed, process pipe supports are being installed in the boiler room and protective coating of the floors is underway throughout the building.

Meanwhile the painting crew continue their important work coating the steel structures.

Across the site, the odour treatment plant is now taking shape with all four tanks (biological and carbon scrubbers) installed on their concrete plinths and connecting pipework in process.



The first pipe (bottom right) is placed on top of the pre-assembled pipe bridge on 28 July

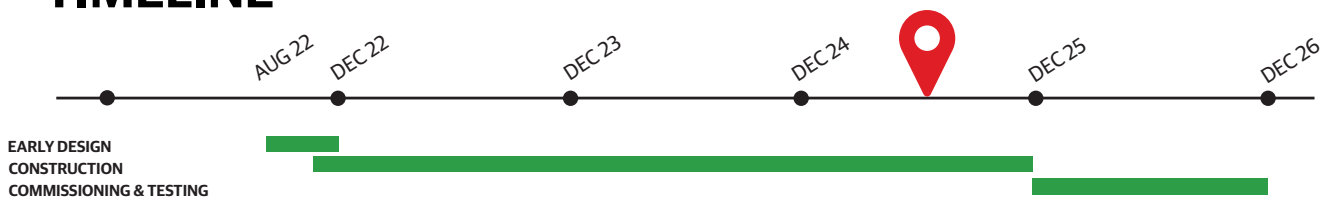
Alongside, a crew continues to work on the building that will house large fans to suck untreated air from across the facility into the odour treatment plant to deodorise the air.

On the southern side of the site, work is underway around the base of the digester tanks preparing to pour the concrete slabs around the plinths and pads that will support the pumps. Preparations are also underway on the bases for the large stainless-steel tanks that will store post-digester treated sludge

before it goes to the thermal drier. Meanwhile, the pre-assembled pipe bridge that will carry sludge, to and from the digesters, cables, biogas, air and water across the facility is starting to emerge. Over 1 km of pipes will be installed on the bridge, spanning 80m across site.

Up the hill from the main site another team continues to work on building the new pipe corridor and connections that will transport sludge from the existing Moa Point Wastewater Treatment Plant down to the new facility.

TIMELINE





Meet the Team

As well as talented young graduates as profiled in our May issue, the McConnell Dowell-HEB Construction Joint Venture (JV) is providing a great learning experience for two young apprentices who've kindly shared their stories with us.

Keisha Puha - 19, (below right) is one of two apprentices on the project. She started on site in December 2023 after graduating from Taita College in 2023 and completing a six-week cadetship course. This course led to her apprenticeship with the JV. Keisha is working with the team on the digesters. She's also doing inventory pick-ups and deliveries.

"I really enjoy being on the floor, doing the practical hands-on side of things. It's such a diverse project and the people are great. It's very cool to be involved."



Logan Skelton - 21, (above left) also completed the six-week cadetship course to start his apprenticeship and started on site in December 2023. Initially he was helping pour the concrete slabs for the floor of the Main Process Building. But now he is now working on the digester site, helping build retaining walls and preparing the concrete staircase.

"I've had the opportunity to try out multiple things and learn new skills on this project. In particular I'm really enjoying spending more time working on machine operation."



Odour Control Building under construction

Freshening the Air

Te Whare Wai Para Nuku's location near business and residential areas means robust processes are in place to treat odour, meeting high consenting standards to ensure both the work environment and surrounding communities are not impacted by unpleasant odours.

Wastewater treatment and the anaerobic (oxygen-free) environment can create gases like methane and hydrogen sulphide that have an unpleasant smell.

Methane is a valuable fuel and is captured, cleaned and used to power parts of the facility. However, other gases like hydrogen sulphide are sucked into the network of 1m diameter fibreglass pipes that carry untreated air from across the facility to the odour treatment plant.

The plant has four large fibreglass tanks that contain materials for the two-stage treatment process - biological and carbon scrubbing. The untreated air is first sucked into the two tallest tanks that contain the biological scrubbers - minute bugs that love to eat hydrogen sulphide. The tanks are full of small hollow plastic bricks, in a wet and acid environment that support the bugs to grow and thrive.

The air is then drawn into the two shorter tanks that contain activated carbon, which filter out any residual gases that the bugs may have missed. What comes out of this process is clean air that is discharged from a stack.

The leading edge, fully enclosed, odour treatment and management process at Te Whare Wai Para Nuku is highly efficient.