

TURITEA WIND FARM, MANAWATU

The Turitea Wind Farm project is one of several Connell is working on in the renewable energy sector.

It's an extensive and complex operation in which the Connell team is playing an important part in the building of foundations for this important energy infrastructure project.

Due to the challenging environment, every piece of plant had to be mobilised to the various site locations using a helicopter. Stage one of foundation work is complete including the placement of 137m³ of concrete into the six sites. A further 90m³ of concrete is scheduled for stage two.

Our team has also flown in and installed 15 tonnes of reinforcing steel, and excavated and moved over 900m³

of soil and rock on the six sites using only 1.7 tonne excavators.

Each site has a clearing of 650m² area of bush and on one site alone, we moved 450m³ of excavated material, with the deepest excavation being six metres on a steep sloping site. Our subcontractor has drilled and installed 848 lineal metres of ground rock anchors.

This project involves significant ongoing planning and logistics. On some days we have had up to three helicopters in the air simultaneously. Due to the location of the sites, access involved a 50-minute walk through dense bush every morning and evening.

Right: Some days on this project we may have up to three helicopters in the air.





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WESTERN INTERCEPTOR

Grinding through the winter months is always a hard slog when you are digging deep holes in the ground. Dealing with mud and huge amounts of ground water is never an easy task, especially when working in the public eye.

All that aside, the team on site at the Western Interceptor project in Hamilton has pushed through and made excellent progress even with encountering old Kiwi Rail structures and services. A vehicle underpass and a pedestrian underpass had to be broken out and old water mains and telecom services had to be worked around.

To top it all off, we came across a section of contaminated land. It required testing and direction from the SQEP as to how we should manage it correctly to ensure we don't damage the environment or cause any health and safety issues to the team working with it. All of these set backs were dealt with by the team on site as efficiently as possible to keep the project moving.

During late-winter the Connell team has also completed another first in Hamilton. We have had GSI on site to complete some deep soil mixing to improve the ground to enable us to work around services and install the section of pipe running up the Crawford Street stub road. Earlier in the year we dug into a section of unsavoury ground where we could not control the silts due to the sheer amount of water present. This could have had the potential to do major damage to everything in the surrounding area including roads, services and nearby buildings. It was agreed with the client that a better method was required to minimise the risk of damage and deep soil mixing was chosen as the solution.

This work has now been completed and we eagerly await the 28-day curing time to come to an end so we can dig a hole in it to fully appreciate the result. Watch this space.

Hopefully, going forward, the sun will come out again, the ground will dry up and we can get the grass growing and screen plantings back in so that you will never know that we have open cut a trench five metres deep to install a new one metre diameter PE-lined concrete sewer pipe along the side of the State Highway.



KINLEITH SUBSTATION

Following a two-and-a-half year period of construction, the Connell team is demobilising from the Kinleith substation, near Tokoroa.

Over this time we have:

- Reshaped and extended the switchyard to accommodate the upgrade.
- Constructed a new 55 metre long, two storey switchgear building.
- Installed a new roof and firewall in the existing switchgear building so it could be converted into a control building.

- Constructed numerous structural footings, including four new transformer foundations.
- Installed new firewalls for the new transformers.
- Upgraded the oil containment and stormwater drainage network.
- Installed new concrete ducting and replaced the timber lids on the existing concrete ducts with FRP lids.
- Demolished the redundant structures.
- Refurbished and resealed the driveway and carpark.

The Kinleith substation is located near Tokoroa in the South Waikato region of the North Island. Connell's project objective was to reconfigure and rebuild the Kinleith substation, which supplies power, via Powerco (the local distribution company), to a pulp and paper mill owned by Oji Fibre Solutions (Oji) and the distribution network around Tokoroa. Most of the primary equipment at Kinleith is programmed for replacement in the next 10 years.



WESTERN INTERCEPTOR PROJECT OVERVIEW

The Western Interceptor duplication project is a three kilometre pipeline carrying sewer from the Norton Road and Lincoln Street roundabout towards the start of the Waikato Expressway.

The project includes laying PE-lined concrete pipe at depths of up to six metres in very wet ground as well as two driven pipelines under a Class 2 arterial road. Connell was awarded this contract in late-2018 and our team could not wait to get stuck in to the challenges it presented. Working collaboratively with the client, Hamilton City Council, and other affected stakeholders is key to this project's success.

RENEWABLE ENERGY

Connell has become a member of the New Zealand Wind Energy Association, which reflects the increased involvement we have in the renewable energy sector.

Connell currently has two main projects running in the renewable energy sector.

energy sector, at Turitea Wind Farm and Waipipi Wind Farm.



FROM THE CEO

The last six months at Connell has been a period of mild transformation and strategic repositioning as a direct result of the COVID-19 pandemic.

Whilst initially a period of uncertainty throughout Level 4 in March, staff at all levels across the business have worked hard to ensure continuity of our work sites and planning our operating environment going forward as the next two years are going to be a test of character for CCL. Focus will be on business sustainability rather than bigger revenues – emphasis on protecting the bottom line rather than focusing on the top line!

While there remains considerable uncertainty about future national infrastructure spend and client prioritisation of spending, Connell is well positioned to tackle the uncertain future that lies ahead. Our half year results have been pleasing and align with our financial metrics that were set before COVID-19 was a known threat.

A few significant projects are nearing completion over the coming months, including Kinleith Substation – the largest project delivered by CCL in the power sector. The major Western Interceptor and Turitea Wind Farm projects (as also featured in this newsletter) continue to make good progress, while several other projects start shortly.

Connell made two key staff appointments during the Level 4 lockdown. Ben Baxter, Construction Manager, and Tania Shepherd, Project



Co-ordinator joined us in March. These excellent acquisitions are critical for the growth of Connell over the years to come.

Lester Foxall Chief Executive Officer

PART OF THE TEAM

During the COVID-19 Level 4 lockdown to be precise, we welcomed Ben Baxter and Tania Shepherd to the Connell team. We're excited to have both Ben and Tania as part of our organisation.

Ben Baxter (far right)

Ben joined the Connell team as Construction Manager. Ben is a Chartered Professional Engineer with a Masters in Civil Engineering. He will manage all Connell's projects throughout New Zealand. Starting with the company during the lockdown was quite the introduction to Connell team!

Tania Shepherd (right) Tania joined the Connell team as Project Co-ordinator for our Taranaki branch. Tania was already familiar with the Connell team from her previous role with NuEnergy. She will oversee all aspects of project and office coordination for our Taranaki branch.





Connell Contractors is an award winning, multi-disciplinary civil construction company operating throughout New Zealand from bases in Hamilton, New Plymouth and Auckland. We have been successfully delivering projects to our clients for over 35 years and have earned a reputation for market leading performance on a broad range of civil engineering projects.

HAMILTON (HQ)

22 Foreman Road, Hamilton 3241 PO Box 10526 | p 07 958 3408 e office@connellcontractors.co.nz



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