

In a milestone for bringing climate-change mitigating carbon mineralisation technology to NZ, Weora's drilling programme into the Greenhills Ultramafic Igneous Complex near Bluff is underway (photo below).

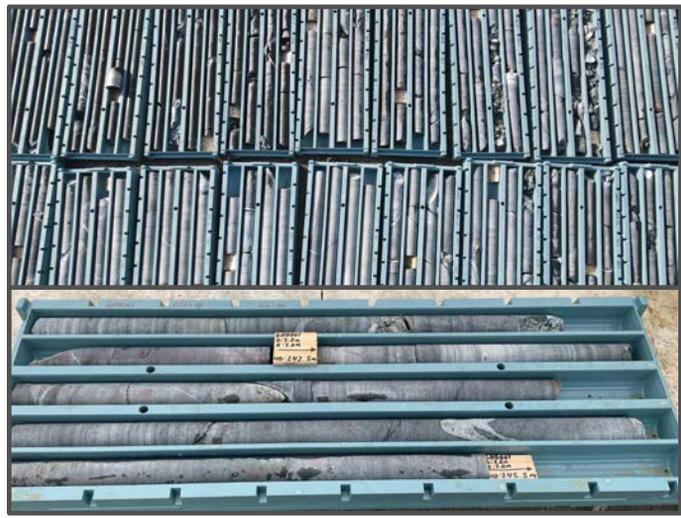
Situated in an operational dunite rock-quarry, the drill rig began turning mid-August on Weora's first pilot borehole (GHD001) and is progressing 20 to 30 m each day (photo inset below). Bore depth has already passed 300 m, with completion to the target depth of 800 m anticipated in early-October.

Rock core from GHD001 is being recovered each meter (photo right) and will undergo chemical and physical analysis to determine the suitability of Greenhills geology for permanently removing CO₂ from the atmosphere.

Initial observations confirm the presence of a massive dunite lithographic unit, with magnesium-rich olivine dominating the mineralogy from the surface to the current hole-bottom at 306 m. Under the right conditions, olivine is highly reactive with CO₂ and chemically transforms into new carbonate minerals, forever sequestering CO₂ from the atmosphere.

With its close proximity to plentiful clean energy, extensive infrastructure, and major CO₂ emitters (Tiwai smelter, fertiliser producers, meat works and dairy factories), Greenhills presents a flagship opportunity for mitigating millions of tonnes of NZ's CO₂ emissions. Weora is pursuing an ambitious timeline to deploy carbon mineralisation at commercial scale at Greenhills and subsequently to several other sites with similar geology throughout NZ.

Beyond geological exploration, for the past six months Weora has undertaken early engagement with emitters, local and central government, iwi and hapu, several universities, and other stakeholders to lay the foundations for successful and enduring project partnerships.



Upcoming project work in the immediate future includes:

- Sampling of the recovered rock core from GHD001 will be used in laboratory carbon mineralisation experimentation. Reaction conditions, yields, mineral products, and CO₂ storage capacities will be determined with data allowing detailed modelling of overall potential for both ex-situ and in-situ processes at Greenhills.
- A second 800 m borehole at Greenhills will commence immediately after completion of GHD001. Additional further drilling later this year and early-2023 will be undertaken pending positive results from the initial twined holes.
- A high-resolution airborne geophysical magnetic survey of the Greenhills area is planned for October-November to complement borehole data and allow more comprehensive modelling of the surrounding geomorphology.
- Desktop studies and project planning for Weora's other mineral permit areas across NZ will commence shortly once prospecting licences are granted.
- Continuing the policy development of including carbon mineralisation in the NZ Emissions Trading Scheme and other carbon markets with strong prospects for a building a consortium of parties to cooperatively develop regulatory accommodation in NZ.

Tiwai aluminium smelter

Weora drill rig

South Port

Bluff

Flat Hill wind farm



South-eastern outlook from Weora's first drill site GHD001

