

Media Release

FOR IMMEDIATE RELEASE

Aspiring Materials critical minerals pilot production plant opens in Christchurch

Ōtautahi Christchurch, Aotearoa New Zealand, 2 April 2025:

The opening of the Aspiring Materials critical minerals processing pilot plant means New Zealand now has domestic capability to produce critical minerals and essential materials used by core industries everyday across the country.

A moving karakia was performed by kaumatua Henare Edwards to bless the new site in Bromley, Christchurch, before the official opening ceremony at Aspiring Materials last Friday. The event was attended by Hon. Minister Shane Jones, Hon. Dr Megan Woods and Christchurch East MP Reuben Davidson, along with government officials, industrial operators, investors, academics and business leaders.

Aspiring Materials' world leading technology turns a low value waste resource into high value critical minerals and essential materials and will deliver both regional economic growth and jobs.

Highlights:

- Hon. Minister Shane Jones, Hon. Dr Megan Woods and Local MP Reuben Davidson gave encouraging remarks at the opening ceremony.
- Local MP Reuben Davidson expressed a real opportunity, led by example from Aspiring Materials, to bring more cleantech companies into the Bromley area
- Prior to the official opening, Aspiring Materials had already completed a successful production campaign through their pilot facility, yielding high purity magnesium, nickel-cobalt-manganese hydroxide and reactive silica.

Hon. Minister Jones cut the ribbon with founder Dr Chris Oze to officially open the facility, before touring the new mineral processing plant with Hon. Dr Megan Woods alongside Reuben Davidson, MP for Christchurch East and representatives from NZTE, MFAT, Ara Ake and ChristchurchNZ.

Hon. Dr Megan Woods has been a firm supporter of Aspiring Materials since their early days and offered her congratulations to the team of 11.

“When I first started visiting [Aspiring Materials] it was lab scale so it’s amazing to see the growth. What they’re managing to do here in Christchurch and what we can see for the country is what we need to do. Not only if we’re going to decarbonise our economy but if we’re going to seize all those opportunities around well-paid jobs that will make sure that New Zealand can lead from the front and seize every opportunity that comes with that.”

While the company has realised scale-up to pilot in a short period of time, Aspiring Materials has progressively derisked their world-leading technology. The pilot plant build was completed in early March and ahead of the official opening, the team had already completed two full production campaigns, both producing excellent results.

In his welcoming speech, CEO Mark Chadderton said the pace at which the Aspiring team has scaled in nothing short of an engineering marvel.

“To put this in context, we demonstrated the science back in 2021 in a beaker. Earlier this week, we ran it at this pilot scale, separating out our three core products, and we’re incredibly pleased with the results. In my experience it never goes this well, so full credit to everyone involved.”

The purpose-built pilot plant facility was designed in collaboration with leading engineering consultants Beca and DETA Consulting, manufactured by Longveld and installed by PW Engineering and Swarm Intelligence. At capacity the pilot plant is capable of processing 250kg of olivine rock per day.

Olivine is a mineral found in ultramafic rock. The abundant supply of this rock, primarily used for roading in New Zealand, means it is considered low value and often viewed as a waste material in mining operations.

Aspiring Materials has unlocked the potential in olivine to transform this rock into critical minerals and essential materials. Their patented process separates out industrial grade critical minerals of magnesium, manganese, cobalt and nickel as well as silica.

Chadderton expressed the economic potential to the guests at the opening event:

“What this means for New Zealand is that we can reduce our dependency on unreliable supply chains and by onshoring the process we can create new opportunities for New Zealand, create new industries, with high paying jobs and diversify our export sector which is so critical for our future. Monetising a near limitless resource that’s currently being used for roading is the dream. Aspiring Materials is taking that very low-cost feedstock and turning it into something of high value.”

Local MP Reuben Davidson was pleased to see the cleantech placing Bromley on the map with cutting edge innovation.

“It’s very important to have exciting innovative companies like Aspiring Materials moving into this part of the city, Bromley is clearly the place to be!”

With the Aspiring Materials pilot plant now operational, the team is looking towards their next phase of development – the build out of a continuous production demonstration plant and the engineering design for their first full commercial plant.

The company is engaging with key markets and industries – water treatment, manufacturing, agriculture and energy – to conduct commercial trials and demonstrate real market applications.

Mark Chadderton has firm belief that Aspiring Materials represents an opportunity for New Zealand to lead the world in the Industrial Transformation:

“The opportunities are enormous... accessing critical minerals like magnesium, cobalt, manganese, nickel, all incredibly important for tomorrow; replacing fly ash and other important materials for concrete manufacturing. We’re also providing a clean source of magnesium oxide for the dairy industry so it’s not coming from offshore. Finally, Aspiring



Materials is about giving us a way to decarbonise industry which is so critical. I firmly believe that the Aspiring Materials process can play an important role in developing New Zealand’s economic future.”

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MEDIA IMAGES AVAILABLE HERE:

[Aspiring Materials pilot plant opening - MEDIA - Google Drive](#)

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About Aspiring Materials

Aspiring Materials is a clean-tech company based in Ōtautahi Christchurch, Aotearoa New Zealand. The team has developed a world-first process that produces critical minerals and essential materials for industrial users from a single rock input using a carbon-free production process that generates no harmful waste.

The company was founded by geologist Dr Christopher Oze after investing a decade of collaborative scientific research with an engineering colleague into developing construction materials that could be produced from the scarce resources available on Mars.

Aspiring Materials has already been well recognised by the global climate and clean-tech sector. Founder Dr Chris Oze and CEO Mark Chadderton are Breakthrough Energy Fellows, and the company is an Elemental Impact Portfolio company, an APAC Cleantech25, a 2024 NZ Hi-Tech finalist, 1 of 10 PepsiCo APAC Greenhouse Accelerator participants and a nominee for the 2025 EarthShot Prize.

The company has been supported with seed investment from Icehouse Ventures, Outset Ventures, Motion Capital, and K1W1, among others.

Aspiring Materials is currently raising capital to fund the next phase of the operation - build out of the pilot plant to scale as a continuous production demonstration facility and engineering design for the first commercial plant.