

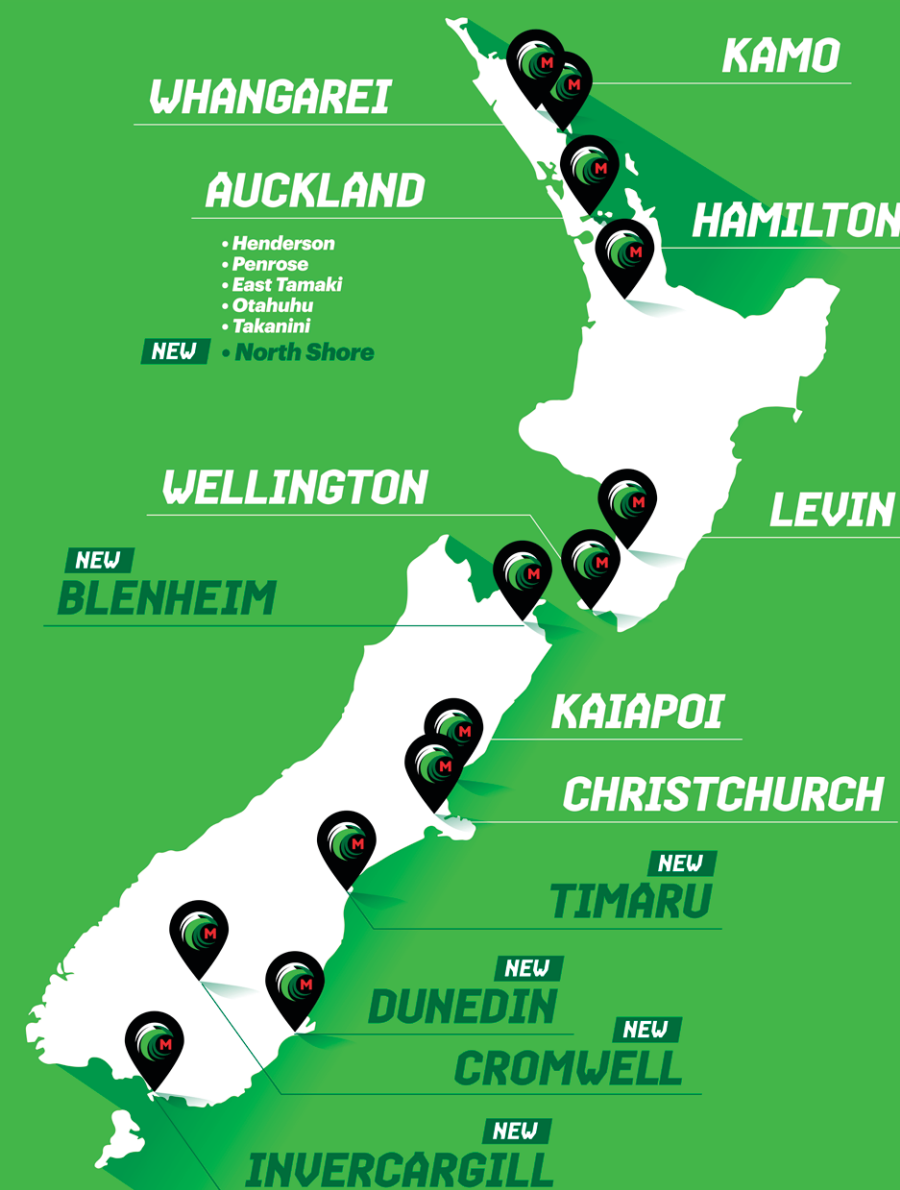
RISE OF THE PHOENIX...

Kiwi company targets an enduring New Zealand metals circular economy

In a time of unprecedented supply chain disruption, Phoenix Metalman Recycling (PMR) has tripled its business footprint within 18 months to ensure the metals circular economy endures for a sustainable New Zealand. "We have the protection of Aotearoa New Zealand's environment at the core of our business' purpose," says founder, executive director and CEO Eldon Reeve. PMR saw an opportunity in 2020 to transform the structure of New Zealand's metal recycling industry, progressively and proactively offering an independently certified net carbon zero metal recycling

service – within NZ to global destination port – to support the country on its journey to a lower emissions future. "We are walking the talk to support the construction industry here to validate the infinite recyclability of all metals. "PMR, by facilitating the circular economy are consolidating nationwide integrated services to ensure recycling is accessible to all. As an industry previously silent on its mahi, PMR has become the voice of New Zealand's largest circular economy offering transparency and authenticity through its sustainability data," says Reeve.

THE CASE FOR RESOURCE MANAGEMENT ON CONSTRUCTION SITES: 'WHEN DO WE START TO REFER TO CONSTRUCTION WASTE AS SECONDARY RESOURCES? IF WE SORT AT SOURCE, MOVING AWAY FROM THE SINGLE MIXED SKIP BIN MODEL... AND STARTING WITH HIGHER VALUE MATERIALS, SUCH AS METALS; THEN OUR LOCAL CIRCULAR ECONOMY STANDS A CHANCE.' - PHOENIX METALMAN RECYCLING



Growing from six sites in 2021 to 18 sites this year, PMR has a nationwide reach from Invercargill in the South Island to Kamo, north of Whangarei in the North Island. The company has "horizontally and vertically integrated metal recycling services under the umbrella of one business" owned by Kiwis, and "ensuring the guardianship of a valuable resource within NZ". Sustainability data is the new currency of business says Reeve; the metal recycling industry has been sorting at source from the very beginning. PMR sorts over 13 types of metal grades while also applying practical sorting skills out on site for their clients' demolition projects; weighing materials, creating a recycling data

set for transparency, and connecting with development site locally sourced recycling centres to ensure the secondary resources are diverted from landfill. Not everything can be recycled, programme and cost limit full deconstruction, but where possible solutions are found.

PROJECT START: EXTRACT AND SEPARATE

Mark Levin, demolition contracts manager says: "The key is to identify the materials to extract and separate at the beginning of the project, organise their destination's, and transportation. It's

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rewarding when we find a solution for that resource.”

If a business is constructing all over NZ, PMR can track, weigh and consolidate total metals recycled – if you sort a few types at source. The metals bin is electronically weighed, validated and independently certified. This data set serves to assist businesses in their communication of their sustainability journeys – specifically their recycling volumes to their staff, customers, management and shareholders.

With the introduction of mandatory climate related disclosures reporting taking effect in 2023, PMR has “positioned the industry to move itself and others towards NZ’s SDG commitments for 2030 and beyond”.

CASE STUDIES:

PMR is in action in Northland and Auckland’s Favona – two great examples showing materials and handling during construction and demolition phases of a project. In Northland, at the Ngawha Innovation and Enterprise Park

– where recycling is challenged by accessibility, PMR has been creating a construction resource data set from three consecutive build platforms for their client Far North Holdings Ltd.

Every secondary waste material during the construction phase is being weighed with a corresponding docket record. This gives an insight into the mix of resource volume being separated on site. In this particular case, consolidated transport was required – no one is going to drive hundreds of kilometres to pick up discarded packaging, so a co-ordinated transportation effort is needed, says PMR within the regions.

Weather plays a part if the resources are not covered; some cannot be recycled wet. A review of a three month data set reflected a resource mix where the bulk of waste/resource material was achieving close to a 50% diversion rate. PMR says if we could do this across all development sites it would reduce construction and demolition waste to landfill by 50%, which would be a great start.

The solution was low tech – re-using drums and other types of bins to enable sorting on site.

Previously, Favona Glasshouses – Goodman Property’s NZGBC Greenstar Mainfreight site where 80+% of materials removed from the site have been recycled. A staggering 416 tonnes of glass was recycled into building batt insulation and other glass products locally.

Concrete – 1322 tonnes of it – concrete was removed from site for crushing and recycling, 760 tonnes of metals were recycled and nine tonnes of PVC reticulation channel reused for a horticulture

installation. PMR says it took 359 loads to remove all materials from site and they customised bins and trucks to catch the glass, including synchronised demolition to dismantle the frame and catch the glass at the same time. The glass had to be clean to be recycled, so any that fell to the ground was not able to be recovered.

PMR’s cost planner Stan West estimated from the 40,000m2 roof area plus walls there was potentially 460 tonnes of glass to be recovered. “We got close!” says West.



Above: Favona Glasshouses synchronised glass extraction for Goodman Property’s NZGBC Greenstar Mainfreight site. Below: The glass remains from the Favona Glasshouses for recycling into batt insulation and other local glass products.



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