



NZ Geothermal Week

24-29 JULY 2023 - TAUPO



pepeha

Ko Maungakeikei tōku maunga
Ko Tāmaki Makaurau Waitematā tōku moana
Ko Waikato tōku awa
Ko Ngati Waikato Tainui tōku iwi
Ko Ngāti Mahuta tōku hapu
Ko Maraea Kautawhiti toku ingoa whanau
Ko Hilary West-Reeve tōku ingoa

harakeke

The harakeke (flax) plant represents the whānau (family) in Māori thought. The rito (shoot) is the child. It is protectively surrounded by the awhi rito (parents). The outside leaves represent the tūpuna (grandparents and ancestors)



Marge Williams

(1925–2005)¹⁷

Waikato Tainui

Life Member 1988

*Every child has some talent
— we just have to find it.*

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1970s PIONEERS

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1990s–2000s

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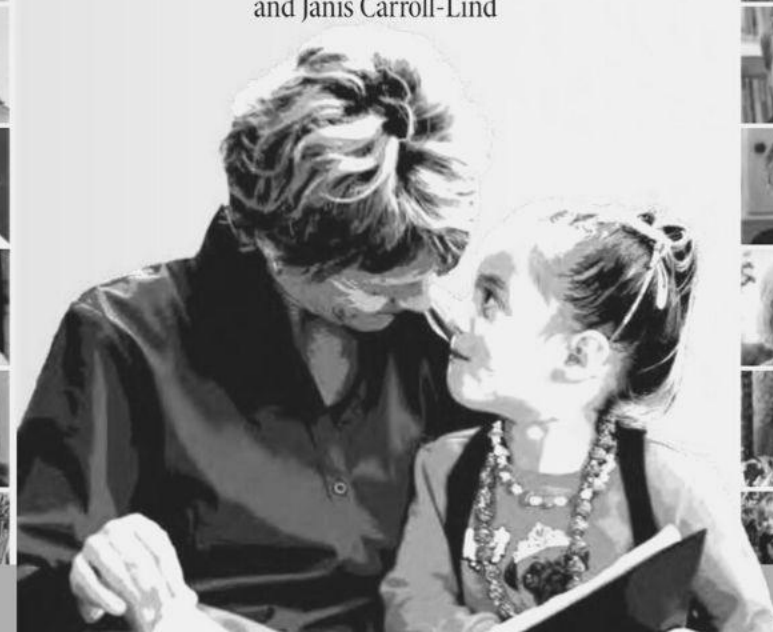
Ngā kohinga kōrero a te aumangea

Kia mana te ara kōhungahunga ki Aotearoa

Life stories on the frontline

Growing a childcare movement in Aotearoa

Edited by Helen May, Arapera Card,
and Janis Carroll-Lind



Opening Homes and Hearts



Members' Stories

Marge Williams

Recently widowed, in 1959, Marge converted the downstairs of her Taupō house, built equipment and toys and opened a childcare centre. Initially, the centre catered for 11 children, but as demand grew, from 1961 onwards, Marge included children with special needs into the programme. However, it was a struggle to secure additional funding from the Education Board as they feared setting a precedent. Marge, like a number of the early childcare activists, understated her role:

"I've never been particularly political, but I felt strongly about certain issues."

Marge believed that children who attended childcare deserved the same rights to trained staff and government funding as those attending playcentre and kindergarten. This was the shared belief that kept early Association members persisting, despite the setbacks.

Every child has some talent
— we just have to find it



Marge Williams pictured with the children of her former students (1985).



**Marge - a Zonta Woman of the Year Award
recipient - for Public Service**

A member of Te Rito Maioha from 1966

**Area Training Supervisor from 1970-1987,
made a life member in 1988 National
Advisor 1994-2002**

**Helped to develop the Diploma of
Teaching Qualification
- a precursor to today's Bachelor of
Teaching (ECE)**

**social
sustainability**

**intergenerational
wellbeing**



kaitiakitanga

Kaitiakitanga is the ethics and practice of guardianship, protection and conservation of the natural environment and the resources within it, on which people depend

coming full circle

Infinitely circular - resource recovery for the Taupō region

**environmental
sustainability**

**circular economy
essential services**

the Phoenix journey to today



FY13 - FY21

30,000+ MT metals recycled
27 containers exported
55 FTE; 31 March 2021
Toitu audited



FY22

60,000+ MT metals recycled
1,239 containers exported
125 FTE; 31 March 2022
Toitu audited



FY23

90,000+ MT metals recycled
1,942 containers exported
195 FTE; 3 March 2023
Toitu audit due October 2023



FY24 +

Projected 130,000+ tonnes recyclables
Averaging 250+ containers per month = 2,500+ p.a
213+ FTE; 30 June 2023





our Aotearoa our future

**Phoenix is a proud New Zealand business
with between 5 - 70 years of metal recycling
history across our locations**

Incorporated in April 2013; we are celebrating
our 10 year anniversary

Infinitely circulating secondary resources for a
sustainable future, striving for carbon zero





building a business

ESG

environmental, social, governance

advocate for the circular economy,
lead sort at source resource recovery

support manufacturing's green future with 100%
recycled secondary raw materials

sustainability data and reporting

***THE ONLY GREENWASHING
YOU'LL CATCH US DOING***



TOITŪ



**ISO 14064-1
ORGANISATION**

weighing everything





going circular



NON DG




ALKALINE / ZINC CARBON BATTERIES
GENERAL HOUSEHOLD BATTERIES

NOTE: TERMINALS MUST BE TAPED OR BAGGED - 40 BATTERIES PER SNAPLOCK BAG, LOADED INTO PLASTIC LINED STEEL DRUMS.

DRY POWDER
Fire Fighting Measure




NICKEL METAL HYDRIDE BATTERIES
TOOL, CELLPHONE, HOUSEHOLD AND LARGE EV BATTERIES

NOTE: TERMINALS MUST BE INSULATED, LOADED INTO PLASTIC LINED STEEL DRUMS CONTAINING VERMICULITE. TERMINALS TAPED LOADED ONTO PALLETS

CHEMICAL POWDER
Fire Fighting Measure




NICKEL CADMIUM BATTERIES
TOOL, HOUSEHOLD AND LARGE BATTERIES

NOTE: TERMINALS MUST BE TAPED, LOADED INTO PLASTIC LINED STEEL DRUMS CONTAINING VERMICULITE. MUST BE LOADED INTO IBC'S

CO2
Fire Fighting Measure




LITHIUM METAL BUTTON BATTERIES
DAMAGED LITHIUM BATTERIES CANNOT BE ACCEPTED

NOTE: BUTTON BATTERIES MUST BE TAPED FRONT AND BACK, LOADED INTO PLASTIC BUCKETS CONTAINING VERMICULITE MAX 10 KG PER BUCKET.

CO2
Fire Fighting Measure




LITHIUM ION BATTERIES
EX POWER TOOLS / LAPTOPS / MOBILE PHONES CAR AND LARGE BATTERIES

NOTE: TERMINALS MUST BE TAPED & LOADED INTO PLASTIC BUCKETS CONTAINING VERMICULITE. MAX 30KG PER BUCKET. TERMINALS INSULATED AND LOADED ONTO PALLET

DRY POWDER
Fire Fighting Measure




LITHIUM PHOSPHATE BATTERIES
SMALL & LARGE BATTERIES

NOTE: TERMINALS MUST BE TAPED & LOADED INTO PLASTIC BUCKETS CONTAINING VERMICULITE. MAX 30KG PER BUCKET. TERMINALS TAPED AND LOADED ONTO PALLET.

CO2
Fire Fighting Measure




LITHIUM METAL PRIMARY BATTERIES
NON RECHARGEABLE

NOTE: TERMINALS INSULATED, LOADED INTO PLASTIC BUCKETS CONTAINING VERMICULITE. MAX 30 KG PER BUCKET.

CO2
Fire Fighting Measure




LITHIUM BATTERIES WE CANNOT ACCEPT

- DAMAGED LITHIUM
- TADIRAN LITHIUM INORGANIC
- LITHIUM THIANYL CHLORIDE

other waste Batteries





other waste Batteries



'Sunrise over Waitangi Treaty Grounds' Credit: anupamhatui

know
your
number.

reporting

METAL RECYCLING

100% NZ OWNED

CERTIFICATE TOTAL RECYCLED 2022

Client Name

For the following site:

Address

For the period:

01 January 2022 – 30 December 2022

A total of:

XXX,XXX kgs

OF METALS WERE RECYCLED BY PHOENIX METALMAN RECYCLING

Thank you for supporting Aotearoa NZ's circular economy. All mandatory carbon emissions associated with servicing from your yard/site, receiving, sorting, processing, packaging and shipping of the metals to global destination ports - have been offset within our Toitu Envirocare Net Carbon Zero Programme (refer certification attached and link). Consolidated weighbridge data summary attached.



FIGHTING FOR PLANET EARTH

'Kaitiakitanga - Nurturing nature by circulating resources for a sustainable future'



challenging the 1 skip bin model

'Sustainability is no longer about doing less harm. It's about doing more good.'

JOCHEN ZEITZ

9 mth programme

AUCKLAND CBD WYNYARD POINT



92% recycled

39 tanks
400t largest tank
794t waste/ACM
1927t metals
7102t concrete
9032t total tonnes



DEVELOPING SUSTAINABLY







7 mth programme

Goodman

AUCKLAND FAVONA GLASSHOUSES



80% recycled

40,000 area

416t glass

631t waste/ACM

761t metals

1,322t concrete

9t PVC

15t house

3,154t total tonnes

Emissions (Toitu emanage):
359 loads removed from site
Category 1: 56.97 tCO₂e



GREEN STAR CONSTRUCTION & DEMOLITION WASTE REPORTING.

Phoenix Metalman Recycling
Compliant and independently verified with
Toitu Envirocare



NZGBC
TE Kaitiaki Take Kōwhiri
Member 2022-2023

4 mth programme

foodstuffs NORTH ISLAND

WELLINGTON FOODSTUFFS COOLSTORE

95.3% recycled

320t cool panel

258t waste/ACM

246t metals

11,489t concrete

12,313t total tonnes

Emissions (Toitu emanage):
246 loads removed from site
Category 1: 50.76 tCO₂e



PHOENIX
METALMAN RECYCLING

**FAR NORTH
NGAWHA PARK**



preliminary results.....

46% recycled	%
4,793kg timber	29%
1,502kg cardboard	9%
2,806kg plasterboard	17%
6,125kg mixed waste	36.9%
1,369kg metals	8%
21kg plastics 1&2	0.1%
16,616kg total kgs	100%

Emissions:
67 loads removed from site



54%
landfilled

46%
circular

**what does
Next Gen Leadership
look like inside a recycling business
100% focused on Aotearoa NZ?**



environmental tool box talks

metals knowledge on building sites



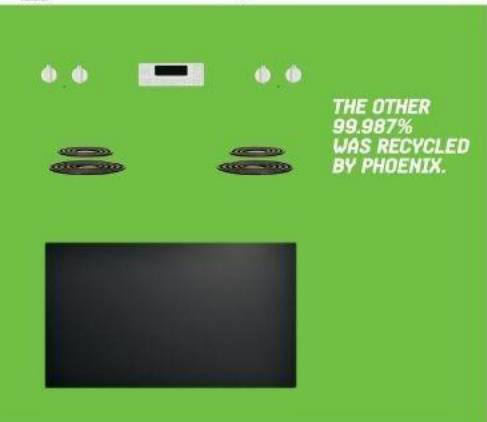
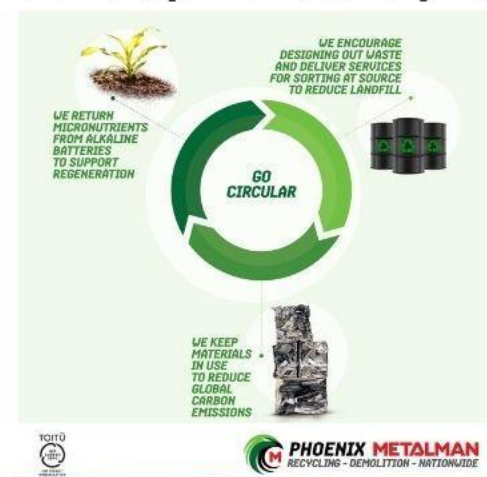


we educate

For the enduring guardianship
of our environment,

we must continually educate
the next generation





consumerism

Our take, make, waste - linear economy - needs to evolve and go circular, we are encouraging eco innovation in product development and product stewardship

collaboration

2016 - 2023

350,000kg fish offcuts
repurposed so far

Cans 4 kai - Kēne mō te kai
commenced in June - 30kg
Papatūānuku Kōkiri Marae,
Westhaven Marina and LegaSea



**LEAVE YOUR
EMPTY'S HERE**

**AND WE'LL TURN THEM INTO
KAI FOR THOSE WHO NEED IT.**

The Kia Ika Project has partnered with Phoenix Metalman. Now collect and recycle aluminium cans. The cash generated helps us share more kaimoana. Waste not, want not.



🌐 kailika.co.nz
📘 @TheKailikaProject
📷 [the_kai_ika_project](https://www.instagram.com/the_kai_ika_project)



LEGASEA
FISH FOR THE PEOPLE





collaboration





systems &
infrastructure
upgrades



other waste
batteries



HANGA-ARO-RAU
Manufacturing, Engineering
and Logistics
Workforce Development Council

collabor-Action



SW management
climate change



electrification



SUSTAINABLE
STEEL
COUNCIL



on road / rail
supply chain



fleet renewal

HERA



The
Battery
Industry
Group



ocean
supply chain



EROAD



ecotricity

TOITŪ



ISO 14064-1
ORGANISATION



voluntary
offsetting



CLIMATE
IMPACT
PARTNERS



cans for Kai



nz association
amr
of metal recyclers



PHOENIX
METALMAN RECYCLING

Nickel is now playing an increasingly important role in the clean energy transition, with the material being used in lithium-ion battery (LIB) chemistry for powering electric vehicles (EVs), and in renewable energy storage.

Ni
Nickel

12,175
OF TIMES WE RECYCLED STAINLESS STEEL/NICKEL IN 2022

geothermal energy metals

stainless steel
304, 316, 2205, 2507
titanium steel

Waitaiti Geothermal Powerstation, Taupo, New Zealand

the energy transition will be built with metals

solar energy metals

copper
silver
zinc
aluminium
steel
indium
gallium
selenium
cadmium
tellurium

AS OF TODAY, WE HAVE DIVERTED A TOTAL OF 106,953 KGS OF THESE OTHER WASTE BATTERIES FROM LANDFILL.

Zinc Alkaline Batteries - 67,048kgs
Lithium Batteries - 17,235kgs
Nickel Metal Hydride Batteries - 9,116kgs
Nickel Cadmium Batteries - 13,554kgs

FY23
448 containers
9,408 T batteries

Copper is at the heart of the clean energy transition.

Copper connects and delivers clean energy to the world.
Copper.org

51,578
OF TIMES WE RECYCLED COPPER LAST YEAR

STEEL IS THE POWER BEHIND RENEWABLE ENERGY

Depending on make and model, wind turbines are predominantly made of steel - 60-75% of total turbine mass
National Renewable Energy Laboratory, USA

2022
11,251,637 KGS ALUMINIUM RECYCLED!

steel, stainless steel, copper, aluminium, nickel, cobalt and lithium enabling the entire power value chain – from geothermal to wind turbines and solar panels, transmission and distribution infrastructure to energy storage, batteries and electric vehicle (EV) charging....



*total loads
weighed*

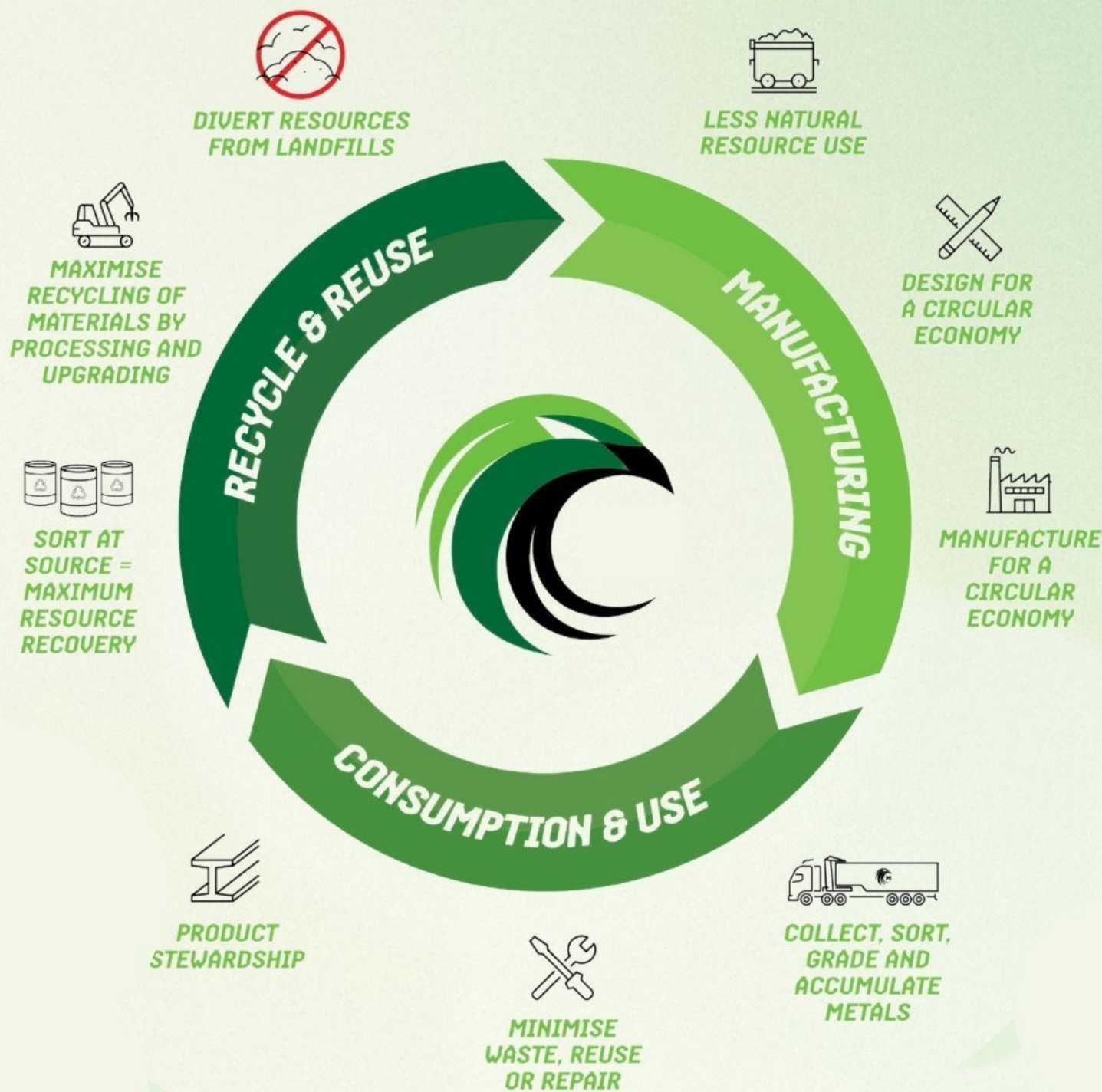
259,838

scaling up in Taupō



870 Rakaunui





future focused
for future generations

**Go
circular**



**WE'RE FOR
LANDFILL**