

**Fortune
favours the bold**
Ko māia, ko angitu
June, 2025 - Christchurch



PHOENIX
RECYCLING GROUP

Recycling for our future



Yes, we are here to talk about batteries

and yes, when recycled with Phoenix, they are being recycled into raw materials for new batteries or to be used in other applications

We are not going to show you an image of a fire...

Just tell you what we are doing about it



Why is Phoenix different from other NZ battery recyclers?

Compliance driven with specialist EPA permits

Nationwide : 19 : 100,000+sqm

240 staff - we own our own fleet, 50 DG drivers (DG-9)

Data led; 5 Years voluntarily carbon emissions reporting
Tracking emissions to deliver the circular economy locally and globally





Our industry weighs everything

We never estimate our volumes; every product type is sorted
100's of metallic specifications are made for sustainable manufacturing

A new Phoenix record!

457,889

loads separately sorted and weighed for recycling in FY25

46,437

different organisations, businesses
and individuals recycled with us in FY25

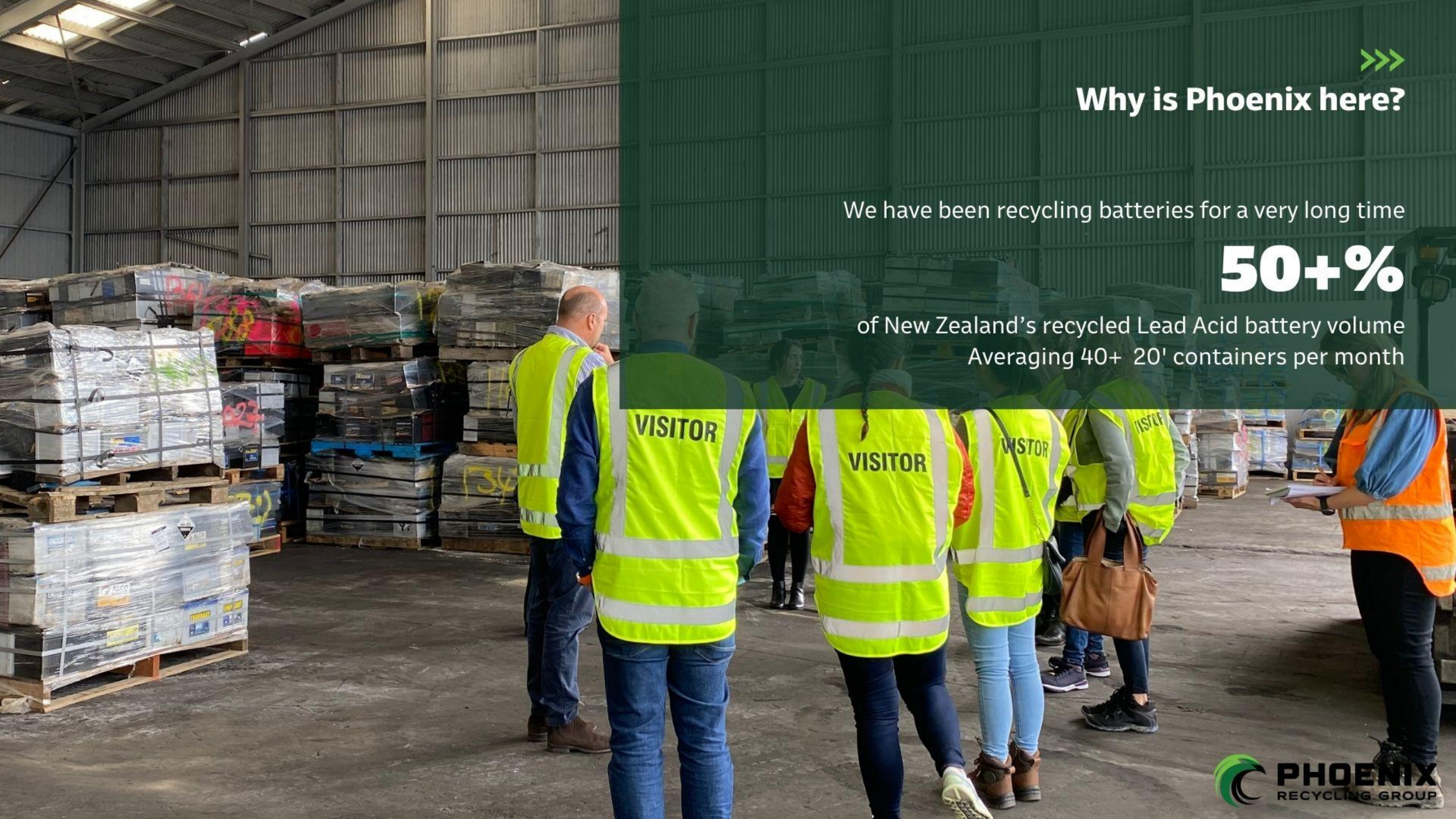


Why is Phoenix here?

We have been recycling batteries for a very long time

50+%

of New Zealand's recycled Lead Acid battery volume
Averaging 40+ 20' containers per month



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



**All Phoenix's sustainability data is
independently audited**

We have been voluntarily carbon reporting our sustainability journey
for 5 years with Toitu Environcare since 2021

Delivering sustainability data reporting for our customers for climate
related disclosures.

4 years in and we are achieving reductions in certain emission factor
categories!



FY24 Sustainability highlights

Know your number, if you measure you can manage
In our 5th year of verification within carbon reduction programme



Advancing Local and Global Circularity

33% 

more volume recycled



Electrifying

37% 

increase in kWh



Empowering our People

3,176

hours of employee training

Protecting the Environment within NZ



1% 

Category 1 (Fuel) emissions



0% 

Category 2 (Energy) emissions



34% 

Category 4 (Waste) emissions decreased



Offshore Transportation

33% 

Category 3 (indirect transport emissions)



Are they your batteries or ours to manage?

Why are we blaming the waste industry for fires?

Why are we blaming the scrap metal industry for fires?

We as an industry have ended up with them, but we all buy them and use them everyday

Do you think they are imported labelled correctly?

Is it regulated?

How is NZ collecting data to determine size of our Hazardous Waste issue?

Can you tell the difference?

and yes, it matters



How many types?

is it changing all the time?

What are we going to do about it?

There has not been time to wait,
fortune follows the bold.

Something needed to be done,
so we did it.

How many types of batteries have you seen on these slides?

Our team knows!

Big and small

We can't be picky

AUTOMHA
LITHIUM ION BATTERY - 51.8V - 20Ah - 10.5kg

HANDLING

- Never open, disassemble the battery pack or bypass any safety device
- Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) objects
- Do not charge the battery pack above +45°C and below 0°C
- Do not expose the battery pack to open flame or fire

STORAGE

- Do not store the battery pack above +40°C or below +15°C and avoid prolonged exposure to humidity
- Do not store the battery pack close to heating equipments, or exposure to sunlight for long periods

Refer to the Manual

Li-Ion

Li-Ion

CE

ITALY

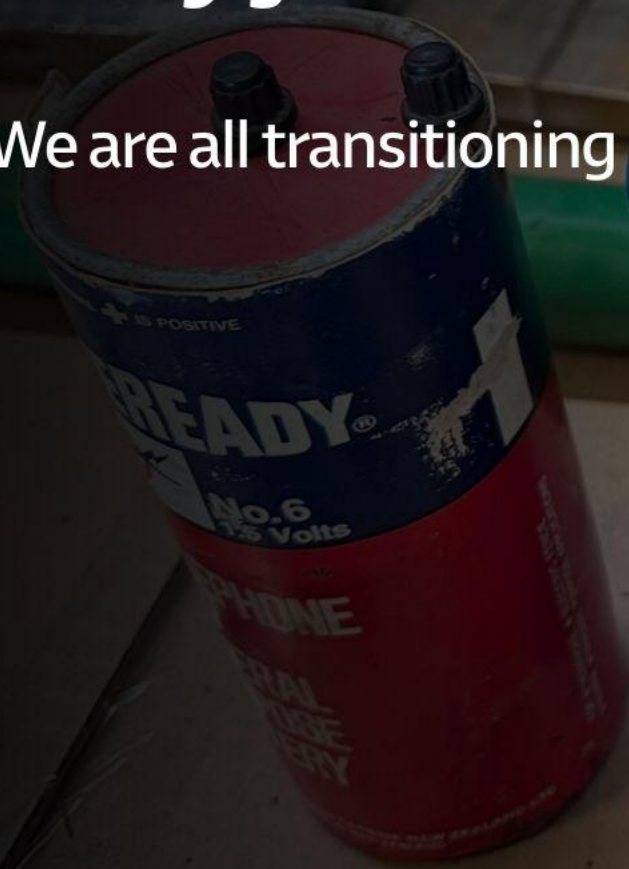
The legacy has a long tail.....

Let's act now



They just keep on coming.....

We are all transitioning our energy sources



**Fortune
favours the bold**
Jasmine Faulkner

WASTEMINZ AWARDS FOR
EXCELLENCE
2025

finalist

**in the Waste & Resource Recovery
Young Professional of the Year category**



brought to you by



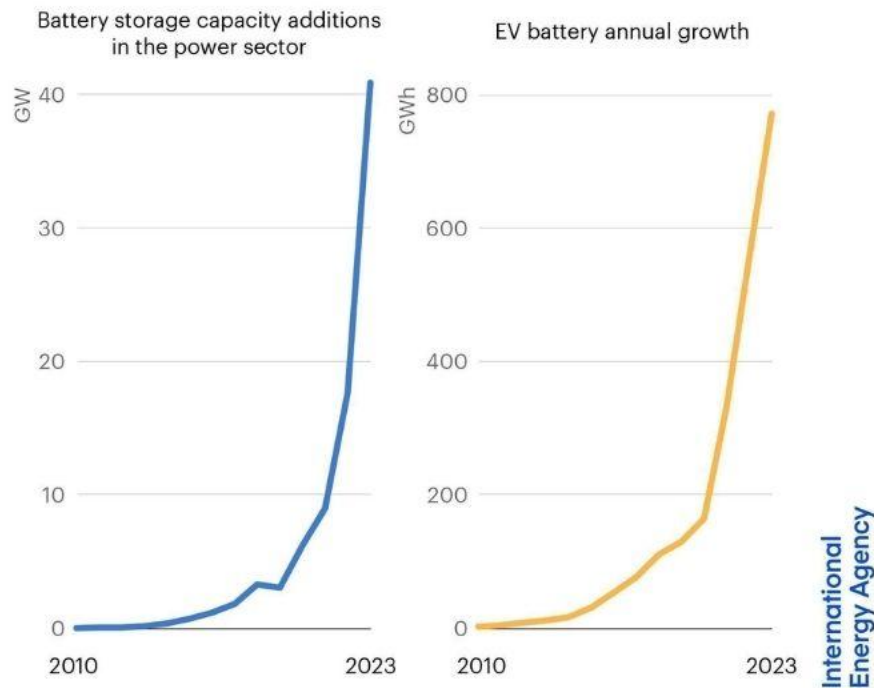


Global Lithium Battery demand

Batteries are an essential part of the global energy system today and the fastest growing energy technology on the market

Despite the continuing use of lithium-ion batteries in billions of personal devices in the world, the energy sector now accounts for over 90% of annual lithium-ion battery demand

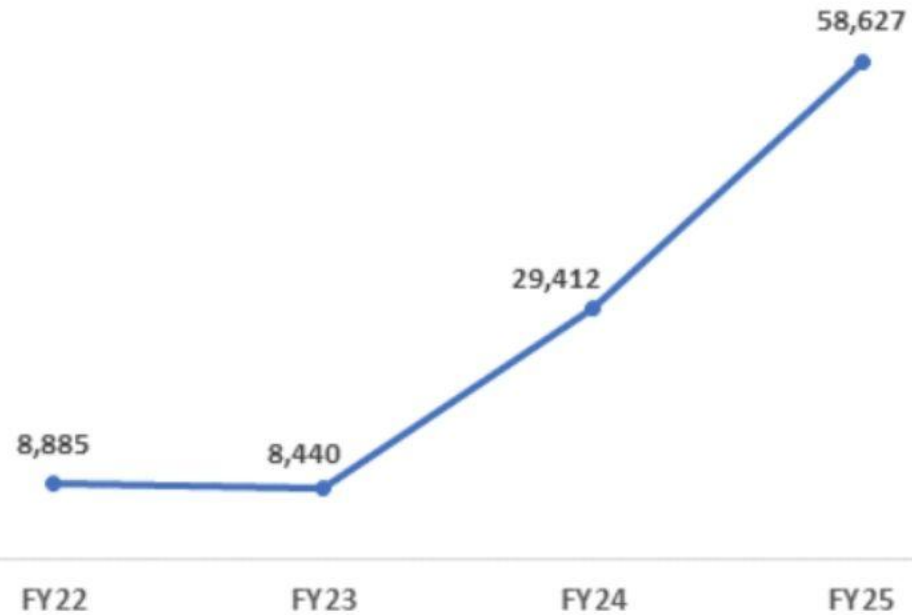
The energy sector is propelling huge growth in the global battery market. Today, batteries are the fastest growing clean technology



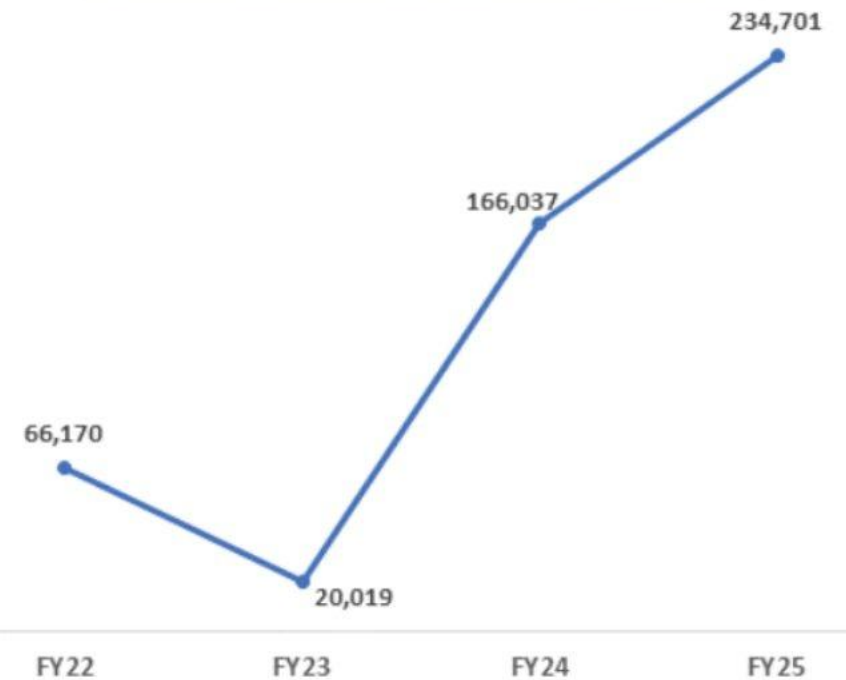
NZ's National Battery Recovery Data

Phoenix has been building New Zealand's record of battery recycling recovery data for the last 4 years

Lithium Batteries Collection over Fiscal Years



Other Waste Batteries Collection over Fiscal Years





Phoenix's expanding volume, month
on month: Inception April 2021

We track everything, every type

**A new record - 503,121 kgs
recycled so far!**

Lithium, Alkaline, Nickel Metal Hydride, Nickel Cadmium

WE'VE RECYCLED

284,842 KG
ALKALINE
BATTERIES

WE'VE RECYCLED

42,816 KG
NICKEL-CADMIUM
BATTERIES

WE'VE RECYCLED

67,007 KG
NICKEL-METAL
HYDRIDE
BATTERIES

WE'VE RECYCLED

108,456 KG
LITHIUM
BATTERIES



Before Phoenix launched their solution

Outside of our solution following global international best practice meeting Basel Convention for Hazardous Waste, we currently we know of others operating in:

an unregulated industry

Using open buckets, IBC's and drums, stored inappropriately

Uninsured or self insured

Collection units un-monitored, or only on 24 hour loop

Illegally, unmarked, un-monitored facilities



Before Phoenix launched their solution

The status quo was a completely unregulated market with
bespoke unconnected services,
with un-verified downstream recycling

Finding large scale stockpiles
and dumping of industrial/commercial batteries

Lithium batteries stored in garages
and living rooms in residential areas

What should the public do if they see something
suspicious?

Contact your local FENZ Fire District Team and/or submit a
[“Fire Hazard Assessment Report”](#)



Before Phoenix launched their solution

Large scale dumping of household, industrial and commercial batteries

Completely unregulated market with bespoke unconnected services, un-verified downstream recycling



Description:

Hybrid packs delivered 17.10 by a customer. State is very poor, poses an electrocution threat potentially. Pieces of car panel and all

Images:





Permit to export hazardous waste

under clause 11 of the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004

Permit Number: EPA00900075589D

Permit holder's legal name: Phoenix Metal Recyclers NZ Limited

Type of hazardous waste: Mixed battery waste

Destination:

Importer:

Processing Facility:

Permit valid from: 1 August 2023

Permit expires: 09 June 2026

New Zealand Tracking number: NZ012/23

Metric tonnes: 1,500 metric tonnes

Shipments: ☐ single ☒ multiple

Copies: Copies of this permit will be accepted by New Zealand Customs.

Consent to export:

A permit to export hazardous waste as set out above is hereby granted to the permit holder under clause 11 of the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004, based on the information set out in the permit application and the declaration provided to the Environmental Protection Authority (EPA) by the permit holder on 14 March 2023, and any additional information provided to the EPA by the permit holder, and in accordance with the conditions set out below and any conditions on consent set by

Delegated Authority: Miriam Robertson, Manager, New Organisms Applications, Hazardous Substances and New Organisms

Signature: 

Date: 01/08/2023



Verified Downstream - What a permit looks like

To legally recycle other waste batteries within NZ law
you must have a specific permit

We hold multiple international permits to export hazardous waste,
which have been verified with the Environmental Protection
Authority NZ, in accordance with the Basel Convention

These permits validate every step of the supply chain to deliver the
batteries for recycling

If you haven't sighted one of these specifically made out to the
organization you or their partner are contracted to; then your
battery recycling collection partner is not likely verified to receive
batteries for recycling.

New Basel Convention regulations in effect Jan 1 2025 on E-Waste



Responsible Recycling
Phoenix has end-to-end insurance cover for
our entire local supply chain to global recycling
partner

Public & Products Liability

Contractor's Pollution Liability

MV Insurance

Marine Cargo Insurance

Asset Replacement/ Protection Insurance

Currently cost to insure borne by Phoenix rather than the
consumer or the manufacturer

Why is Product Stewardship not a priority?



LICENSED
& INSURED

>>>
**So where are they going if they don't pass
through Phoenix's solution?**

Where are they going?

Dumped?

Stored?

Traded in a un-regulated market?

Shipped mis-declared?

ALL OF THE ABOVE

DO YOU HAVE BATTERIES?

YOU CHOOSE?



OR



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PHOENIX SUSTAINABILITY DATA & REPORTING AUDITED

- PHOENIX MARKET_Trak**
Recycling
- PHOENIX SUSTAINABILITY_Trak**
Recycling
- PHOENIX EMISSIONS_Trak**
Scope 3 - CO2 Reporting

RAW MATERIALS RECOVERED FOR FUTURE BATTERY TECHNOLOGIES



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RECYCLE WITH PHOENIX IN NZ

INSURED EVERY STEP FOR ASSURANCE



PHOENIX
RECYCLING GROUP
PHOENIX SMART BINS (<5KG EA) & COMMERCIAL/INDUSTRIAL STORAGE (>5KG EA) SOLUTIONS



PHOENIX
RECYCLING GROUP
PHOENIX FLEET COLLECTION SERVICES



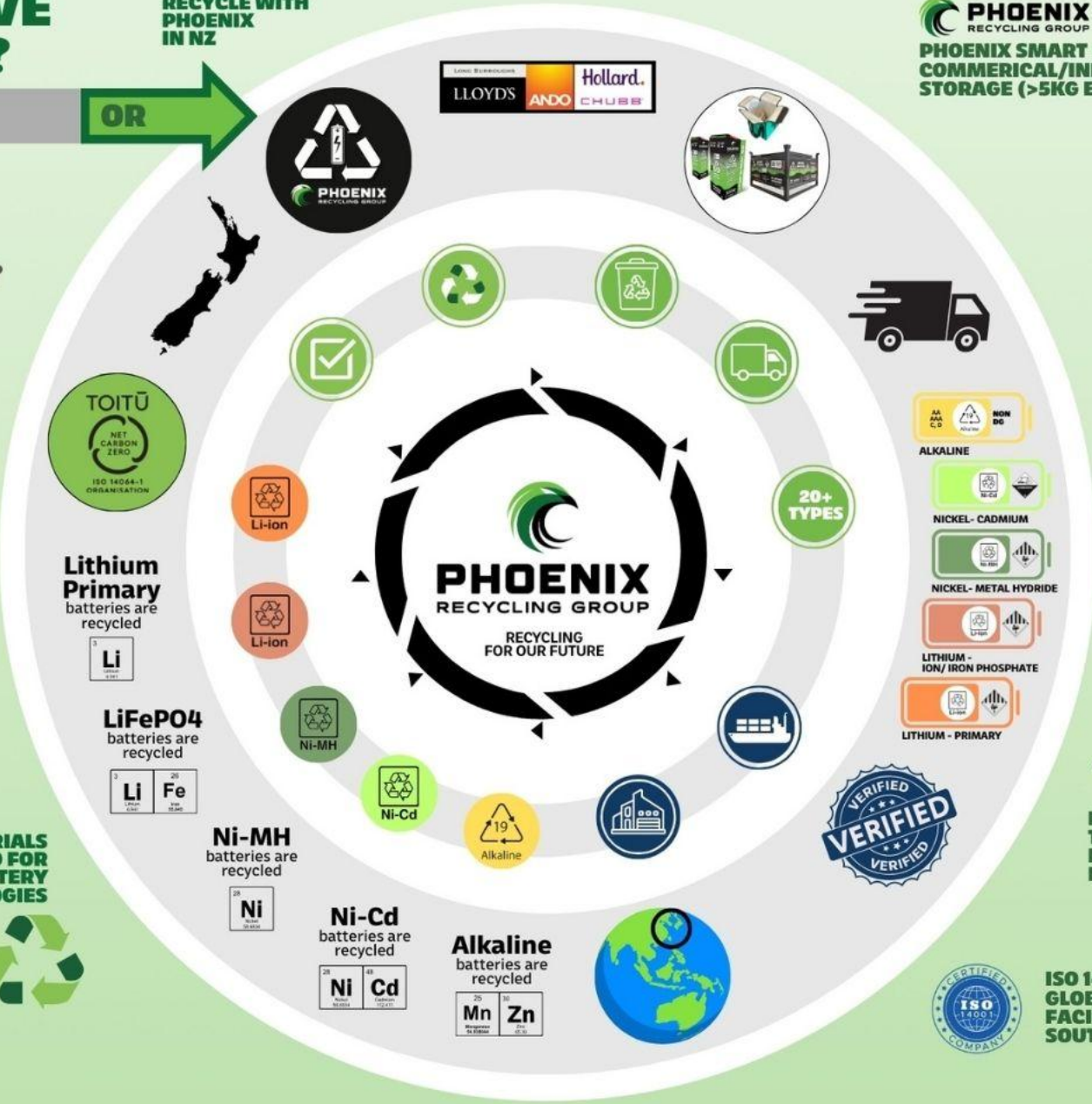
PHOENIX
RECYCLING GROUP
PHOENIX SORTING, PROCESSING & PACKAGING SERVICES

Environmental Protection Authority
Te Mana Rauhi Taiao

EXPORT BATTERIES TO GLOBAL RECYCLING PARTNERS UNDER EPA PERMITS



ISO 14001 CERTIFIED GLOBAL RECYCLING FACILITIES IN JAPAN & SOUTH KOREA



Lithium Primary
batteries are recycled



LiFePO4
batteries are recycled



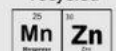
Ni-MH
batteries are recycled



Ni-Cd
batteries are recycled



Alkaline
batteries are recycled



PHOENIX
RECYCLING GROUP

Phoenix's Battery Recycling
End-to-end solution to Recyclers gate

2025 - PHOENIX BATTERY RECYCLING PROCESS DIAGRAM



Nationwide ratepayers are contributing

240+ locations collecting

100+ organisations contributing responsibly

30+ Councils now involved in our solution

over 100 public facing locations can be found on our map,
to make it easy for the public to recycle batteries

our map can be found at:

<https://www.phoenixrecycling.co.nz/battery-recycling-locations>

We are the trusted NZ battery recycler >>>





What is in Phoenix's Smart_BIN?

Over 30 Councils are now recycling batteries with us;
many are using Smart Bins

These bins are 'Smart' because they contain:

IOT: API integration , talks directly to the alarm monitoring

Heat sensors installed in every unit, samples are taken every
minute, with data uploaded every hour

Fire suppression installed in every unit

UN certified fire resistant hardware within each unit

A system that can be installed inside to mitigate the many risks of
recycling batteries and also manage unit damage, theft and security



UN certified - Global best practice solution for NZ

We are not here to re-invent the wheel,
but provide a practical best practice solution

UN certified fire resistant liners, within a DG rated carton





New Smart_BINS heading out to Councils under our Council special

Want to know more?

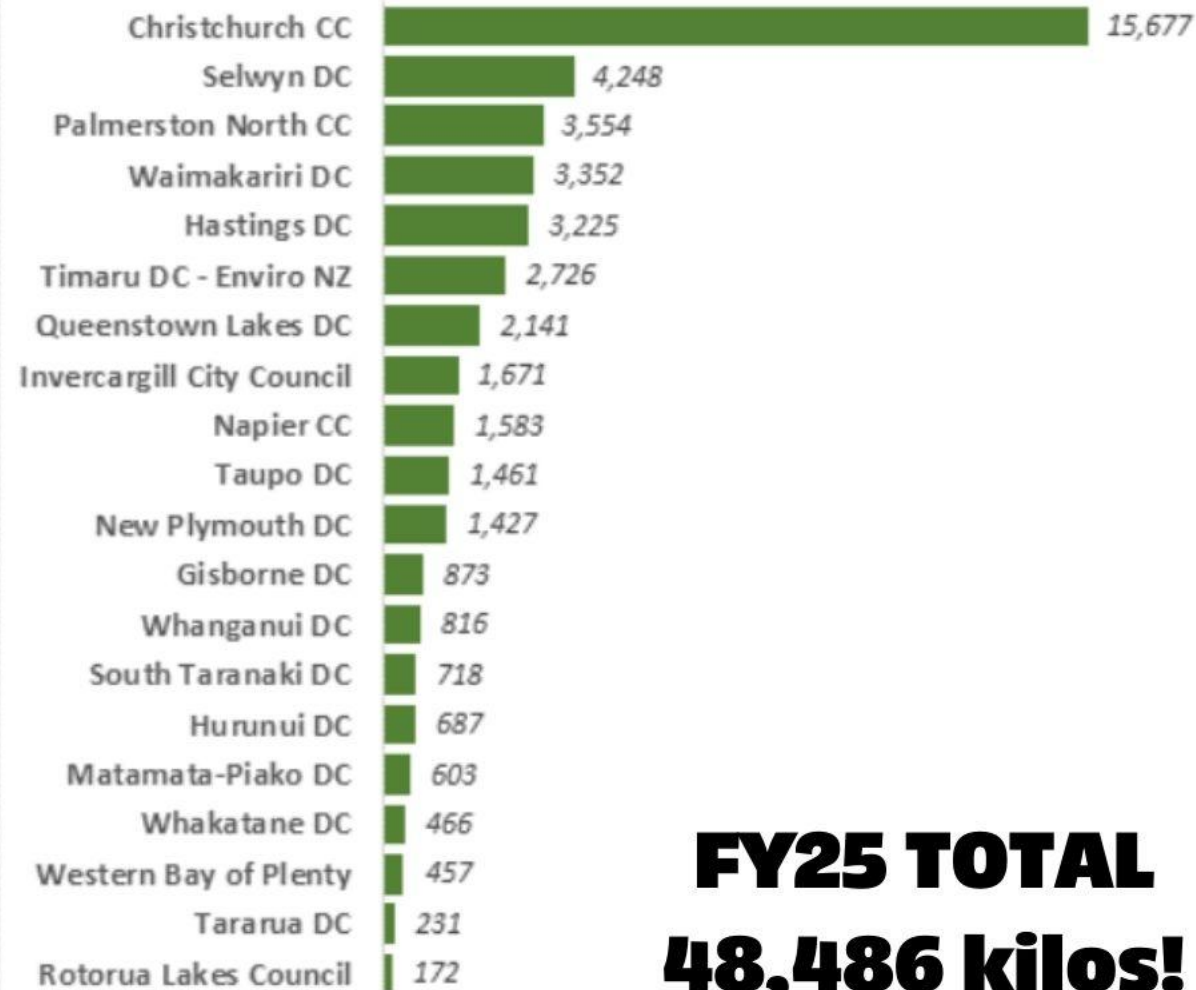
Come see us at Booth #4
in Exhibition Hall 3 on the ground floor





Council Leaderboard

FY25 Top 20



FY25 TOTAL
48,486 kilos!

We have over 30 Councils working with us

If you are a Council and not working with us;
please ensure your downstream battery partner
is Permit verified

Otherwise batteries are being managed safely or
potentially legally

This is a resource, a commodity, that bears a
cost to recover. If recovered; we can reduce risk,
fires and contamination of this emerging
hazardous resource stream



Celebrating amazing work

15,677 kgs!

FY25 award – Christchurch City Council are an amazing example of what a "Great Scheme" looks like when the public are provided a practical means to recycle their batteries safely



6 Sites



Celebrating enthusiasm

**FY25 - 4,248 kgs
diverted!**

Selwyn District Council

4 Sites in Total

Hosts a DCU at NewWorld Lincoln

Hosts a DCU at NewWorld Rolleston

Hosts a DCU in Darfield Library

Customised Smart_BINs



Phase 1

Onshore:

- Establish supply chain volume through contracts
- Site network
- Collection service
- DG transportation
- Hand sorting

Offshore:

- Insured marine cargo transportation
- Specialist EPA waste battery permits to global recycling Partners
- All chemistries, all weights/sizes



Lithium



**Nickel
Cadmium**



**Nickel
Metal
Hydride**



Alkaline



Challenges in the <5kg sizes

They look the same

Sorted manually to ensure no lithium contaminates a load,
we have a 0.0225% accuracy rate

Can't risk missing 1 lithium battery making it through into the wrong pile

**They are manually
sorted again by our
global recycling
partners**

Stillage



Transport



What if your battery is large and weighs over 5kg?

We can recycle them!!

SOC - Why it is important

DG rated Stillages available

Transportation

Packaging

DG rated drivers



Toyota is leading the way trialing for the world with Aotearoa NZ as their first test market; Phoenix as the collaborating partner

De-risks ensures Warranty, IP, Insurance of product is kept with Manufacturer and is fit for purpose of it's original manufactured use





Big Auto EV battery stockpiles

What do we do with large damaged and charged batteries?

Working with education provider to write first to market
EOL systems for dismantling of large EV
and energy storage batteries

The cost to recycle vs landfill vs stockpiling = risk fires

200-400+kg = challenging handling

The difference between an auto-wrecker
and a scrap metal recycler



**TOTAL
DIVERTED FOR
FY25**

38,247 kilos!

Collaboration with the Waste Industry

Waste vs Recoverable Resource

Collaboration with the Waste Industry
and responsible Waste Management providers has been KEY to
ensuring diversion at scale for recoverable resources ex NZ

Phase 2

Continuous large volume feed stock
via contracted supply

Continuously assessing:

- tipping point for investment in onshore processing of Lithium Ion and LiFePO₄ chemistries to (pre-processing or black mass) - inert
- This will remove Landfill requirement for encapsulating Damaged Lithium Ion / LiFePO₄
- Sub-categories of chemistries evolving so fast
- Technological advancement of recycling facilities



Risk / Site Assessments



Group member since 2018



Li-on WasteMINZ Group member

Collaborating with Key Stakeholders



Carbon emissions reporting for the circular economy



Resource Recovery Advisory Group Member
Resource Recovery Qualifications





Our relationship with Fire Emergency New Zealand (FENZ)

Our Collaboration with FENZ is key in our endeavors to provide this service to NZ

Transfer Stations, Recycling yards, high risk facilities - work with your local FENZ District!

Request site and risk assessments

Review Emergency response and Evacuation procedures

What can you do if they see something suspicious?

Submit a Fire Hazard Assessment Request

OR

Contact your Local FENZ District Team

BATTERY RECYCLING SITES

Phoenix has partnered with these sites nationwide, providing collection units for your old unwanted batteries.

Enter your address

Alexandra Transfer Station

60 Boundary Road, Alexandra 9383

Cromwell Transfer Station

79 Barry Avenue, Cromwell 9384

Papanui Mitre 10

54 Herewood Road, Papanui, Christchurch 8053

Bromley Ecodrop Transfer Station

40 Metro Place, Bromley, Christchurch 8062

Redwood Ecodrop Transfer Station

76 Styx Mill Road, Casebrook, Christchurch 8051

Wigram Ecodrop Transfer Station

25 Parkhouse Road, Wigram, Christchurch 8042

Eco Shop

191 Blenheim Road, Riccarton, Christchurch 8041

Ferrymead Mitre 10

1095 Ferry Road, Ferrymead, Christchurch 8023

Clutha District Council - Public Reception Office

1 Rosebank Terrace, Balclutha 9230

Owaka Community Library

10 Campbell Street, Owaka 9535



Google

Keyboard shortcuts Map data ©2025 Google



Phoenix Recycling's where to recycle your batteries map

Responsible battery recycling, at over 100 public facing locations,

<https://www.phoenixrecycling.co.nz/battery-recycling-locations>

Phoenix's collection partner network is the only NZ map of public drop-off locations with verified battery recycling downstreams

The batteries you drop off to recycle are collected and recycled with Phoenix's multiple international permits to export hazardous waste, which have been verified with the Environmental Protection Authority NZ, in accordance with the International Basel Convention

This recycling solution also strictly adheres to NZ's laws and regulations. We recycle all battery types



What does success look like?

All 78 councils participating

Mandatory Product Stewardship, to share cost burden of insurance and recycling

As many retailers who sell batteries into the market participating

Waste industry with verified downstream also on our map

Reliable Data to assist with Market size (update NZ's working Tariff Document)

Shared central comms on educating the public nationwide what to do with their used batteries

Strategic collaboration with all OEMs

What can you do?

- Responsible Recycling: Verify your battery recycler's downstream Partner. Sight the EPA permit.
- Join us, so we can recycle more for Aotearoa
- When purchasing, think and query with supplier about EOL process.

Launched
in

2025

Solar Panel Recycling >>>

Recycling for our sustainable renewable future, finding solutions to legacy products powering our future

Like batteries, we need constant volume feedstock to move to a Phase 2 onshore solution

Need all landfill operators to participate in this diversion

98% of the panel's materials are recovered

We have resources to recover!

What other products does the future bring?



Phoenix are here this week to answer any of your questions

Come see us at Booth #4

It's in Exhibition Hall 3 on the ground floor

Recycling
for our
future



RECYCLING PRODUCT TYPES



METAL RECYCLING



WEEE RECYCLING



PAPER RECYCLING



PLASTIC RECYCLING



GLASS RECYCLING

SUSTAINABILITY DATA & REPORTING



SUSTAINABILITY DATA & REPORTING



SUSTAINABILITY DATA & REPORTING



SUSTAINABILITY DATA & REPORTING

SERVICES



RECYCLING SERVICES



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**We want everyone to experience the
now and the future - responsibly**

Have fun; and recycle

1,413 kgs

of batteries recycled at
the Coldplay Concerts

for Eden Park Trust





**100+ reasons
to Recycle**

**WE'RE FOR
LANDFILL**

Go circular.