

The background of the cover is an aerial photograph of ocean waves, showing intricate white foam patterns against a deep blue-green water surface. A thick, vibrant green diagonal stripe runs from the top left towards the bottom right, partially overlapping the text.

# Sustainability Report 2022



**At Enviro NZ our role is to help customers and local communities do the right thing by the environment – we do this through tailored waste and recycling solutions.**

**As an industry leader, we support New Zealand’s transition to a climate resilient, low emissions society by keeping materials in circulation.**

The report covers our sustainability performance from 1 January to 31 December 2022. It builds on Enviro NZ’s last sustainability report, published in April 2022. Where available, prior year (2021) data has been included for comparison.

Use the navigation icons in the bottom right corner throughout this report to navigate directly between sections.

**For any questions or feedback on the report, please email [sustainability@enviroz.co.nz](mailto:sustainability@enviroz.co.nz)**

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# Message from our CEO



## The way New Zealand deals with its waste and recycling is undergoing the biggest transformation in decades.

With attention focused on reducing the waste we create, reusing materials more and recycling all that we can, we are at a defining moment in New Zealand's journey towards a low carbon circular economy.

The accelerating climate crisis gives greater urgency to this transition. As we have seen with recent flooding in the north and droughts in the south, extreme weather events are becoming more common in the communities we serve. Climate change is happening now.

We recognise that the responsible use of natural resources is crucial to addressing the challenges posed by a changing climate. This necessitates a collective shift from the traditional "make, take dispose" linear model to a circular economy, where materials are kept in use for as long as possible, while waste and emissions are reduced.

Enviro NZ is serious about making a real difference through climate action and accountability. We are committed to improving the recovery, reuse and repurposing of valuable materials to support New Zealand's transition to a climate resilient, low emissions society.

As a strategic partner for every sector of the economy, Enviro NZ develops and invests in solutions that help New Zealanders reduce their waste footprint. We provide collection, resource recovery and processing services for a third of all local councils and more than half a million business and household customers. Being part of the daily lives of so many New Zealanders means we see the frontline reality of the nation's waste and recycling challenges. It gives us a unique opportunity to empower change.

Through knowledge sharing, working together and applying innovative technology and solutions, we are committed to working in partnership to make New Zealand a better place to live for today and for future generations. This report charts our sustainability performance and progress on our three pillars of people, planet and prosperity.

In 2022 we invested in New Zealand's regional resource recovery and recycling infrastructure. We opened a new materials recovery facility in Timaru, a specialist recycling plant for construction and demolition materials in South Auckland, and we commissioned new AI-enhanced optical sorters in New Plymouth and Hamilton to recover more material for reuse. We generated a record amount of renewable electricity from our landfill gas-to-energy operation at Hampton Downs. And with the food and hospitality industry coming back to life after the lifting of lockdown restrictions, we launched our new commercial food scraps collection service in Auckland. To support better optimisation of resources, we give it a second life as compost and help close the loop on local food wastage.

We cemented our reputation as a council specialist and solutions-focused sustainability partner, signing major new contracts with Dunedin City Council and Central Otago District Council. Tauranga City Council and Western Bay of Plenty Council celebrated milestones in their waste minimisation efforts. Tauranga has reduced volume to landfill by 50% and Western Bay of Plenty by 60% since our

kerbside collections service was introduced in these regions in 2021.

Our employees are the lifeblood of our organisation. By fostering a culture that values wellbeing through our I've Got Your Back programme, we are better equipped to address the challenges of today and tomorrow.

While Covid-19 retained its grip on New Zealand in 2022, our hardworking team navigated their way through the pandemic's complex operational demands and kept critical services and infrastructure moving. I am proud that even in these challenging times, we continued to grow as a business with our customers and partners, and grow as a team.

There is a lot more we want to accomplish with significant work underway to bring us closer to the sustainable future we want to see.

Ngā mihi,

Chris Aughton

**Chief Executive Officer**

# Performance highlights



## Climate action

Decreased total greenhouse gas emissions by **19%**  
Prepared and validated greenhouse gas inventory under **Toitū carbonreduce programme**



## Renewable energy

Recovered **42,982 megawatt hours** of renewable electricity from waste at Hampton Downs



## Fleet decarbonisation

Increased **hybrid vehicles** in passenger fleet by **35%**



## Landfill decarbonisation

Captured more than **90%** of landfill gas at Hampton Downs and Bonny Glen



## Infrastructure investment

Opened a new **\$3.8 million** materials recovery facility in Timaru  
Opened a new **\$2.5 million** wood recovery facility in Pōkeno



## New services

Launched a **commercial food scraps collection service** in Auckland



## Safe and sustainable work

Expanded our driver training academy and inducted **26** new truck drivers  
Decreased high potential serious incidents by **50%**



## Community impact

Helped get **440,000** meals to families in need through our food rescue partnership  
Donated **\$220,000** to community causes



## Awards

Won **WasteMINZ Awards for Excellence** in health and safety, organics and local government sector groups

Reporting period: 1 January to 31 December 2022. Percentages reference year-on-year change.

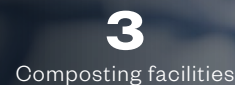
# About Enviro NZ

Enviro NZ is a materials management and resource recovery company committed to managing, recovering and processing waste streams to deliver sustainable outcomes.

Enviro NZ's national network of collection services and critical infrastructure supports the vital sustainability efforts of over 20 local councils and more than 500,000 customers across the country. Our best known brands include EnviroWaste, EnviroEarth and ChemWaste and we provide stable employment to over 1,100 people nationally.

In 2023, Enviro NZ will bring all of its brands together to reflect the company's focus on making it easier for New Zealanders to shift to a more sustainable way of life. The company's portfolio of brands will all be known simply as Enviro NZ. We will continue to provide the same essential services while introducing new solutions for the future.

## Enviro NZ in numbers





## Collections and transport

We collect recyclables, organics and residual waste for households and businesses across New Zealand.



## Processing materials

We own and manage facilities that process and consolidate resources, providing a national network of critical infrastructure.



## Resource recovery

We support New Zealand's shift towards a circular economy by ensuring organics, kerbside recycling and construction materials get a second life.



## Energy generation

We generate renewable energy from waste by converting landfill gases into electricity at Hampton Downs and the closed Greenmount landfill.



## Managing residual waste

We manage the safe disposal of waste that cannot be recycled or recovered at landfill sites.



## Technical services

We offer specialist solutions for all types of hazardous and liquid waste. Our team of chemists, engineers and advisors provide trusted technical expertise.



## Education

We guide and support businesses and community groups who want to incorporate environmental sustainability into their everyday lives.

## Ownership

Enviro NZ is part of OK Infrastructure Holdings Limited (OKI), a global infrastructure company with diversified investments in the United Kingdom, Europe, Australia, New Zealand, Canada, the United States, Hong Kong and China. OKI investments include energy infrastructure, transportation infrastructure, water infrastructure, waste management, waste-to-energy and infrastructure-related businesses.

# What matters most to our stakeholders

Our industry is changing as the momentum builds behind low carbon and low waste living. This is driven by societal expectations, technology, changes in government policy settings and consumer preferences. It is also changing because New Zealanders can see real changes in our climate and are demanding action.

**70%**

of our residential customers want us to increase our focus on recycling and repurposing materials\*

In 2021, Enviro NZ completed its first materiality assessment with internal and external stakeholders to better understand their views on priority issues and impact areas for the business. Separately that year we interviewed over 1,500 customers and members of the public, as well as a third of our workforce, which gave us a deeper insight into their concerns and what we can do to help.

Our stakeholders encouraged us to focus our efforts on reducing waste and increasing the amount New Zealand recycles, reuses and recovers. People told us they want to make more sustainable choices but said it is not always easy to do.

We have been listening and reflecting on what we can do as an industry leader to ensure our business is relevant for the times and creates value for our partners and communities.

**88%**

of our employees want us to provide more community education around waste and resource recovery\*

The insights we have gained will shape our business approach for the next ten years and propel our transition from a company that manages waste to a company that manages resources and delivers solutions for customers.

\*Source: Kantar New Zealand, 2021 research

Hamilton's mother and son team **Aaron and Caroline Brown**



# Our sustainability priorities

We are embedding sustainability in the way we work together and with others. At Enviro NZ, our role is to help customers and local communities tackle New Zealand's throwaway culture and keep valuable resources in circulation.

We are at the beginning of our sustainability journey. A year on from our first Sustainability Report, we are taking stock of the progress we have made against our commitments for a greener tomorrow. As we better understand our impact, there is more we want to achieve in our areas of focus. Our sustainability agenda is centred around four key priorities where we can deliver positive outcomes and shared prosperity for people and the planet.



Taking **climate action** through emissions reduction



**Infrastructure development** to support New Zealand's transition to the circular economy



Create great **places to work**



**Support our customers** in their sustainability journeys



# Our sustainability targets

Our pillars



## Caring for people

Sustainability is a shared journey, powered by people. We are working to create value for all our stakeholders, including employees, customers and communities.



## Serving the environment

We are committed to protecting the environment and improving the recovery, reuse and repurposing of non-renewable resources.



## Building prosperity

As an essential service provider, we aim to be a responsible and resilient business that continues to create value and economic opportunities.

Focus areas

- Reduce manual handling injuries using a risk-based approach to safety
- Engage employees to promote health and wellbeing
- Identify and develop individual development plans to retain key talent
- Contribute positively to our communities

- Create operational efficiencies to reduce greenhouse gas (GHG) emissions
- Increase natural resource use efficiency
- Increase uptake of renewable energy
- Work with partners to build the circular economy

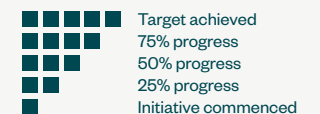
- Assess and mitigate climate risks
- Develop climate-resilient infrastructure
- Innovate sustainably to expand product and service offerings
- Engage partners and customers to encourage behaviour change

Our targets

- Reduce total recordable injury frequency rate to below 30 in 2023 ■ ■ ■ ■ ■
- Launch reward and recognition programme for safe driving in 2023 ■ ■ ■ ■
- Extend driver training programme to develop talent pool in 2023 ■ ■ ■ ■
- Conduct 50 wellbeing sessions in 2023 ■ ■ ■ ■ ■
- Cover all drivers in 2023 training programmes ■ ■ ■ ■ ■ ■ ■ ■

- 10% reduction in fleet emissions by 2026 from our 2021 baseline year ■ ■
- 100% transition of passenger vehicles to low carbon options by 2025 ■ ■ ■ ■
- 100% integration of green procurement practices by 2025 ■ ■
- 100% renewable energy by 2030 ■

- Climate risk assessment for one facility ■ ■ ■ ■ ■
- Green Star certification for up to five facilities ■ ■

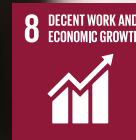




# Caring for people

“ We’re moving forward together with a strong sense of purpose. To deliver on our ambitions, we are committed to safety, health and wellbeing and treating people with respect and fairness. It’s how we live our company values – being respectful, honest, supportive and safe. Ultimately, we want to bring out the best in our team with work that matters and to ensure our people return home safely to their loved ones every day.

Corinne Taylor, General Manager People and Safety



# Health and wellbeing

**Enviro NZ's wellbeing programme, I've Got Your Back, is at the heart of our team culture. It expresses how we live by our values and support each other.**

In response to employee feedback to our foundation programme, we developed a follow-up phase that reinforces the link between mental wellbeing and good nutrition, sleep and movement. We also piloted a course to support our managers to lead wellbeing in their teams and role model self-care for those around them.

Participants strongly endorsed these additional modules and we are now preparing to roll them out company-wide in 2023.

I've Got Your Back won the award for excellence in health and safety at the 2022 WasteMINZ Awards.

### Covid-19 recovery

As new Covid-19 variants brought fresh waves of infection in 2022, Enviro NZ maintained strong protection and risk prevention protocols to keep people safe.

We worked under new rules specially designed to keep our critical workers safe and keep essential services operating. Through this period of challenge and change, our I've Got Your Back commitment to each other came to the fore.

Regular company communications connected our people to support and engaged them in safe practices. The 9% increase in the use of our employee assistance programme in 2022 indicates we are successfully normalising the need for help and embedding an open and supportive mental health culture.

Covid absences and a constrained labour market placed added pressure on staff recruitment and retention. Figures released in 2022 estimated a national shortfall of 9,000 professional drivers, with around 400 of these in the waste and recycling industry.

In response, we began implementing a new competency framework to recognise and reward our drivers' development. This provides drivers with opportunities for personal development, increased earnings potential and career progression.

### Early intervention

There were 139 referrals to Enviro NZ's new early discomfort intervention and injury triage programme. The national programme was implemented in 2022 to provide employees with proactive support so they can remain active and at work. It provides fast access to medical professionals and injury specialists, ACC-approved stay at work plans to ensure injured people rehabilitate and recover safely, and ensures we investigate and learn from incidents. Total Reportable Injuries reduced by more than 40% in 2022.



**3**  
new employee health and wellbeing programmes

**9%**  
increase in uptake of employee assistance programme



## Jamie's story

Jamie Mason works as an operations supervisor in our Christchurch technical services branch. After a serious health scare, Jamie turned his life around by overhauling his food and exercise habits. He credits I've Got Your Back for empowering his lifestyle reset.

At work Jamie is constantly on the move. You might find him behind the wheel of a truck, testing samples in the lab or helping out a customer on site.

He struggled with his weight over the years but things came to a head in December 2020. A moment's inattention exiting a digger led to a serious leg injury. Jamie saw in the New Year in hospital and spent weeks recovering at home.

"My size was really affecting me. I didn't like opening up because I don't like asking for help," he said.

When he returned to work, he summoned the courage to talk to his manager. Enviro NZ connected him with specialists and put in place a plan to support his wellbeing goals. This included rehab and fitness sessions with a personal trainer as well as nutrition advice.

"The company is supporting me. In the past, I've tried to do it by myself and I've failed. It's good to feel stronger. I think that's the way I feel - powerful, like I'm taking control."





# Staying safe in and around vehicles

**Working safely is a core value and daily practice.**

We operate in dynamic infrastructure and transport environments and our people are exposed to a range of hazards in their work. Our priority is to ensure our employees return home safely to their loved ones every day.

## **Safety on roads**

Our core operations involve driving trucks on roads, and operating equipment offroad and onsite. We are constantly seeking out best practices and new innovations to eliminate or minimise critical risk in this dynamic context.

Enviro NZ operates one of the biggest inhouse driver training academies of its kind in New Zealand. Our team of 14 driver and machine operator trainers equip new team members with the skills and knowledge to safely operate specialist vehicles.

**9,270**  
training sessions

The NZTA accredited programme supports drivers who hold a class 1 licence to obtain a class 2 truck licence

within four weeks. The academy produced 26 new truck drivers in 2022.

Ongoing development sharpens the skills of our workforce to operate Enviro NZ's diverse and specialist range of truck types – from those used in commercial collections like frontload, huka and gantry trucks, to those used for council kerbside collections like low entry vehicles, rear and sideload trucks, as well as large truck and trailer vehicles used in bulk haulage.

**26**  
new truck drivers qualified

We have installed monitoring cameras in our trucks and warning signage outside them, and we are always exploring new technologies for safer driving. An automatic braking technology system was trialled that could prevent truck rollaways. Sensors detect if a driver has got out of their seat without fully applying the handbrake.

Enviro NZ also collaborated on 'Do Bin Day, the Safe Way,' a public education campaign spearheaded by WasteMINZ to increase awareness on safety issues around collection trucks.



# Staying safe on our sites

Enviro NZ owns and manages facilities across the country that process and consolidate consumed resources, providing a national network of critical infrastructure. We are committed to the safety of everyone who works and visits these sites.

In 2022 we explored the application of emerging technology to support our mission to reduce workplace risk.

Automation and Artificial Intelligence (AI) initiatives have the potential to enhance safe work practices. They may also help reduce human error and the risks associated with physically demanding and manual processes.

- > We piloted a breakthrough AI initiative to make our busy Constellation Drive site safer for workers and visitors.
- > New optical sorters were commissioned in our New Plymouth and Hamilton recycling facilities to reduce the reliance on manual handling. Optical sorters increase efficiency and reduce waste when sorting recyclable material.
- > We commenced site trials of several safety systems to improve the safe operation of large machinery. At Pikes Point, a wheel loader was fitted with a reverse

camera, reversing radar, blue strobe light and reversing squawker. The strobe light warns people when the wheel loader is in reverse, while the camera and radar detect and warn the driver when objects or people are near. Once detected, an audible alarm, flashing light and seat vibration alert the driver to take action. At Hampton Downs, a new light system was trialled with dozers, diggers, compactors, dump trucks and wheel loaders. A green light indicates when a machine has been de-energised, the park brake has been engaged and it is safe to approach the machine.

We apply our skills, systems, tools and technology to target and address key areas of risk. We use incident management system iTrak to monitor performance, track investigations and ensure actions are followed through.

**50%**  
decrease in high potential serious incidents

Key municipal contracts and infrastructure sites are independently audited each year for compliance and are certified for:

- > ISO 45001 Occupational Health and Safety Systems
- > ISO 9001 Quality Management Systems

# NZ tech first in facility safety

Advances in AI have the potential to help workplaces like ours manage risk more effectively in real time.

During the year, we worked with the tech innovators at Qrious and Spark business to develop a cutting-edge AI solution that could help identify health and safety risks at a resource recovery facility.

This breakthrough project was Spark's first 5G Multi Access Edge Computer pilot.

We have had instances at our sites where members of the public have bypassed safety controls to try to retrieve something from a clearly signed and barrier protected area where excavators work. Using 5G connectivity, the system has the



capability to trigger alerts when a person is identified as being too close to an excavator in a specific detection zone. This technology has the potential to alert our team to an incident as it is happening so we can instantly respond.

We are now looking at how AI and technology support safety needs in different site settings.





## Workforce profile

### Women represent



Enviro NZ employees identify with a large number of different ethnicities

The most common are:

**NZ European**  
**37%**

**Māori**  
**20%**

**European**  
**10%**

**Pasifika**  
**6%**



# Diversity and inclusion

**We are striving to make Enviro NZ a place of opportunity by supporting a diverse and inclusive workforce. When people from different backgrounds work together, we are able to better serve our customers, live our values and deliver on our purpose.**

Enviro NZ serves communities across New Zealand and we are proud our workforce reflects the diverse society we are all part of. We continue to work towards enhancing gender and ethnic diversity within our industry.

At Enviro NZ, women work as site managers, labourers and in a range of specialist technical and engineering

positions. While we have made encouraging progress, we still have some way to go to ensure this no longer seems extraordinary but commonplace and normal. To drive progress, we are committed to ongoing investment in our people.

Our team reflects the changing make-up of modern New Zealand. Celebrating Diwali, Lunar New Year and International Women's Day has fostered a more inclusive employee experience and helped create an environment where people can be themselves at work.

With the lifting of Covid restrictions, we look forward to marking more of these moments together in person.

Annette Tata at Hampton Downs



# Team culture and engagement

**We are bonded not just by the work we do, but by the culture and values that connect us all.**

During the year we introduced changes to our organisational structure so we are better set up to collaborate and work together as one team. We brought together our field operations and infrastructure divisions and merged our sales teams to focus our collective energy on our common goals.

We engaged our employees through regular “People Pulse” surveys, CEO “Ask Me Anything” interactive sessions, and regular CEO and senior management site visits, and used the feedback to inform our plans and develop our company culture.

Our team had a strong influence on setting Enviro NZ’s new direction – they were emphatic about wanting Enviro NZ to help leave New Zealand’s environment better for future generations.

Enviro NZ’s legal team was highly commended in the people and culture category at the 2022 In-house Lawyers Association of New Zealand Awards.



# Partnering for impact

**Working with others is an essential part of who we are. We partner with values-aligned organisations to improve environmental outcomes and drive positive change for our customers and communities.**

We have established a new partnership and sponsorships framework to develop collaborative relationships with like-minded organisations. New Zealand's drive to decarbonise means we have a responsibility to lead by example in advancing sustainability and encouraging others to do the same.

## Nga Muka partnership

Enviro NZ is working in partnership with mana whenua to protect the environment at Hampton Downs Resource and Energy Precinct. As local kaitiaki, Nga Muka take an active role in cultural monitoring on site and provide invaluable guidance on managing the impacts of our operations. Weaving culture and science together, the monitoring creates a space for traditional practices and perspectives to be considered and supports increased collaboration for collective impact.

## Rethinking food waste

Our award-winning partnership with the New Zealand Food Network (NZFN) is reducing food waste, feeding people in need and supporting new food production. Last financial year the NZFN delivered about 154 tonnes of food (equivalent to 440,000 meals) to New Zealanders in need through this partnership – much of it food surplus that might otherwise have gone to landfill.

We partner with the NZFN to make it easier for our large food production customers to do the right thing with surplus food that cannot be sold. Food that is edible is distributed by the NZFN to food hubs across the country, while remaining inedible items are securely processed by our product recovery team so it can be repurposed for compost or stockfeed.

The partnership won the organics category at 2022 WasteMINZ Awards for Excellence.

**\$220,000**  
donated to community causes

# Education outreach

Enviro NZ's education advisors Corrie Andrews and Angela Wynn have taken up residence in South Canterbury's new Eco Centre Te Pokapū taiao o Aoraki to promote recycling and waste minimisation in the community. The Sustainable South Canterbury Trust established the educational hub as a place where anyone can learn about green practices.



**34**

waste minimisation education events



# Serving the environment

“ We’re working to reduce our own impact on the planet and helping others do the same. We take our responsibilities to protect and care for our natural environment very seriously. We’re focused on reducing our carbon footprint, empowering responsible resource use, maintaining the highest standards of environmental performance, educating our communities and supporting our customers’ transition to the circular economy. We’re here to empower change and make looking after our environment easier for everyone.

Glen Jones, General Manager Customers and Sustainability



# Our climate impact

**As a leading recycling and waste service provider to New Zealand households and businesses, we take responsibility for our emissions and we play a key role in helping others on their own decarbonisation journeys.**

The waste sector, in which Enviro NZ operates, is estimated to contribute four percent of New Zealand's emissions. To mitigate climate change, we are committed to make our own direct contribution to reducing GHG emissions through sustainable resource handling practices and fleet decarbonisation.

Our primary business activities generate two greenhouse gases: methane and carbon dioxide. Methane emissions from landfill are responsible for 70% of our GHG emissions. Carbon dioxide emissions from transport account for about 27%.

Our emissions reduction plan and strategy targets specific actions to reduce our carbon footprint. We have made significant progress. Compared to 2021, Enviro NZ's total emissions decreased by 18.8% and our Scope 1 emissions decreased by 20.8%.

## Landfill decarbonisation

Optimising landfill gas capture and gas-to-energy is a major focus. At our Hampton Downs facility, we consistently capture more than 90% of landfill gas from the landfill and convert it into electricity. Under current regulations, Class 1 landfill gas collection efficiency is capped at 90%.

Despite Hampton Downs gas collection efficiency passing this threshold, a 10% minimum emissions liability must be reported.

During the year, we set a new record for electricity generation from our gas-to-energy operation. An average output of 6.01 megawatts was recorded at Hampton Downs in one 24 hour period. To boost efficiency and reduce emissions, we have installed a new high-efficiency engine at the plant. An estimated 6,000 homes are powered by renewable energy generated at this facility.

In 2022, our teams returned to the office following the lifting of Covid restrictions and our business continued to grow. These factors drove the 22% increase in our Scope 2 emissions. To offset electricity consumption, we have replaced natural gas-based heating with electric heat pumps, and our first solar power generation facility is expected to be operational in 2023.

Engines convert landfill gas to electricity at Hampton Downs



## Fleet decarbonisation

Enviro NZ continues to transition its passenger fleet for a low carbon future.

We have upgraded over 60% of our passenger cars to hybrid models to reduce fossil fuel consumption. A programme evaluating utility vehicles has commenced to target a reduction in usage for smaller hybrid options.

Our fleet of 16 electric heavy trucks travelled close to 120,000 kilometres in 2022, serving thousands of New Zealand households. In the process, we saved approximately 70,000 litres of diesel.

## Scope 3 emissions tracking

Our approach to reporting on Scope 3 emissions has evolved to account for the broader impact of our business activities. In 2022 we tracked additional sources of emissions in our value chain, which has resulted in a year-on-year increase in our Scope 3 footprint. As we work towards a more comprehensive measurement of indirect emissions sources within our inventory boundary, we expect Scope 3 emissions to rise significantly over the next few years.

Scope 3 emissions occur from sources upstream or downstream of our business activities. Our strategy is to build sustainability into our procurement policies to engage our suppliers and influence them to lower the carbon footprint of their goods and services. Enviro NZ is poised to implement a new supplier code of conduct for our suppliers and service providers, which reflects our commitment to responsible business practices and emissions reduction.

## Our emissions profile

In 2022, Enviro NZ became a Toitū carbonreduce certified organisation. Certification aligns with our vision and purpose regarding climate action and accountability.

The 2022 emissions figures reported here have been independently audited by Toitū. Enviro NZ's total emissions were 121,769 tCO<sub>2</sub>e, which is 18.8% lower than the base year total of 149,968 tCO<sub>2</sub>e.

	2021   tCO <sub>2</sub> e	2022   tCO <sub>2</sub> e	Change   %
<b>Scope 1   operational</b>	32,159	33,331	3.6
<b>Scope 1   landfill</b>	117,361	85,061	-27.6
<b>Scope 1   total</b>	149,520	118,392	-20.8
<b>Scope 2</b>	273	333	21.9
<b>Scope 3</b>	135	3,044	2,155
<b>Total</b>	<b>149,968</b>	<b>121,769</b>	<b>-18.8</b>

Greenhouse gas emissions are measured in metric tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).

**19%**

decrease in total greenhouse gas emissions

**35%**

increase in hybrid vehicles in car fleet

Over **90%**

of landfill gas used as renewable energy or flared

**42,982**

megawatt hours of renewable energy generated at Hampton Downs

**659,547**

tCO<sub>2</sub> emissions avoided via landfill gas conversion to electricity



# Circular economy

**We see waste as a resource that can keep giving.**

Enviro NZ supports New Zealand's transition to a low carbon circular economy by working closely with our customers to find circular solutions that unlock new value for people, the planet and prosperity.

New Zealand's waste sector is transitioning from a legacy model dependent on disposal to landfills, to one that increases material reuse, recovery and recycling, and minimises waste.

The Ministry for the Environment estimates that over 17 million tonnes of waste is generated in New Zealand every year. It is estimated over half of the material that is disposed in landfills could have an alternative beneficial use through optimising existing technology, improvements in collection and processing infrastructure and public education.

Resource recovery and recycling are at the centre of our efforts to conserve the planet's finite resources and support circular supply chains. In 2022 we built new facilities and enhanced existing infrastructure to expand our recycling capability, organics processing and recovery of construction and demolition materials. This infrastructure enables us to recover more materials from waste streams.

**157,842**  
tonnes of materials recovered



# How we support the circular economy



## Materials recovery facilities (MRFs)

MRFs are critical recycling infrastructure. Mixed recycling collected from households and businesses is sorted and separated in these industrial scale facilities to maximise resource value. We operate MRFs in Hamilton, Taupō, Timaru and New Plymouth.

MORE THAN  
**33,000**  
tonnes of materials recycled



## Construction and demolition materials processing

Construction and demolition materials are the single biggest waste stream to New Zealand landfills. Our specialist facility in Pōkeno supports construction industry needs and plays an important role in ensuring previously wasted material is recovered to support better environmental outcomes.

MORE THAN  
**38,000**  
tonnes of C&D materials recovered



## Product recovery solutions

Working with the food, retail, warehousing, transport and insurance industries, we take manufactured material that cannot be sold and recover the recyclable components for reuse – sending more resources back into the circular economy loop.

MORE THAN  
**6,000**  
tonnes of materials repurposed and recycled



## Composting technology

We operate three composting facilities that turn food scraps and green waste into compost within three weeks using aerated static pile technology.

MORE THAN  
**48,000**  
tonnes of organic materials composted





# Resource recovery impact

We keep resources in circulation so they can have another life, which reduces waste and improves environmental outcomes.

## Materials recovered by Enviro NZ in 2022 in tonnes

Concrete	38,374	equivalent to avoiding up to <b>5,000</b> tCO <sub>2</sub> e
Paper / cardboard	27,231	equivalent to pulp from <b>450,000</b> trees
Plastic	4,476	equivalent to <b>220 million</b> 600 ml soft drink bottles
Metal / e-waste	3,564	equivalent to metals used in the manufacture of <b>4,000</b> cars
Glass	25,895	equivalent to <b>130 million</b> 330 ml beverage bottles
Aluminium cans	629	equivalent to <b>40 million</b> beverage cans
Steel cans	1,044	equivalent to <b>35 million</b> beverage cans
Wood	7,705	equivalent to <b>5,000</b> tonnes of coal in energy
Organics	48,924	composting avoided <b>90,000</b> tCO <sub>2</sub> e
Oil	703	equivalent to producing <b>350,000</b> litres of biodiesel

Numbers relating to equivalent measures are indicative. They have been estimated using correlation from different sources.

# Food waste recovery

**Enviro NZ has expanded its organics service to close the loop on food waste and contribute to New Zealand's low carbon future.**

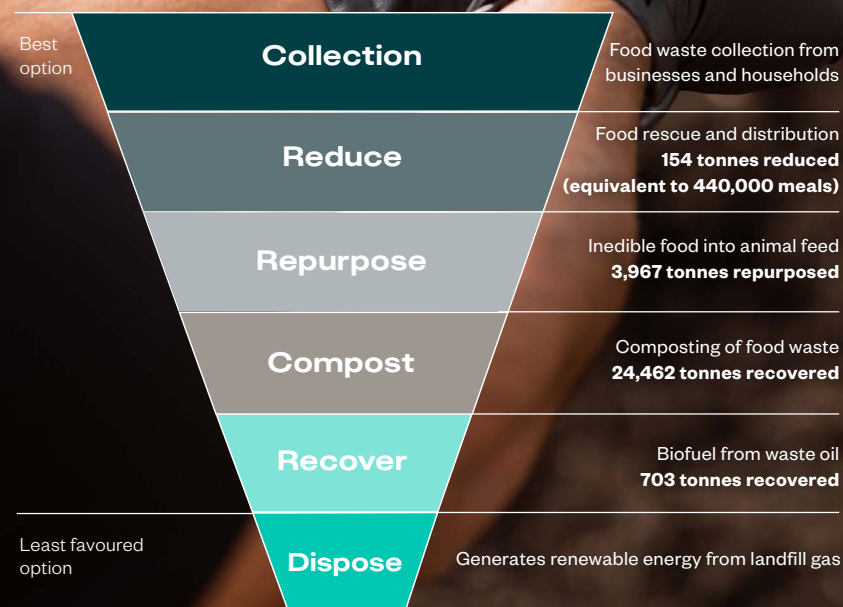
According to official estimates, 300,000 tonnes of food waste are sent to New Zealand landfills every year. Aside from far-reaching social and economic costs, food waste in landfills can contribute to a changing climate. Food and organic waste is estimated to account for nine percent of New Zealand's biogenic methane emissions and four percent of total greenhouse gas emissions.

Addressing organics is central to New Zealand's new waste reduction strategy. The government has announced it will require food scraps to be collected separately from general waste by 2030. New national targets to be achieved in this timeframe include a 30% reduction in waste needing disposal and 30% reduction in biogenic emissions from waste. Enviro NZ is strongly positioned to respond to policy setting changes as a market leader in organics processing.

We operate large-scale organics facilities that transform food scraps and green waste into compost in Hampton Downs and Timaru. A major highlight for 2022 was the roll out of our food waste collection services for Auckland businesses. We are assessing the potential to introduce similar services in other centres.

Enviro NZ also works closely with its customers to provide waste audits, education and advice. Our partnership with the New Zealand Food Network means we can help direct surplus product from manufacturers and suppliers to where it can do the most good. If food cannot be redistributed, it is transformed into compost or repurposed for stock feed or vermiculture.

# How Enviro NZ supports food waste reduction



# Unlocking new value for our customers

**Working in partnership, waste from one industry is transformed into a resource for another.**

Partnering with industry has unlocked a new solution that is helping reduce the environmental impact of common manufacturing processes.

Sodium hydroxide, also known as caustic soda, is used in a number of manufacturing processes and is commonly found in everyday household items like soap and cleaning products.

Our technical services team works with businesses that produce spent caustic, a waste by-product that requires specialist treatment before it can be safely disposed.

We also work with manufacturers that use caustic soda to neutralise acidic wastewater so it is safe to enter the public system – many who would prefer to use a locally-sourced recycled option.

Two different industry issues, one solution. In days gone by, contaminated and spent caustic soda would typically make a one-way trip to landfill. Now it is collected and cleaned up in specialist facilities so it can be reused.

This creates a cost-effective product that is used in place of virgin raw material. Our chemists manage the quality and consistency of the product, so when it leaves us it can have a second life.

Storage containers at Enviro NZ's technical services site in Auckland



# Environmental protection

Caring for the environment and protecting natural resources are integral to our environmental strategy and central to reducing our impact on the environment.

## Environmental compliance

To protect our air, land and water quality, we operate under strict environmental standards.

We have a team of engineers and environmental scientists that closely manage and monitor our operations to ensure we maintain a high level of compliance.

Of the 372 incidents recorded during the year, most were for minor events and immediately resolved.

We track our performance through our environmental management system, which is certified to meet the requirements of the ISO 14001 standard. External audits are conducted by regulatory authorities to monitor that our sites meet consent requirements.

## Environmental advocacy

As our industry enters an era of transformation driven by climate-change policymaking, we have used our voice as an industry leader to advocate for reforms that will support New Zealand's transition to a low carbon circular economy.

We believe New Zealand's waste and recycling systems should make it easier for people to make sustainable choices, to lower waste and lift resource recovery rates. We engaged with government and industry groups to support proposals for kerbside recycling standardisation and organics diversion from landfill.

To promote positive behaviour change, we expanded our education programme in 2022 to reach a broader range of stakeholders, including employees, customers, schools and community groups. We also refreshed our sponsorships and partnerships framework to target support to not-for profit organisations that focus on environmental education and action.

## Emergency response

In a time of crisis, we are called on by central government and local agencies to provide specialist clean-up and emergency response services.

In 2022 we mobilised quickly for Environment Canterbury to manage the environmental effects and public health risks stemming from two separate emergency events caused by oil and chemical spills which threatened local river ecosystems.

Climate change increases New Zealand's risk to natural disasters. The technical services we provide in dealing with debris, different waste streams and hazardous materials, mitigates environmental impacts and supports New Zealand's adaptation response.



# Oil off a duck's back

When a massive fire at a Kaiapoi factory caused an oil spill into waterways, Environment Canterbury (ECan) asked us to assist with the specialised clean-up.

The New Year fire caused an unknown quantity of oil to leak via stormwater drains into the Cam/Ruataniwha, Kaiapoi and Waimakariri rivers, threatening local ecology and wildlife.

Working alongside ECan's response team, we focused on containing oil and removing contaminated water from the affected sites. During the clean-up, a number of oil-soaked New Zealand scaup were captured and transported to the South Island Wildlife Hospital for life-saving treatment. A month after the fire, four native ducks were safely released back in to the Kaiapoi River.

Enviro NZ received an outstanding contribution award from ECan in recognition of our role in the emergency environmental response.





# Building prosperity

“ We recognise our success as a business is intrinsically linked to the customers and communities we serve. People depend on the essential services and facilities we provide up and down the country. Our adaptation response is focused on securing long-term operational and infrastructure resilience to deliver on our essential role in society. Working in partnership to develop new solutions to our common problems establishes a strong base for the future sustainability and growth of our business – and for the benefits to be shared among our stakeholders.

Jason Miles, Chief Financial Officer



# Investing in infrastructure

## Construction and demolition solutions

Construction and demolition waste contributes significantly to the waste going to landfill in New Zealand. Finding new uses for unwanted building materials presents an enormous opportunity to lower New Zealand's waste and carbon footprint.

New Zealand's building boom is producing new homes, buildings and essential infrastructure – it also generates an estimated three million tonnes of sector waste that ends up in landfills each year.

Enviro NZ is helping New Zealand businesses be more constructive with their building waste. Our dedicated construction and demolition facility in Pōkeno receives and sorts timber, aggregate, concrete, metals and more.

In 2022 we unveiled a specialised piece of heavy machinery, nicknamed "The Beast," at our Pōkeno Resource Recovery Centre. The shredder chips 40 tonnes of wood an hour. We take everything from scrap timber to cladding, flooring to framing, and turn it into biofuel. Much of this material is treated wood, which has

previously been difficult to recycle. It is then sent to the Golden Bay cement kiln where it replaces coal, providing an environmental solution that powers industry.

The new \$2.5 million wood recovery facility received \$1 million in funding from the Waste Minimisation Fund, which is administered by the Ministry for the Environment.

## Green Star solutions

With environmental accountability becoming mainstream, Enviro NZ offers detailed waste reporting so businesses can be certified for the New Zealand Green Building Council's Green Star standard. Materials recovered at our Pōkeno construction and demolition facility come with assurances from an external auditor.

Reporting allows businesses to track their impact and share their progress as consumers, employees and investors demand evidence of more sustainable business practices.

**7,700** tonnes of wood recovered





**\$3.8 million**  
materials recovery facility  
opened in Timaru

# Investing in partnerships

**New Zealand has 67 territorial authorities whose role is to meet the current and future needs of communities for local infrastructure and public services.**

As a council specialist, Enviro NZ supports 23 local councils' waste minimisation and recycling efforts by providing essential services to local communities.

## Together reducing waste

South Canterbury's waste minimisation and recycling efforts received a major boost with the commissioning of a new \$3.8 million materials recovery facility (MRF) in Timaru.

The MRF is the region's biggest resource recovery hub. It receives kerbside mixed recycling from Timaru, Waimate, Mackenzie, Ashburton and Central Otago District Councils, as well as materials from local businesses.

Once sorted and separated, recovered recyclables are sent to local and international markets to receive a second life.

## Accelerating circularity

The introduction of optical sorters with image sensors and artificial intelligence has sped up the sorting process, improved the quality and increased the volume of

recycled material recovered in our Hamilton and Taranaki MRFs. The new sorters were co-funded by Enviro NZ and the Ministry for the Environment to help the regions achieve their waste minimisation targets.

In 2022, Enviro NZ entered into a new contract with Dunedin City Council and signed a new agreement with Central Otago District Council to support the regions' sustainability and waste minimisation goals. The residents of Central Otago will receive a weekly kerbside organics collection and enhanced rural recycling services to maximise resource recovery from July 2023. Enviro NZ will introduce food and organics collection services in 2024 to support Dunedin's 2030 zero carbon vision.

## E-waste solutions

Computer Recycling and Enviro NZ joined forces in 2022 to make a dent in the estimated 98% of electronic waste currently ending up in landfills. We introduced e-waste recycling drop-off points at Enviro NZ sites across the North Island, and these collected more than 290 tonnes of unwanted equipment during the year.

## Reducing waste to landfill

Enviro NZ commenced kerbside collections for Tauranga City Council in 2021 and within a year recorded a 50% reduction in household waste going to landfill.



# Investing in innovation

**Enviro NZ is investing in new technology that will make it easier for us to work together, serve our customers and optimise efficiencies.**

Developing our core business systems will help us make better long-term decisions with richer information and data insights.

## Digital solutions

A new weighbridge solution, developed in-house, has already shaved half a minute from average processing times for drivers across our sites. Thousands of dockets are generated each year so this time saving soon adds up and is helping provide a faster experience for users of our facilities. Traditional weighbridges can create bottlenecks for customers, reflecting the time it takes to process a transaction, from weighing to waiting for a receipt to print. With the new system, this now takes an average of two seconds.

Our tech transformation is giving us the right tools and foundation to continue to provide our customers with the services and experience they are looking for. New in-cab technology was installed in our frontend loader truck fleet which integrates our frontline operations and back-end customer service systems. In some locations paper-based processes have been replaced with digital solutions – simplifying and speeding up the way we work.

## A new way of working

To support the upgrade, Enviro NZ has worked in a completely different way.

The project team is supported by subject matter experts in finance, technology and infrastructure, and we have put in place a 20-strong change agent network drawn from across the business.

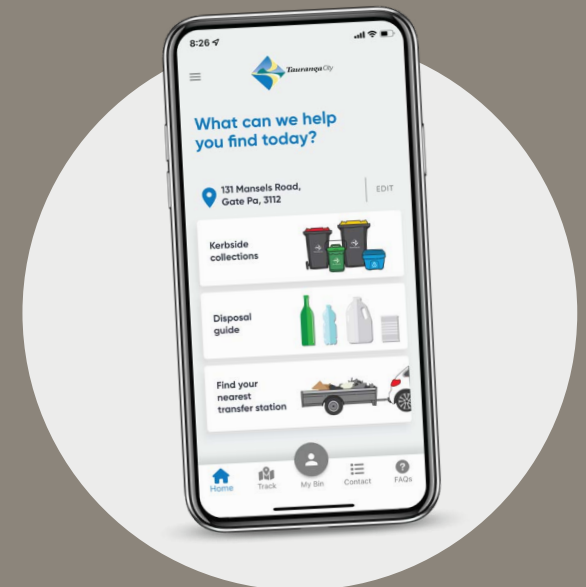
# Municipal Plus

With kerbside collection services becoming increasingly complex, we developed a new digital platform to make life easier for our municipal partners. Residents use the Municipal Plus app to receive service alerts, recycling guides, and report illegal dumping and service issues.

Through Municipal Plus, councils receive near real-time information on service requests, billing, presentation rates and contamination, including images.

The platform is now used by four councils and is available in over 100,000 households.

Municipal Plus won the award for excellence in the local government category at the 2022 WasteMINZ Awards.





# The way forward

**As we look to the future, Enviro NZ's essential services and strategic infrastructure will continue to play an enabling role in supporting New Zealand's waste minimisation and resource recovery goals.**

We have a clear long-term plan and commitment to supporting New Zealand's sustainability shift. Our energy is focused on the areas where we can have the most impact.



## Infrastructure investment

We are developing new regional recycling and resource recovery infrastructure in multiple regions across New Zealand.



## Education

To promote sustainability and waste minimisation, we are helping our customers and communities develop the skills they need.



## Emissions action

We are reviewing our emissions reduction targets to align with New Zealand's emissions reduction plan. The next step is adopting science-based targets.



## Climate adaptation and resilience

To ensure critical infrastructure and operations remain resilient to climate risks, further work is planned to develop our adaptation strategy and measures.

