



Access to composting
infrastructure transforming
certified compostable
packaging in Aotearoa.



CONTENTS

4	Introduction
6	Objectives Methods Findings
7	Recommendations
8	Conclusion
10	Accessibility of compost facilities
12	Case studies
16	Glossary

INTRODUCTION

Garbage disposal and waste management are invariably tied to climate change. It is estimated that 45 per cent of our household waste collected curbside is food. According to the [Ministry for Environment](#), 9 per cent of Aotearoa, New Zealand's biogenic methane emissions and 4 per cent of our total greenhouse gas emissions are from food and organic waste.

The impetus of the circular economy strongly influences material design for the products of the future. If we are to shift from a linear to a circular economy, we must consider material properties in their entirety, understanding how they can be processed or transformed in waste-to-value streams. By acquiring this knowledge and identifying who provides these services and approaches, we can optimise and create the loop for the materials, products, people and the planet.

When we look at the growth rate of takeaways in Aotearoa, according to current [Research and Markets](#) data, the Fast Food and Takeaway Food Services industry is worth \$3.2 billion with a projected CAGR of 3.92 per cent during the forecast period (2022 - 2027). So we know there is more takeaway packaging entering residential general rubbish collections. The [single-use plastic bans](#) have encouraged certified compostable products where effective recycling measures fail, yet the latest waste strategy proposal is underdeveloped, with kerbside collections excluding compostable packaging products.

Certified compostables are designed to decompose with food waste, removing mechanical separation requirements. Including compostable packaging in organic collections can increase biomass diversion from landfill by recovering food scraps attached to (food) packaging that would otherwise be lost if the packaging was removed from the bio-waste stream. Excluding compostable packaging from kerbside organic collections limits our capacity to recover, transform and produce new materials or energy as part of a circular economy.

At this stage, compost collection infrastructure remains underdeveloped. Composting facilities must apply for resource consent to operate, and the resource consent conditions can limit or restrict the type of feedstock they can accept. And since our last report, several composters have announced they would no longer process compostable packaging at their site.



OBJECTIVES

Our objective was to identify compost facilities across Aotearoa, New Zealand, accepting certified compostable packaging, their collection partners and what, if any, restrictions or exclusions were in place at these facilities. The information would be publicly available in PDF format on our website to assist our partners seeking full-circle solutions through [Compost Collect](#) – our compost collection service. The report would also be of value to those operating within the food service space for facilitating waste-to-value conversations.

METHODS

According to the [wasteMINZ website](#), eleven compost facilities were identified as accepting compostable packaging and food service ware, current as of March 2023. Listed facilities differed from those accessible via our website. With limited available information on each location, each compost facility was contacted to inquire whether their compost inputs included certified compostable packaging and, if yes, any restrictions or exclusions that applied.

FINDINGS

Throughout Aotearoa, New Zealand, eight facilities currently accept certified compostable packaging and eight collection companies.

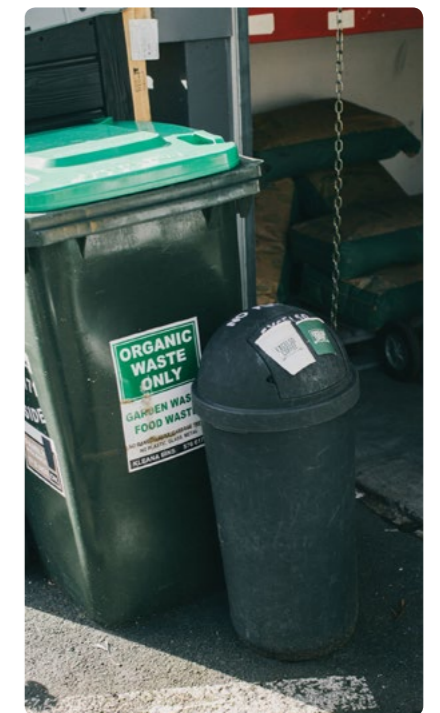


RECOMMENDATIONS

Acknowledging the Waste Minimisation Act 2008 and the Litter Act 1979 is dated with limited tools to address environmental issues, the government announced on March 29 a waste strategy that commits Aotearoa, New Zealand, to a low-emissions, low-waste circular economy by 2050. The waste strategy should have provided a considerable evaluation of the ethical responsibility of phasing out plastics for alternative materials. Because while compostable materials are cyclical like those of nature—produced with waste materials and reusable at the end of their life, inadequate national infrastructure exists.

In this section, we present recommendations inspired by desk research.

- 1.** Government to run national public awareness initiatives on plastic pollution, biodegradable and compostable packaging.
- 2.** With unified national kerbside collections for organic matter, councils to support compost facilities in their district to collaboratively establish systems that can improve the quality of materials for those facilities that accept compostable packaging.
- 3.** Develop a national certification for compostable packaging similar to the Consorzio Italiano Compostatori scheme to help people and those working in compost facilities recognise certified compostable products.
- 4.** Implement Extended Producer Responsibility (EPR). The principal approach of this framework, adopted by the Swedish Parliament in 1993, is that the environmental responsibility for a product lies with the producer. The OECD issued a guidance manual in 2001 for governments.
- 5.** Invest in waste-to-value systems. It is necessary to treat post-production and post-consumer waste in an upcycling perspective that is geared towards increasing the value of the materials. The result of composting is carbon dioxide, water and humus, a soil nutrient. There is no unemployed mass. Compostable packaging is an input that can be used to produce fertiliser, a product with a viable market.
- 6.** Further increase the Waste Disposal Levy. The initial increase to \$60/t for Class 1 landfills by 2024 is insufficient to adequately incentivise organics diversion.



CONCLUSION

Compostable products were designed to tackle the vast amounts of plastic packaging used in takeaway food deliveries, minimising the environmental impact of convenience culture. Last October, the first tranche of single-use plastic bans came into force, and this July will see the broadest ban, which includes single-use plastic tableware, cutlery and straws. So beyond the desire for more sustainable solutions, there is a mandate with the aim of replacing those plastics used today with compostable materials. However, without investment in composting infrastructure, compostable packaging may continue being landfilled en masse.

What is required is a complex holistic approach. Beyond replacing fossil fuel-based materials with a better alternative, we need collaborative approaches between experts on the circular economy, councils and people working in waste management to collect and process compostable materials at scale.

Being “circular” is about remedying the inefficient use of natural resources, products and materials. It is a question of clearing away the concept of “waste” and recognising that everything has value. Therefore, The choice of materials must be oriented towards identifying the most “uncomfortable”, most difficult and most expensive waste to dispose of, to reinterpret and regenerate while also increasing its value to make the process sustainable and convenient.

In conclusion, business owners and those in procurement positions can be agents of change. With this report, we wanted to identify the waste-to-value facilities processing compostable packaging and the fundamental steps implicated in the transition to sustainability in discovering solutions for the circular economy approach.

ACCESSIBILITY OF COMPOST FACILITIES

See below for a list of these facilities, the compostable packaging they accept, and the waste companies that can be used to deliver packaging to the facility.

This list is accurate as of 17 April 2023.



Waipapa Landscape Supplies

Region served - Bay of Islands

- 1913 State Highway 10, Waipapa
- 09 407 666
- waipapaland@gmail.com
- [website](#)

CONTRACTORS

- Waste Management NZ Ltd

Accepts bamboo and sugarcane serve ware, paper straws, napkins and birchwood cutlery.



Envirofert Composting Facility

Region served - Auckland and Waikato

- 74 Geraghty Road, Tuakau
- 09 910 0050
- pauly@envirofert.co.nz
- [website](#)

CONTRACTORS

- EnviroWaste
- EnviroEarth
- Reclaim
- Waste Management NZ Ltd



Greenwaste to Zero

Region served - Nelson/Tasman

- 18 Cargill Place, Richmond
- 03 544 8857
- info@greenwastezero.co.nz
- [website](#)

CONTRACTORS

- EnviroWaste



Christchurch City Council Organics Processing Plant

Region served - Christchurch

- 40 Metro Place Bromley
- 0800 800 169
- compostsales@livingearth.co.nz
- [website](#)

CONTRACTORS

- EnviroWaste
- Waste Management NZ Ltd
- Total Waste Solutions
- WasteCo



Palmerston North City Council (Awapuni Resource Recovery Park)

Region served - Palmerston North

- Tip Road, Palmerston North
- 06 356 8199
- melissa.Doyle@pncc.govt.nz
- [website](#)

CONTRACTORS

- EnviroWaste
- Waste Management NZ Ltd



Capital Compost - Wellington Southern Landfill

Region served - Wellington

- 201 Landfill Road, Ōwhiro Bay, Wellington
- 0508 864 769
- jennifer.elliott@wcc.govt.nz
- [website](#)

CONTRACTORS

- EnviroWaste



Canterbury Landscape Suppliers

Region served - Christchurch

- 1250 Main North Road, Kainga
- 03 323 7797
- tony@pottingmix.co.nz
- [website](#)

CONTRACTORS

- EnviroWaste
- Waste Management NZ Ltd
- Total Waste Solutions
- WasteCo



Christchurch South Community Gardens

Region served - Christchurch

- 188 Strickland Street, Spreydon
- 03 942 6630
- info@csccommunitygardens.net.nz
- [website](#)

CONTRACTORS

- EnviroWaste
- Waste Management NZ Ltd
- Total Waste Solutions
- WasteCo



CASE STUDIES

The government passed its Zero Carbon amendment to the Climate Change Response Act in 2019, which sets a target for all greenhouse gases except biogenic methane to reach net zero by 2050. When we consider 9 per cent of Aotearoa, New Zealand's biogenic methane emissions are from food and organic waste, composting poses one of our greatest opportunities for unlocking the potential of resource recovery, returning carbon to the soil and building more resilient cities while reducing environmental impact.

CASE STUDY 1

MANUREWA HIGH SCHOOL



Manurewa High School is [diverting around 3500kgs of waste per week](#) from landfill to compost as part of the government-led healthy school lunch initiative, Ka Ora, Ka Ako, an initiative that provides healthy school lunches at no cost to students and aims to reduce food insecurity by providing access to a nutritious lunch at school, every day. As of March 2021, more than eight million lunches were served in 542 schools to over 132,600 kids, which is set to grow as the programme strengthens.

Compostable packaging provides the benefit of maximising the diversion of biodegradable waste from landfill to 'greener' streams, such as anaerobic digestion and composting by recovering food scraps attached to compostable (food) packaging that would otherwise be lost if the packaging is removed from the bio-waste stream. We aim to

accelerate the transition to a circular economy by optimising the lifecycle of our materials and products, working alongside our partners to drive the industry forward, and advancing the diversion of organic materials from landfills.

CASE STUDY 2

GREENWASTE TO ZERO



Last year, Greenwaste to Zero processed over 6,600 tonnes of organic matter – green waste, food scraps and compostable packaging with three full-time staff and a very hands-on approach to the day-to-day. This compost is purchased by locals to build healthy soils. It's also a wonderful example where existing local infrastructure is utilised to deliver council waste reduction strategies.

Established in 2002 to manage the disposal and effective recycling of the green waste in the Nelson and Tasman district, Colleen and Jason Wastney purchased Greenwaste to Zero in 2019, and it remains a family-run business. At that time, the site was consented to accept green waste, but with council support, resource consent was extended to compostable food packaging in July of that year.

Sublime Coffee Roasters was the first compostable cup client at the time, sending approximately 3,200 EcoCups and lids for composting each month, encouraging people to bring their compostables back for collection. Today 500-700 customers are on the site per week, and one-third are commercial customers, landscapers, et cetera, either dropping off green waste or collecting compost, topsoil and mulch.

"I feel composting is now considered a vital part of our community. A circular economy is important, and composting is the perfect example of this." – Colleen Wastney

GLOSSARY

Bioplastic

According to European Bioplastics (2018), a bio-based material "is defined as a bioplastic if it is either bio-based, biodegradable or features both properties."

Circular Economy

Following the model outlined by the Ellen MacArthur Foundation (2016), the circular economy is a "systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature."

Circular Materials

Materials which could be transformed and used to generate circular processes and local solutions addressing citizens' concerns, usually at the community level.

Closed-Loop

A system within which inorganic materials or synthetic ones can stay in continued use without losing their properties or value.

Compostable

Materials which require specific environmental conditions, including location, temperature, level of aeration, and timeframe, allowing microorganisms to decompose these materials back to their natural elements.

Degradable

Capable of being degraded. The term means any material capable of being decomposed chemically or biologically. Most materials degrade over time. Plastic degrades to microplastic, for example.

Biodegradable

An extension of degrading. Materials with the ability to be broken down into non-harmful substances through living micro-organisms, a natural process. The time frame taken for materials with this capacity varies depending on the perishability of the material itself.

Greenhouse Gas Emissions

Atmospheric gases that intercept long-wave (mainly infrared) radiation emitted from the Earth's surface. Natural greenhouse gases include water vapour (H₂O), carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Man-made greenhouse gases include CO₂, CH₄, N₂O, and various chlorine and bromine-containing compounds such as sulphur hexafluoride (SF₆) and chlorofluorocarbons (CFCs). Carbon dioxide (CO₂) is the primary greenhouse gas emitted through human activities.

Recycling

As per the European Union's Waste Framework Directive, recycling is defined as "any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes"



