

WORKING DRAFT

A Zero Waste Plan For Welly

Working draft version 1: 14 October 2021

Prepared by Waste Free Welly

Waste Free Welly is an open and collaborative group of individuals and organisations working to progress the vision of zero waste in the Wellington Region. Our group includes enterprises, advocates, educators, researchers, NGOs, and consultants who all share the same vision of a zero waste city.

Visual design and layout of the plan by Kate Appleton
Wellington Circular Economy infographic created by Isy Harris



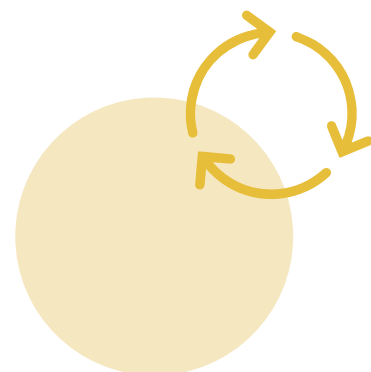
Waste Free Welly has created this Zero Waste Plan for Poneke/Wellington City, the place we call home. We began working on this plan recently and this version is an early draft.

We believe Wellington should start working towards a Zero Waste vision, just like other cities around the world, including Auckland.¹

In this plan, we explain why the time has come for Wellington to go for zero waste. We describe where we are now, and we look at what could be different if Wellington adopted a Zero Waste Plan. The expected outcomes are based on the experience of other cities overseas who have committed to work towards zero waste.

We also paint a picture of all the good stuff that is already happening in our beautiful city, and we have started to list the things Council can do to make more of this good stuff happen. Our proposed initiatives are still in development and we plan to develop them further. They are based on proven zero waste strategies that have already enabled impressive waste reduction in other cities around the world. We have tailored them to the Wellington City context, with a particular focus on the three Waste Free Welly priority areas:

1. Organic waste
2. A Reuse Economy
3. Resource Recovery



What is Zero Waste?

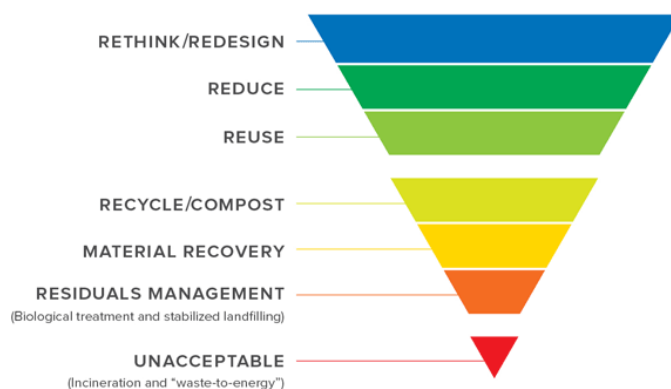
The international, peer-reviewed definition of zero waste to work towards is:

“The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health.”

—Zero Waste International Alliance (2018) [‘Zero Waste Definition’](#).

This definition aligns with the guiding principles of the zero waste hierarchy.

THE ZERO WASTE HIERARCHY 7.0



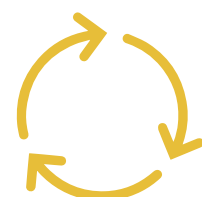
¹ C40 Cities 'Advancing Towards Zero Waste Declaration'. Accessible at <https://www.c40.org/other/zero-waste-declaration>.



This infographic paints a snapshot of the zero waste activity already occurring in Wellington City as at October 2021. The goal of this Zero Waste Plan is to help Wellington increase this type of activity.

In creating this plan, we have combined the knowledge and practice of Waste Free Welly members, with the best international evidence, including the two Zero Waste Masterplan documents produced by Zero Waste Europe (ZWE) and GAIA. These two masterplans offer a comprehensive, practical outline of the tools and strategies that cities can implement to achieve dramatic reductions in waste:

- Joan Marc Simon, Jack McQuibban, Pierre Condamine (2020) [The Zero Waste Masterplan - Turning the vision of circular economy into a reality for Europe](#) (Zero Waste Europe).
- Aditi Varshneya, Ruth Abbe, and Alex Danovitch (2020) [The Zero Waste Masterplan: A guide to building just and resilient zero waste cities](#) (Global Alliance for Incinerator Alternatives: Berkeley, CA).



The Story of Why Zero Waste is Important

Zero Waste Action is Climate Action

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“Actions in the waste sector assist municipalities in achieving emissions reduction goals. Downstream waste management policies such as recycling and composting have the potential to mitigate greenhouse gas emissions; upstream measures to reduce waste at the source help avoid greenhouse gas emissions altogether.”

— [GAIA Zero Waste Masterplan](#) p9

When we reduce waste, we reduce emissions, all along the supply chain. Aside from emissions produced at end-of-life, resource handling and use account for 70% of greenhouse gas emissions.³ Aotearoa, and Wellington, can make a just transition from a throwaway culture to a low waste, low carbon circular economy by transforming our relationship with waste.

The waste hierarchy, which prioritises prevention, reduction and reuse, can be used as a ‘climate lens’ to help guide decisions and investment.

Comprehensive evidence to support this is outlined in the submission to the Climate Change Commission, submitted jointly by leading organisations in New Zealand’s zero waste community.⁴



³Laxmi Haigh et al (2021) [The Circularity Gap Report 2021](#) (Platform for Accelerating the Circular Economy, January 2021), p.8.

⁴Joint Submission of the Zero Waste Community on the Climate Change Commission’s 2021 Draft Advice for Consultation (Submitted on 28 March 2021). Accessible at <https://zerowaste.co.nz/assets/0328-Zero-Waste-Joint-Submission-to-CCC-Draft-Advice-Consultation.pdf>.

The Story of Why Zero Waste is Important

Implementing Zero Waste Strategies increases Resilience



“Zero waste is not only about decoupling economic activity from environmental destruction, it is above all about building resilience and natural capital for future generations.”

— ZWE, [Zero Waste Masterplan](#), p.8.

We can reduce the vulnerability of the city and its inhabitants by focusing at the top of the waste hierarchy and ensuring diverse systems and scales for managing products, services, resources and waste. Robust resource recovery centres can become Community Emergency Hubs, as seen after the Kaikōura earthquake.

Local recycling centres can continue operating throughout Level 4 Covid lockdowns, unlike Material Recovery Facilities (MRF). Eliminating or reducing waste at source leaves valuable landfill capacity available for use if disasters strike. Construction and demolition resource recovery facilities allow buildings to be recycled rather than landfilled. Regular markets, reuse and refill systems for everyday essentials and takeaways, and accessible initiatives and spaces for repairing and sharing all increase community connection and bonding, and help to reduce isolation and inequity. In essence, disaster resilience and community resilience are outcomes of a roadmap to zero waste. The needs for emergency waste management will change as we go, as will our success at connecting waste reduction efforts with the goals of social services in Wellington City.



The Story of Why Zero Waste is Important

Pursuing Zero Waste Targets brings Economic Benefits

In the last financial year, Wellington got \$724,000 in waste disposal levies from the Ministry for Environment.⁵ As the waste disposable levy increases from \$10/tonne to \$60/tonne by 2024, so too will the pool of funds available to WCC in direct levies, and via targeted funding rounds from Ministry for Environment e.g. Waste Minimisation Fund and the Plastics Innovation Fund. Furthermore, reduction of waste to landfill will change WCC's ETS liability, while waste minimisation initiatives could also generate income. A well-designed zero waste plan or strategy should seek to boost these and other potential offsets to lost landfill income.

Auckland has estimated that it could be \$6-\$8 billion better off, with much lower carbon emissions by 2030 with a transition to zero waste and circular economy models.⁶ Zero Waste Europe has designed a Zero Waste Cities savings calculator to help visualise and understand the benefits that adopting zero waste policies can bring.⁷ We used this calculator with data on Wellington's population and current waste generation and management levels. The calculator works by comparing with real life examples of cities achieving high waste diversion. The calculator highlighted potential savings of \$10m with a separate collection rate of 81%; this is the level of separate collection achieved by Palma, Italy.

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“Cities need equitable and inclusive recovery. Zero waste creates more jobs than traditional forms of waste disposal and presents new opportunities for local businesses.”

— ZWE, [Zero Waste Masterplan](#), p.7.

⁵ [Waste disposal levy payments to territorial authorities | Ministry for the Environment](#)

⁶ Sustainable Business Network and Auckland Tourism, Events and Economic Development (2018) Circular Economy: A new dynamic for Auckland businesses (Auckland Economic Insights Series, May 2018). Accessible at https://www.aucklandnz.com/sites/build_auckland/files/media-library/documents/ATEED-economic-insight-paper-Circular-economy-final.pdf

⁷ <https://zerowastecities.eu/academy/savings-calculator/>



The Story of Why Zero Waste is Important

Zero waste business models reduce plastic pollution



“Aotearoa New Zealand is at a pivotal point where we must rethink our relationship with plastics... The level of public concern around plastic use and leakage into the environment is high... Much of the current discussion around how to remedy Aotearoa New Zealand’s model of plastic use focuses on improving the recycling system. However, the most impactful step would be to use less plastic in the first place when feasible. This challenges us to innovate, create new materials and new ways of using them, and develop new business models.”

– Office of the Prime Minister’s Chief Science Advisor (2019) [Rethinking Plastics in Aotearoa New Zealand: Key Messages](#) (Auckland, December 2019), pp.16-18.

Landfill is not the final destination for all the waste Wellington City generates. A proportion, especially plastic, ends up polluting the natural environment causing a litany of intergenerational social and environmental harms.

This leakage happens at various points in the supply chain, including production (e.g. pre-production plastic pellets on Oriental Bay), use/consumption (accidental/intentional littering, microplastic pollution from textiles and tyre dust), and waste management (disposed products escaping from skips, bins, rubbish trucks, transfer stations, and landfill).

Therefore, zero waste strategies that prevent waste and packaging in the first place are important tools in fighting plastic pollution, reducing Council costs associated with rubbish and recycling collection and ‘litter’ clean up, and reducing the opportunity-cost for community groups and everyday people engaged in voluntary activities like beach cleans.



Busting Landfills and Pollution: What a Zero Waste Plan could achieve for Welly, based on real world data

A well-designed suite of initiatives and a meaningful implementation plan that engages community organisations, civil society and businesses could significantly reduce waste to landfill and pollution in Wellington. Even more so if it builds upon the good work already happening on the ground. Available data helps to show where the key opportunities lie and what could result from tapping into them. We discuss these opportunities and where to focus in relation to:

- Reducing waste to landfill
- Plastic pollution

Reducing waste to landfill - the possibility

We have completed some basic modelling on the waste to landfill to understand the possibility of a zero waste roadmap. Our modelling takes into consideration a range of scenarios, including the possible impact of the strategic waste review roadmap and national level waste policy changes on waste reduction and diversion to recovery. We have found conflicting data across various reports, which makes it difficult to understand the true baseline for the city at the current time.

In the first assessment we have looked at total waste to landfill versus capacity adopting the following assumptions:

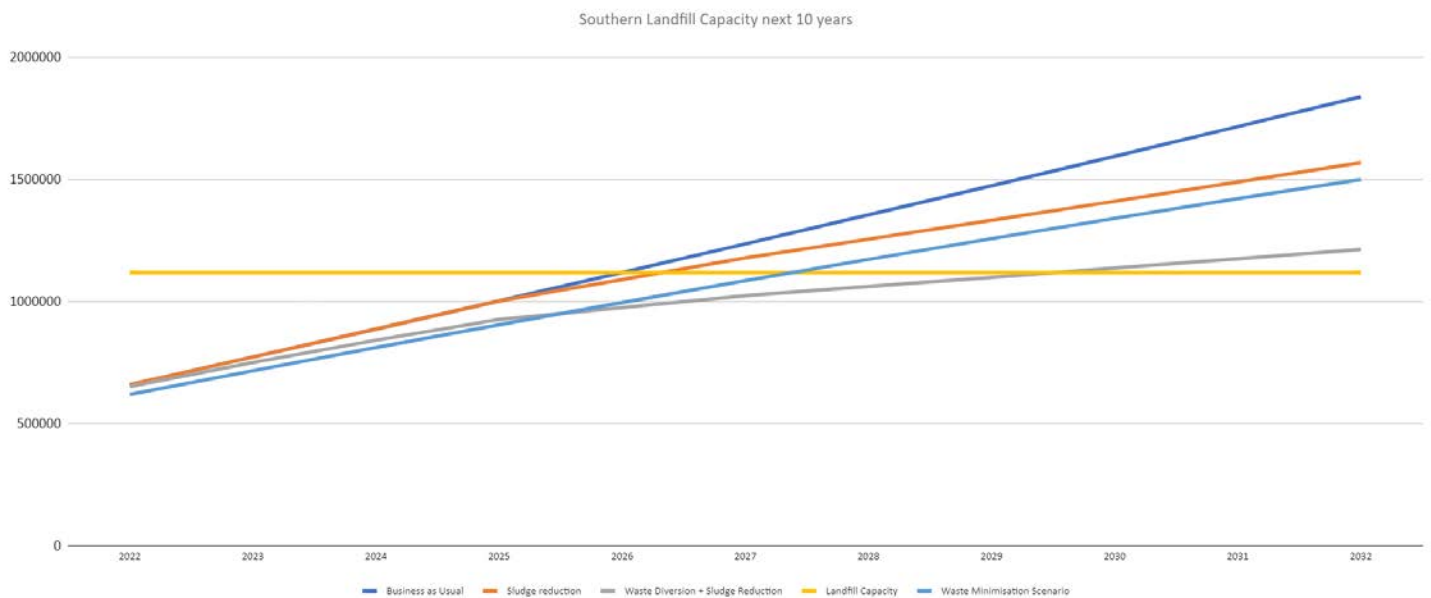
- Remaining landfill capacity is estimated from tonnes per annum going to landfill - 107,395 tonnes per annum (SWAP report).
- Population growth rate: 65,000 in the next 30 years (mid point of 50,000-80,000 provided in Beca report).
- Sludge reduction scenario: Phase 1 of sludge minimisation is online 2026, and phase two 2028 (2026 date given in Council papers on residual waste treatment options).
- Waste minimisation scenario: reduce waste to 400 kg/person/year by 2026 (Wellington Region Waste Management and Minimisation Plan)
- Waste diversion scenario: a conservative 20% year on year reduction in the waste streams identified in the SWAP report as recyclable, recoverable and compostable.





As the figure below illustrates, while business as usual does see the landfill capacity reached in 2026, waste minimisation combined with sludge minimisation extends the lifetime of the landfill to 2029. This illustrates the additional time available to put a joined up zero waste plan in place if the focus can be shifted to waste minimisation. With more ambition on waste diversion, the lifetime of the landfill can be extended further.

Figure 1. Southern Landfill Capacity next 10 years

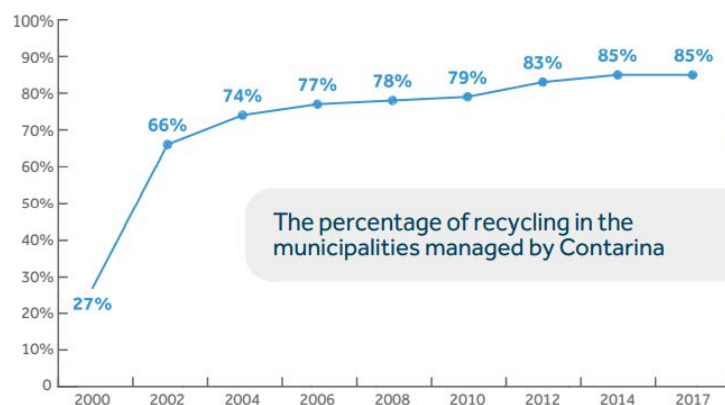


The table below compares Wellington to some international cities of a similar size that have taken an ambitious zero waste approach. These illustrate how much residual waste to landfill could be reduced in a shorter time frame than the current ambition from WCC.



City	Pop.	Municipal waste generation (kg/capita/annum)	Residual waste generation (kg/capita/annum)	Separate recycling rate	Commentary
Wellington	214,790	297kg	500	14%	Residual waste excludes private landfills. Diversion estimated from Annual Plan figures on recycling & composting.
Swansea (2019/20)	246,217	297kg	155	65%	Target (Wales): 70% recycling 2025, 80% recycling post 2025. Indicator: 62% reduction in waste generation. Moratorium on further waste incineration.
Ljubljana (2018)	279,631	60kg	115	68%	Target: 280kg municipal waste per capita by 2020, 78% separate recycling by 2025
Treviso (2019)	90,000	467	67	85%	Targets: 96.7% separate recycling and 303kg municipal waste per capita by 2022.

Residual waste generation and recycling rates for Wellington versus Zero Waste Cities^{8,9}



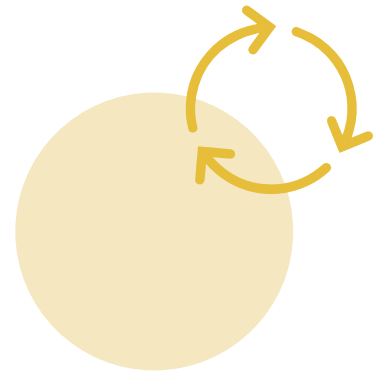
Percentage recycling by Contarina - waste management company responsible for management of waste for area with population of 554,000¹⁰

⁸ https://zerowastecities.eu/wp-content/uploads/2020/12/zwe_report_state-of-zero-waste-municipalities-2020_en.pdf

⁹ <https://stats.wales.gov.wales/Catalogue/Environment-and-Countryside/Waste-Management/Local-Authority-Municipal-Waste/annualreuseandrecyclingcompostingrates-by-localauthority-year>

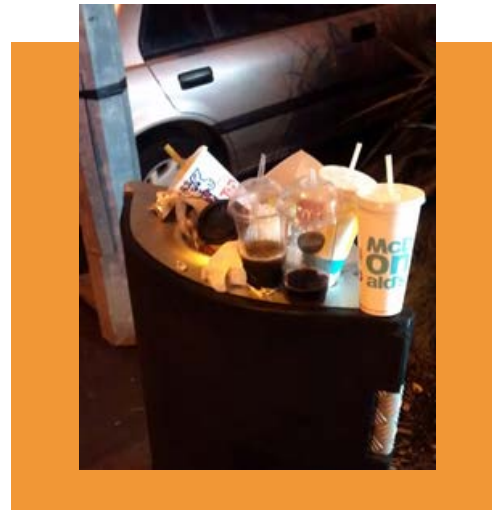
¹⁰ https://zerowastecities.eu/wp-content/uploads/2020/12/zwe_report_state-of-zero-waste-municipalities-2020_en.pdf

Plastic pollution - where to put our focus



Reducing waste to landfill is critical, but because not all waste ends up in landfill, it cannot be the only focus of a Zero Waste Plan. Efforts to reduce leakage of waste into the environment, particularly plastics, must also be part of the mission. The Rethinking Plastics in Aotearoa New Zealand report specifically highlights the role of Councils in addressing plastic pollution. Consideration of local and international data about plastic pollution, alongside the actions that fall within Council's sphere of influence, helps us to prioritise key focus areas.

Both local and international studies show that in industrialised countries, packaging of takeaway foods and beverages constitutes a sizeable proportion of the 'litter' stream by volume, item count, and weight.¹¹ The [Sustainable Coastlines' Litter Intelligence data](#) for the Wellington Region produced from 2395 volunteer hours over 206 surveys from 37 survey areas (beaches, freshwater and stormwater) shows that plastic is the greatest proportion of the litter stream by item count (69%) and the third greatest by weight (19%)¹². Over 30% of these plastic items are associated with food and beverages, including takeaways and grocery store packaging. An additional 37% are miscellaneous plastic fragments, much of which will also be linked to the Fast Moving Consumer Goods (FMCG) supply chain. Construction materials are also a significant contributor of waste of all types found in Wellington's natural environment.

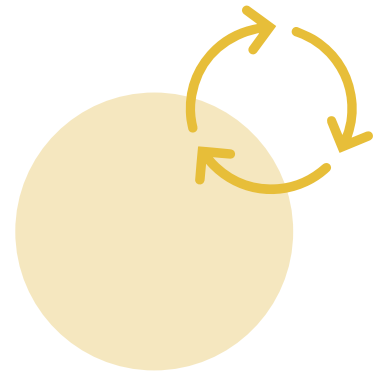


Avoidable single-use packaging gets ready for a journey around Windy Wellington.

¹¹ Michael Dorn and Sabrina Stockli (2018) "Social influence fosters the use of a reusable takeaway box" Waste Management 79, p.296. See also the local and international research cited in <https://takeawaythrowaways.nz/why>

¹² Noteworthy, given how light plastic is. The two top material streams by weight were wood and glass and ceramics, predominantly made up of processed timber & pallet crates and construction material.

Plastic pollution - where to put our focus



Similarly, in the Kaiwharawhara catchment, a 3-year study by then NIWA scientist Dr Amanda Valois into the sources and fate of litter as it moved from land to sea revealed that plastic was 60-80% of the litter profile, with food wrappers, containers and lids, and soft and hard fragments the most common plastic items found. At some sites, construction-related plastic items dominated the litter, including strapping bands, cable ties, safety tape, insulation, and foam window spacers. Although not a significant contributor by number, palette wrap and large commercial plastic wrap represented a significant volume of the litter in the river at times, smothering the stream bed and becoming entangled on instream structures.¹³

These findings about the sources and extent of plastic leakage into Wellington's natural environment are replicated around the country.¹⁴ The evidence shows that apart from advocating for more robust Central Government regulation (e.g. product bans, levies and product stewardship), city councils can help to turn off the plastic pollution tap by developing and supporting zero waste systems for food, drink and other FMCG packaging. The evidence also suggests that continued efforts to require resource recovery from construction sites through well-managed on-site separation of materials, alongside a move away from open skip bins, will help reduce both plastic pollution and waste to landfill.



One of six bags of styrofoam insulation pulled out of the Kaiwharawhara catchment by researchers.

¹³ MBIE Endeavour Smart Ideas project Rivers as Vectors of Plastic Pollution (CO1X1816), led by then NIWA scientist Dr. Amanda Valois.

¹⁴ For example, research from the Palmy Plastic Pollution Challenge found that 27% of the plastic pollution generated by Palmerston North city was associated with food and beverages, including takeaways and grocery store packaging, with an additional 45% being miscellaneous soft plastics, plastic bags and shrink wrap. See Palmy's Plastic Pollution Challenge (2019) Project Report, August 2019. Accessible at <https://drive.google.com/file/d/101CbUtZnUv0ecYUEYgixMjj-YhczP-nL/view>



Zero Waste Actions - Let's Show Initiative!

Waste Free Welly has three priority areas for Council action:

- Organic Waste
- The Reuse Economy
- Resource Recovery

These priority areas align with Central Government waste and climate policy. Furthermore, they target the 52% of residual waste disposed at the Southern Landfill (i.e. excluding sewage sludge, special waste and contaminated soil), as considered in Beca's recent future waste management options report, of which 39% is food and green waste and 53% is readily recyclable materials (paper, plastic, metals, glass, textiles, timber, rubble). The priority areas have also been selected based on the data set out above describing Wellington's plastic pollution profile.

Within each priority area we recognise all the work that is already happening to implement best zero waste practice in Wellington City. In most cases, the opportunity for Council is to actively support what already exists, and to find ways to partner with and/or resource those businesses, organisations and communities already leading the way. Therefore, alongside our recommended initiatives, we have also included case studies of best practice in the city.

A summary of Waste Free Welly initiatives for each priority area

Organic Waste

- Connect organic waste policy with upcoming Sustainable Food Network Action Plan
- Support and develop food rescue systems
- Multiple options for separate organic waste service for all households, prioritising local
- Retain and expand organic waste processing capacity
- Phase-in mandatory separation of food waste at source, and at the Southern Landfill



A summary of Waste Free Welly initiatives for each priority area

Reuse Economy

- Conduct a city-wide stocktake and gap analysis of reduce/reuse services and initiatives
- Invest in and promote reusable packaging
- Expand public drinking water access and infrastructure throughout the city
- Expand access to unpackaged essentials (groceries)
- Phase-in mandatory reusable serviceware at events
- Increase the availability and accessibility of repair services for durables (including electronics, furniture, textiles etc.)
- Support the development of reusable nappy washing services
- Boost the growth of an equitable sharing/service economy in Wellington City
- Support the growth of reuse shops and encourage resource recovery operators to increase their reuse activities - these activities can happen both in-person as well as online



A summary of Waste Free Welly initiatives for each priority area

Resource Recovery

- Conduct Wellington and regional assessment of infrastructure capacity and availability of sites for resource recovery.
- Mandate/institute segregated kerbside collections, recycling centres and restrictions on residual waste capacity as well as residual collections.
- Invest in processing capacity for construction and demolition waste.
- Establish a Resource Recovery Centre Network for Pōneke
- Change planning regulations to require consideration of efficient use of resources
- Adopt sustainable and social procurement
- Support circular economy and zero waste business
- Enforce and implement support of waste bylaw and greater enforcement of private landfills



Organics - Food and green waste

% diversion or avoidance potential - 39% by weight

The Food and Agriculture Organisation of the UN (FAO) has estimated that around a third of food produced is lost or wasted from farm to fork, which contributes around 8% of global greenhouse gas emissions - if food waste was a country, it would be the third largest greenhouse gas emitter in the world after China and the USA.¹⁵ Reducing food waste has thus been deemed one of the most effective global solutions in addressing climate change by Project Drawdown.¹⁶

In Wellington City, 57.8% (by weight) of household rubbish collected at kerbside is food and green waste, and approximately 39% of all waste received at Southern landfill is organic waste. Organic waste decomposing in landfill produces methane, and is a waste of a resource that could be composted and returned to the earth to offset the use of damaging chemical fertilisers, and restore the health, fertility, biodiversity, and water retention and carbon sequestration capacity - the mauri - of soil.

To reduce these impacts and treat organic waste as a valuable resource, we must prevent and reduce food and organic waste at source, rescue and redistribute edible or avoidable food waste for human and animal consumption, and separate and collect what's leftover to be composted and returned to the soil.



¹⁵ Nadia Scialabba (2015). Food wastage footprint and climate change. FAO, <http://www.fao.org/documents/card/en/c/7338e109-45e8-42da-92f3-ceb8d92002b0/>

¹⁶ Project Drawdown (2021). 'Table of Solutions.' <https://drawdown.org/solutions/table-of-solutions>

Wellington Case Studies for Organic Waste - Who can help Council work towards zero waste

Para Kore (Reduce or avoid, recycle)

Para Kore works to empower and support marae and organisations to work towards zero waste, through the delivery of innovative education and support, including building māra kai, reducing food waste, and setting up worm farms and composting systems, within the frameworks of kaupapa and tikanga Māori. Para Kore has 2 kaiārahi (mentors) in Te Upoko o te Ika / the Wellington region.

Everybody Eats (Reduce or avoid)

Serves restaurant-quality, pay-as-you-feel, three-course meals, prepared by volunteer chefs, from perfectly good food that would otherwise go to waste.

Kaibosh (Reduce or avoid)

Links the food industry with community groups that support people in need, ensuring that quality surplus food reaches those who are struggling rather than being needlessly discarded. This benefits both our community and our environment.

Kaicycle - Composting hubs (Recycling and composting)

Small-scale local composting and regenerative urban farming. Currently provide collection and drop-off services to households, offices and small businesses. This compost supports urban farms that grow nutrient-dense local food while facilitating community building and learning.



Para Kore



Everybody Eats

Wellington Case Studies for Organic Waste - Who can help Council work towards zero waste

WhyWaste - On-site processing (Recycling and composting)

Professionally managed worm farm subscription service for households and workplaces

Capital Compost - Green waste and commercial food waste composting (Recycling and composting)

Using green waste and food waste to make weed-free, batch-tested compost and gardening products. Capital Compost produces a wide range of quality soil products for Wellington gardeners, contractors, and landscapers. Products are made from the natural composting of recycled green waste and are Certified organic.

Para Kai - Household food waste collection and home composting (Recycling and composting)

A year-long trial of collection (500 households) and home composting (450 households, opt-in basis) on the Miramar peninsula. The home composting trial was complemented with 3 community events that provided education and engagement in food waste reduction/avoidance and growing food at home/locally.



Para Kai



Capital Compost

Read this table in conjunction with the relevant sections in [GAIA Zero Waste Masterplan](#):
Chapter 3: sections 4, 5 & 6 - pp.54-69

Recommended Initiatives for Organic Waste

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Connect organic waste policy with upcoming Sustainable Food Network Action Plan:</p> <p>This Plan will likely address organic waste, and we agree that organic waste management infrastructure in Wellington should be interlinked with the development of a sustainable and resilient local food system. This connection should be a key factor when options for organic waste management are assessed.</p>	<p>Local organics recycling and composting Local food production Local food use (across manufacturers, distributors, retailers, hospitality, institutions, etc.) Food rescue and redistribution Community co-design and partnership Impact measurement</p>	<p>Happening now (in development)</p>
<p>Initiative (reduce and reuse)</p> <p>Support and Develop Food Rescue Systems:</p> <ul style="list-style-type: none"> • Support and invest in new and existing food rescue initiatives • Adopt a range of measures (waste audits, technical support and education, awards for food waste reduction or donation) to incentivise and support retailers and food businesses to reduce food waste production • Limit or ultimately ban retailers/food producers from disposing of avoidable food waste (see last initiative in this table for regulation suggestions) <p>Limiting disposal of edible food waste (e.g. mandating a minimum recovery rate of food waste for human consumption), or banning it altogether, will help minimise the social and environmental harms of our wasteful food system. Food rescue initiatives must be adequately supported and resourced to cope with the significant growth in rescuable food that would result from such regulations.</p>	<p>Kaibosh The Free Store Kiwi Community Assistance</p>	<p>Happening now (food rescue) / within 5 years (extra support and ban)</p>

(See pp. 60-63 of [GAIA Zero Waste Masterplan](#))

Recommended Initiatives for Organic Waste

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
Initiative (recycling and composting)		
<p>Multiple options for separate organic waste service for all households, prioritising local:</p> <p>Council should support and provide households with multiple options for organic waste collections to create a decentralised but coordinated network - e.g. community composting collections/drop-offs, professionally serviced home composting/worm farms, and kerbside collections among other possibilities. The development and provision of options should seek to prioritise local facilities to minimise transport and achieve multiple outcomes beyond waste minimisation, such as growing food resilience via community gardening/urban farming.</p>	<p>Kaicycle (Living Compost Hubs) Why Waste</p>	<p>Happening now (more investment needed) / provide full suite of options within 5 years</p>
.....		
<p>Retain and expand organic waste processing capacity:</p> <p>We recommend that Council maintains the Capital Compost facility (whether at its current or a new location) and invests in/support a range of other organic waste processing options, including:</p> <ul style="list-style-type: none"> • Small-scale localised composting sites • Medium-scale on-site and pre-treatment facilities, such as in-vessel processing systems • On-site composting/processing at schools and institutions <p>Work with other Councils in the Wellington Region to develop additional composting and processing options (e.g. on-farm composting)</p> <p>Increasing the range and capacity of sites and facilities may require planning and zoning changes to make it easier for composting/processing operations to set up. We recommend Council facilitates and supports such changes, such as in the current review of the District Plan.</p>	<p>Capital Compost Kaicycle</p>	<p>Within 5 years</p>

Recommended Initiatives for Organic Waste

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Regulation: phase in mandatory separation of food waste at source and at the Southern Landfill:</p> <p>Extend controls for the Solid Waste Management and Minimisation Bylaw 2020 to include restrictions on food waste disposal alongside green waste.</p> <p>This could include:</p> <ul style="list-style-type: none"> • a new ‘Waste Separation’ clause (e.g. Controls 2.12-2.14) that requires particular entities (e.g. hospitality businesses, food/grocery retailers, schools and other institutions) to separate food waste from other waste for collection or on-site processing, and eventually extend this to households. Require separate collection or onsite processing for Multi-Unit Developments as per section 12 of Bylaw. • Mandate retailers and food waste producers to separately collect a minimum % of edible food waste for human consumption; gradually increase the % and ultimately ban the disposal of edible food waste • Ban the disposal of food waste into the wastewater network for households (e.g. InSinkerator) and businesses (e.g. ORCA, Iugis) • Require food waste to be separated from general waste (as per Control 2.19 for green waste) prior to disposal at the Southern Landfill • Ban food waste from being disposed of at the Southern Landfill altogether. <p>These Controls can be phased-in to allow time for separate collection and processing/composting infrastructure to develop - e.g. initially apply only to entities who produce >x (20?) tonnes of food waste p/a, with gradual incorporation of smaller food waste producers within a set timeline. These should be developed in consultation with stakeholders</p>	<p>Solid Waste Management and Minimisation Bylaw 2020</p>	<p>Require mandatory separate collections for large producers by 2023, medium producers by 2024, and all producers by 2025.</p>



National / International Case studies for Organic Waste

- Towns and cities in NZ with organic waste services:
 - Kerbside collections (food and green waste combined): Christchurch, Timaru, Selwyn, Waimakariri, MacKenzie, Waimate
 - Kerbside collections (food only): Hamilton, Papakura (Auckland), New Plymouth, Tauranga, Ruapehu District, Raglan (run by local community enterprise, Xtreme Zero Waste)
 - Small- and medium-scale localised composting: Nelson (Community Compost), Whanganui (Easy Earth)
- International examples of successful decentralised organic waste management¹⁷
 - Austria - 400+ processing sites nationwide, largely medium-scale on-farm composting with pre-treatment facilities located in cities
 - Besançon, France - city of 100,000+ that runs a decentralised network of small-scale composting sites
- Organics waste landfill bans and mandatory separate collection/recycling laws in place internationally¹⁸
 - South Korea¹⁹
 - Multiple US States²⁰
 - EU²¹
- 20 food rescues around the country picking up surplus food and redistributing it to those in need
- Governments representing 50% of the world's population have set an explicit national target in line with SDG 12.3 to halve food waste by 2030.

¹⁷ See page 9-10 in Liam Prince (July 2021). Expanding Organic Waste Collections and Composting in Aotearoa. Commissioned by Greenpeace Aotearoa. <https://www.greenpeace.org/aotearoa/publication/how-food-waste-can-help-bring-about-a-healthy-farming-future/>

¹⁸ For more specific regulatory tools from the US context, see Katie Sandson et al. (July 2019). Bans and Beyond: Designing and Implementing Organic Waste Bans and Mandatory Organics Recycling Laws. Prepared by Food Law and Policy Clinic at Harvard Law School, and Centre for EcoTechnology (CET). <https://www.centerforecototechnology.org/toolkit-presents-state-and-local-policy-solutions-to-keep-food-waste-out-of-landfills/>

¹⁹ Douglas Broom (12 Apr 2019). 'South Korea once recycled 2% of its food waste. Now it recycles 95%.' World Economic Forum. <https://www.weforum.org/agenda/2019/04/south-korea-recycling-food-waste/>

²⁰ Kelly Maile (23 March 2020). 'Organic waste legislative update.' Waste Today. <https://www.wastetodaymagazine.com/article/organic-waste-legislative-update-food/>; US Composting Council (June 2021). 'State Regulations.' <https://www.compostingcouncil.org/page/StateRegulations>

²¹ Enzo Favoino and Michele Giavini (2020). Bio-waste generation in the EU: Current capture levels and future potential. Zero Waste Europe: Commissioned by Bio-based Industries Consortium. <https://zerowasteurope.eu/library/bio-waste-generation-in-the-eu-current-capture-levels-and-future-potential/>

Reuse Economy

Zero Waste Europe estimates that waste prevention strategies and new business models could reduce waste generation by 30-50%.²² Many of these new business models exist in what we have termed the ‘reuse economy’, which reduces waste by:

- slowing down the speed at which products and materials churn through our economy (e.g. through replacing disposables with reusables, supporting resource recovery operators to increase their reuse activities, and repairing)
- reducing the overall number of things in our economy in the first place (e.g. through replacing disposables with reusables, and sharing/service based economies).



The Rubbish Trip supporting Te Herenga Waka’s Single-Use Cup-Free week in May 2021



²² Joan Marc Simon, Jack McQuibban, Pierre Condamine (2020) [The Zero Waste Masterplan - Turning the vision of circular economy into a reality for Europe](#) (Zero Waste Europe), p.8.

Wellington Case studies for Reuse Economy - Who can help the Council work towards zero waste

Zero waste groceries/refill stations/markets

Wellington City currently has two dedicated zero waste grocers (**Hopper Refill** and **GoodFor**), located in the CBD, and a wide range of refill stations and bulk bins for all manner of products where reusable containers/bags are welcome, including wholefoods, deli goods (e.g. meat, seafood, cheese), bread and bakery items, wine and beer, coffee, cleaning products and toiletries, and more. The city is also reasonably well serviced for produce markets, and **Kaicycle** runs a CSA scheme (and plans to set up more) that supplies members with locally grown unpackaged veges.

At all these locations, customers can bring their own reusable bags and containers and get essentials without packaging. The refill business model enables Wellingtonians to reduce their packaging waste, which directly removes material from kerbside rubbish and recycling collections. We celebrate the existence of these businesses while recognising that supermarkets retain market share for groceries. Council policy and investment geared towards the top of the waste hierarchy would prioritise strategies to increase the numbers, accessibility and affordability of these stores.



Hopper Refill - one of Wellington City's two dedicated zero waste grocers.



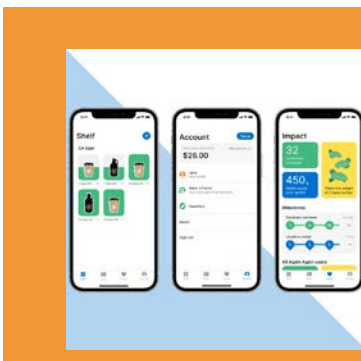
Everyday Wine - wine on tap from kegs on Cuba St

Wellington Case studies for Reuse Economy - Who can help the Council work towards zero waste

Reusable serviceware initiatives

Wellington City is cafe-obsessed and the hospitality industry is important to the local economy and culture. But in our present linear economic settings, this sector can generate a lot of disposable takeaway waste. So, a number of initiatives have developed in Wellington to increase the uptake of reusable serviceware through systemic changes or services, rather than behaviour change campaigns. Several businesses provide hospitality outlets with reusable takeaway serviceware to loan to customers instead of disposables. These include **Again Again** (coffee cups, though expanding to a variety of other reusable containers for food and drink), **CupCycling**, **Reusabowl**, **MugCycle**, and the Te Herenga Waka-Victoria University mug share scheme, **Auraki**. Again Again has recently developed an app to make it easier for any reusable serviceware provider to manage their reusables inventory, without the need for a deposit.

Several hospitality outlets have phased-out disposable cups entirely, which accelerates the uptake of reusables. Although Wanaka currently leads the nation by a long way, Wellington has a high number of single-use coffee cup-free cafes. For example, **Sweet Release**, **Tuatua Cafe**, **Peoples Coffee Lukes Lane**, **Lashings**, **Arobake**, **Dope**, **Commonsense Tory Street**, **Rātā Cafe**. Community groups have been supporting cafes to adopt SUC-free (single-use-cup-free) days, weeks or months, with a particular focus on the Wellington Waterfront, and Te Herenga Waka-Victoria University of Wellington.



Again Again app to manage reusable packaging serviceware inventory



Reusabowl - New Zealand's first reusable takeaway container scheme - homegrown in Welly

Wellington Case studies for Reuse Economy - Who can help the Council work towards zero waste

Reusable serviceware initiatives - cont.

Other organisations are actively working towards a time when events in Wellington City operate with reusables only. **Nonstop Solutions** (formerly Wellington Waste Managers) already operates Wash Against Waste stations at some of the events it services, and plans to expand this offering by investing in a mobile wash truck (which WCC is supporting). **Newtown Community and Cultural Centre** rents out 'Wash Against Waste kits' for community groups to easily use reusable serviceware instead of disposables. **Washing Up in Welly** is a collaborative project between major events organisers and venues across Wellington (including **Sky Stadium** and **Kāpura**), **Sustainability Trust**, **Takeaway Throwaways** and **Nonstop Solutions** to establish centralised and mobile washing infrastructure to enable greater use of reusables at events (both big and small) across the city.



Wellington Waste Managers/Nonstop Solutions Wash Against Waste stand at Newtown Festival



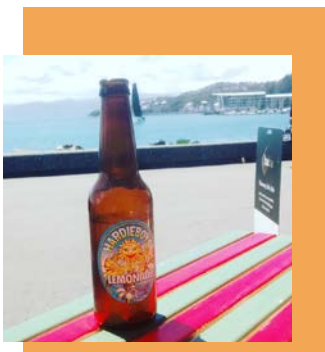
MugCycle stands for Wellington City cafes

Wellington Case studies for Reuse Economy - Who can help the Council work towards zero waste

Wellington-based companies adopting returnable reusable packaging

Reusable packaging reduces both waste and emissions, and supports local economies. A well-established reuse system that is common in Wellington's bars and breweries are beer kegs for 'on tap' beer - these kegs are washed and refilled hundreds of times.

Many businesses in the Wellington Region choose to put their product into reusable packaging that they take back from customers or retailers when empty, to wash, sanitise, and refill. For example, KB Kombucha, Hardie Boys, The Brothers Cold Press, Solid Oral Care, Apostle Hot Sauce, Koakoa liquor, YumJar and Eketahuna Country Meats milk. All of these companies choose glass as their reusable packaging material of choice. They all operate their own washing and sterilising equipment and reverse logistics system. While it would be simpler for these companies to use single-use packaging (given waste and recycling services are publicly subsidised), they recognise the social and environmental benefits of reuse. A Council-supported washing plant or reuse collection service could enable more local businesses to choose reusable rather than disposable packaging, and make it easier for customers to reliably return the packaging.



Hardie Boys' fizz - these bottles are returned to Hardie Boys to be sanitised and refilled so they can go another round



Apostle Hot Sauce takes back their bottles for wash, sanitisation and refill



Yum Jar delivers (via EV) zero waste meal kits as well as grocery items, all in glass jars that they take back, sterilise and refill



Solid Oral Care dental hygiene products use reusable packaging

Wellington Case studies for Reuse Economy - Who can help the Council work towards zero waste

Share and repair activities

When we share goods rather than us all owning our own version of everything, we have fewer things flowing through the economy overall. This reduces the material consumption footprint that ultimately leads to waste generation. Well-designed sharing systems, like public libraries, also open up access to good quality products at more affordable prices than buying outright. Repairing expands product lifespans, so that fewer items reach end-of-life before they need to, reducing pressure on landfill and recycling processes, and the demand for new replacement products.

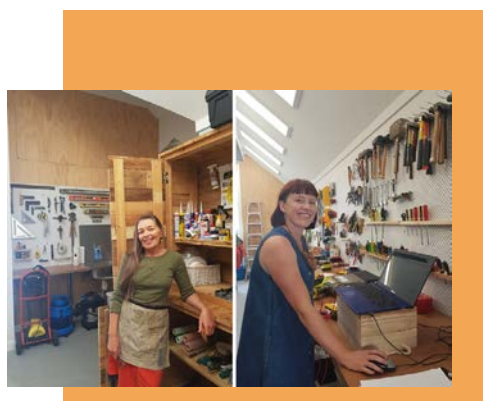
The idea of Wellington City thriving with less stuff, but more quality access, is an important part of the zero waste vision. Several businesses and organisations are helping the city reach this goal. Commercial businesses that repair everyday items like **LT Campbell LTD**, shoe repairers and tailors, and specialty repairers like **Weta Guitars** and **Vanguard Orchestral**, are dotted around the city. Non-profit repair cafes where people can get their items repaired for free as a specified event are organised by community centres and NGOs like **Sustainability Trust** and **Newtown Community and Cultural Centre**. The latter also hosts **Crop Swaps** where people can freely share homegrown fruit and veg, and the highly successful **Wellington Timebank**, where people exchange skills and services using time credits rather than money.

The **Newtown Tool Library** lends good quality tools to members, and **Mechanical Tempest** and **Bikespace** offer accessible bike repairs and a space to repair your own bike, while **ReBicycle EkeRua** donates or sells cheap 'upcycled' secondhand donated bikes - all complementing the many bike repair shops around town.

Wellington's existing repair and share services are largely driven by small businesses, NGOs and community groups. They build community resilience and give value to important skills that increase resourcefulness. They provide an alternative to big box shops that fuel the over-consumption of poorly made, short-lived products that too often end up filling up Wellington's Southern Landfill.



Repair Cafe at Hopper Refill



Inside the Newtown Tool Library

Read this table in conjunction with the relevant pages of the Zero Waste Masterplans:
[ZWE Zero Waste Masterplan](#), p.20
[GAIA Zero Waste Masterplan](#), pp.31-32, 33, 43-53

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Conduct a city-wide stocktake and gap analysis of reduce/reuse services and initiatives</p> <p>The wide variety of services that create a thriving reuse economy include: secondhand stores, reusables services (from packaging and serviceware to nappies), low-waste grocers, washing facilities, repairers and libraries of things. Understanding where the infrastructure and service gaps are in the community to enable waste prevention would help the Council to prioritise targeted policy and investment at this layer of the waste hierarchy, while also giving communities the opportunity to imagine a low-waste future for their suburbs and neighbourhoods.</p> <p>See pp.21-22 & 47 of GAIA Zero Waste Masterplan.</p>	<p>The Rubbish Trip Zero Waste Guide for Wellington City provides a starting point for a stocktake of existing services, but doesn't cover all possible sectors or services.</p> <p>Furthermore, community engagement is needed to help Council prioritise its support for growth of this area - specifically which services are most needed, and in which suburbs.</p>	<p>Gap analysis complete by the end of 2022.</p>
<p>Expand public drinking water access and infrastructure throughout the city</p> <p>Fulfill demands of RefillNZ petition</p> <p>Consider recommendations on p.46 of GAIA Zero Waste Masterplan (where relevant, considering scope of local govt jurisdiction/powers in NZ)</p> <ul style="list-style-type: none"> Phase-out sales of bottled water on council property. Prohibit purchase of bottled water using municipal funds (exemption for emergency contexts) Install public water fountains across the city Incorporate water fountain requirements or incentives into zoning/design codes Alter municipal plumbing or building costs to increase the number of drinking fountains in public buildings 	<ul style="list-style-type: none"> Grow the network of public water fountains that already exists Enable more hospitality outlets, stores and institutions to stop selling bottled water 	<p>No more bottled water sold or purchased in Council operations by end of 2022.</p> <p>Map of planned new water fountain locations released by mid-2022, along with installment dates.</p>

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Invest in and promote reusable packaging</p> <p>Wellington needs more reusable packaging infrastructure (washing facilities and reverse logistics, including returns infrastructure), and direct incentives for use of reusable packaging, e.g.</p> <ul style="list-style-type: none"> • Grants for infrastructure, incubation of new business models, capital start-up costs • Council procurement policies that favour organisations using reusable packaging models • Updated WCC event guidelines/by-law to phase-out disposables at events on council property • A sinking lid policy for food licenses to outlets without access to washing facilities (whether their own or contracted to a third party) • Rent support/subsidy/free or low-cost physical spaces for organisations establishing reuse infrastructure or logistics. • Support ‘reusable only’ precincts (similar to the ‘Plastic-Free Precincts’ in parts of Australia) • Incentivise businesses providing reuse services to locate in underserved suburbs of the city (after consultation with community members to identify what kinds of services and businesses are needed, where they should be sited, and affordable price points). <p>See pp.4-5 of ZWE ‘Dare to Imagine a Better Future’ booklet that describes reusable packaging systems and the kinds of infrastructure (including returns infrastructure) likely needed to enable them to function at scale.</p> <p>Note: although kerbside recycling collections are important, they act as a subsidy for single-use packaging systems, and use up a chunk of the resources available for waste minimisation. In order to align with the waste hierarchy, WCC should plan to reorder procurement and investment priorities so they follow the waste hierarchy and achieve more circular outcomes.</p>	<ul style="list-style-type: none"> • Wgtn businesses using refillable/reusable packaging • Zero waste grocers and other bulk/refill stations (see below) • KB Kombucha • Hardie Boys • The Brother’s Cold Press • Most breweries allow customers to get beer ‘on tap’ into BYO bottles • Most roasters allow customers to get unpackaged coffee into BYO bags/containers • Everyday Wine has a refill and keg system for some wine sales • Most bars sell at least some of their beer on tap from kegs • Reusable serviceware initiatives • Reusabowl • Again Again • Ideal Cup • MugCycle • Auraki (at Te Herenga Waka-Victoria University of Wellington) • Hospitality outlets without single-use cups (e.g. Sweet Release, Peoples Lukes Lane, Commonsense, Lashings, Arobake) • National and international reusable serviceware initiatives available on Takeaway Throwaways Reusable Serviceware Scheme Directory. 	<p>Investment and policy plan by end of 2022, ready for implementation by mid-2023.</p>

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Expand access to unpackaged essentials (groceries)</p> <p>Support the growth and reach of zero waste groceries, fresh produce markets, and urban Community Supported Agriculture (CSA). Support could include:</p> <ul style="list-style-type: none"> • Grants for start-up, capital or operational costs. • Facilitating access to free or low cost physical spaces for these retailers, markets and urban farms. • Including vouchers for these services in relevant social support or koha programmes. • Procuring Council food and drink from these businesses. <p>Grocers: Set a goal of increasing numbers of zero waste grocers throughout the city, with a focus on suburbs and other under-serviced areas (alongside the goal of a minimum number of resource recovery centres). Improving access across the city could include supporting the development of mobile bulk stores (such as The Refill Van in Auckland or Algramo in South America), or zero waste delivery services, such as Yum Jar</p> <p>Markets and CSA: Set goal of fresh fruit and veg markets open at least 5 days a week in city, and develop a target as part of the Sustainable Food Network Action Plan for number of operational urban farms/CSAs. All markets and CSA operating on Council land should be required to be free of single-use packaging and serviceware.</p>	<ul style="list-style-type: none"> • Wellington currently has two dedicated zero waste grocers - Hopper Refill and GoodFor - who are both located in the CBD, and a zero waste delivery service - Yum Jar (who offers zero waste grocery items, but also a zero waste meal kit service). • Other stores that provide access to bulk/unpackaged groceries are listed in The Rubbish Trip Zero Waste Guide for Wellington City. • More access is needed in the suburbs. Ideally zero waste grocers and/or stores with a low-waste ethos would be as widespread as convenience stores. • Wellington has comparatively good access to fresh fruit and vegetable markets compared to other cities in NZ, but there is scope for more and single-use packaging and serviceware is prevalent. The city also does not have a thriving farmers market as exists in cities like Nelson, Dunedin, Hastings. • Kaicycle CSA model could be replicated in multiple suburbs across the city. 	<p>A goal of at least 10 dedicated zero waste stores across Wellington City by 2024 (could include a mix of physical and mobile stores, and delivery).</p> <p>Ensure markets operate at least 5 days a week in the city by 2023.</p> <p>Target of 5 operational CSAs within Wellington City boundaries by 2024.</p> <p>All markets and CSA operating on Council land to be free of single-use packaging and serviceware by the end of 2022.</p>

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Phase-in mandatory reusable serviceware at events</p> <p>Council is offering support to initiatives to develop washing facilities for reusables at events, namely Washing Up in Wellington / Nonstop Solutions truck. This support is welcomed and should continue and be expanded.</p> <p>Provide grants to establish more reusable serviceware/crockery/party kits that Wellingtonians can hire at an affordable rate for small household/community events.</p> <p>Signal a bylaw to phase-out single-use/disposable serviceware at events held on Council land by 2023, in order to create market demand for the washing and services being invested in.</p> <p>Develop guidelines for reusable serviceware at events (see example guides and resources developed by Nelson and Tasman Councils here (under ‘waste management’)) - both as a standalone guide and update WCC’s ‘Event Packaging Guidelines’ and ‘Reducing Waste at Your Event’ booklet to include a more comprehensive summary of key points and options for reusables. Provide incentives and support (e.g. grants, fee waivers) for event organisers to procure reusable serviceware providers as part of their event waste minimisation and management plan</p> <p>Host, support and disseminate the Sustainable Event Alliance’s ‘Global Best Practice Guidelines for Reusables’ Hygiene at Events’.</p>	<ul style="list-style-type: none"> • Nonstop Solutions • Washing Up in Wellington • Wash Against Waste Kit (Newtown Community and Cultural Centre) 	<p>All events on council land must be free of single-use/disposable serviceware by 2023</p> <p>Develop reusable guidelines for events by mid-2022</p>

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Increase the availability and accessibility of repair services for durables (including electronics, furniture, textiles etc.)</p>	<ul style="list-style-type: none"> Wellington has a number of commercial repairers, including LT Campbell, a variety of cobblers, testers at secondhand stores, and phone and laptop repairers. However, information about where they are and training for these skills is not easily accessible. Repair cafes are held intermittently by community centres around the city, organisations like Sustainability Trust, and businesses like Hopper Enterprise. 	<p>Create a policy, investment and procurement plan to increase the availability and accessibility of repair activities in Wellington City by the end of 2022.</p>
<p>Increase availability and access to repair operations - whether commercial operations, community operations, or Council-run operations:</p>		
<p>Subsidising product repair - e.g. Nelson City Council used to offer a \$20 voucher to all residents to cover the costs of recycling e-waste. A similar voucher system could be applied in Wellington, but for repair rather than recycling.</p>		
<p>Supporting regular repair cafes in the city, with Council facilitating this by paying the repairers for their time.</p>		
<p>Hiring a larger team of repairers for The Tip Shop.</p>		
<p>Procurement strategies whereby WCC commits to procure local repair services for its durables, over replacement or refurbishment.</p>		
<p>Create an accessible and frequently updated directory/map of all repair services in the Wellington Region.</p>		

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Support the development of reusable nappy washing services</p> <p>The Council could investigate who could be procured to provide a municipal, user pays, affordable reusable nappy wash and distribution service in WCC. As described on p.7 of the ZWE ‘Dare to Imagine a Better Future’ booklet: “Hygiene items... mainly operate with reusable systems... disposable nappies have been replaced with laundry systems that collect clean nappies and distribute them locally which has created jobs, phased out waste and reduced the exposure of babies and the elderly to harmful plastic.”</p>	<p>A service akin to the AlSCO services (and similar) that currently operate to professionally launder teatowels, dishcloths and hand towels for hospitality outlets and more across the whole of New Zealand, including Wellington.</p>	<p>Investigation into who could be procured to provide a municipal, user pays, affordable reusable nappy wash and distribution service in WCC completed by the end of 2022.</p>
<p>Boost the growth of an equitable sharing/service economy in Wellington City</p> <p>Procure commercial sharing services, like Mevo or Mutu, rather than Council purchasing its own products.</p> <p>Expand scope of public libraries to include a greater range of items than books or provide grants to enable existing non-profit libraries of things to expand their rentable stock.</p> <p>Work with Timebank to consider how WCC could offer time credits in return for citizens’ contribution to Council activities or participation in Council processes, such as consultations and submissions, beach cleans, tree planting etc.</p> <p>Provide free or low-cost access to physical spaces for community sharing services or storage of rentable stock.</p> <p>Grants to enable the development of sharing platforms.</p>	<ul style="list-style-type: none"> • Commercial sharing services/platforms: <ul style="list-style-type: none"> ○ Mevo and other car rental ○ Mutu ○ Laundromats ○ Costume and clothes hire • Non-profit sharing services/platforms <ul style="list-style-type: none"> ○ Wellington Timebank ○ Newtown Tool Library ○ Toy libraries ○ Book libraries 	<p>Release policy and investment plan by end of 2022 for increasing an equitable service and sharing economy in Wellington.</p>

Recommended Initiatives for Reuse Economy

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Support the growth of reuse shops and encourage resource recovery operators to increase their reuse activities - these activities can happen both in-person as well as online</p> <p>As GAIA notes in their Zero Waste Masterplan, reuse is “both an upstream reduction and downstream diversion outlet, investments in promotion, tax breaks, no interest loans and other business support help reuse enterprises compete with cheap, newly manufactured goods.” (p.33) Council could also commit to exhausting options for purchasing secondhand goods from local reuse shops before buying new.</p>	<ul style="list-style-type: none"> • The Tip Shop • Sustainability Trust fabric from Curtain Bank • Op Shops 	<p>Ongoing</p>

Resource Recovery Network

% diversion or avoidance potential - 53% by weight of residual waste at landfill

The largest components of this waste are timber (15%), plastics (13%) and paper (10%).

As noted in previous section, waste prevention strategies and new business models could reduce waste generation by 30-50%.







Wellington Case studies for Resource Recovery - Who can help the Council work towards zero waste

Sustainability Trust has recycling and producer responsibility programmes for e-waste, old bicycles, child booster seats, plastic bottle tops, metal lids, small metal items, dental care products, wool, silicon, Bata gumboots or Little Yellow Bird clothing items. The Trust provides a central and easily accessible site for drop-off of these items.

Examples across Greater Wellington of existing community and council resource recovery centres sites include: Tip Shop / Porirua Trash Palace / Earthlink. Recovery materials and reusable items. In relation to construction sector this includes doors, windows, some timber recovery. The Tip Shop and Sustainability Trust have been collaborating more closely. The Tip Shop has adopted metal lid recycling, and e-waste is going from the Trust to the Tip Shop for reuse, while curtain tracks go from the Tip Shop to the Curtain Bank.

Businesses are looking for solutions to reduce their waste and voluntary producer responsibility is on the increase. Little Yellow Bird, Bata and Munch are examples of Wellington based businesses investing in recycling and recovery. Spaces like Sustainability Trust support these systems by providing a consolidation point for customers to return end of life items.

Your Sustainable Workplace / Organic Wealth. These Wellington based organisations provide waste minimisation consultancy support for businesses in the Wellington region and have been operating for years with a track record of success working with everyone from large Government organisations, through to retail, manufacturing and hospitality.

			
Little Yellow Bird clothing recycling We've partnered up with Little Yellow Bird to become a central city drop off point for all Little Yellow Bird clothing and uniforms. READ MORE	Munch silicone recycling We've partnered up with Munch to become a central city drop off point for all food-grade silicone items. READ MORE	Metal recycling We're a central city drop off for small to medium-sized metal items. If it fits in a reusable shopping bag, you can bring it into us. READ MORE	Gumboot recycling We've partnered up with Bata shoes NZ to become a central city drop off for their gumboot recycling initiative. READ MORE

Sustainability Trust recycling programmes

Wellington Case studies for Resource Recovery - Who can help the Council work towards zero waste

X-frame

Ged Finch, researcher based at Vic University, developed recoverable and reusable framing system for the next generation of sustainable construction.

Construction and demolition recycling is limited in Wellington but there is existing activity to build on:

- Centreport has done a large amount of concrete recycling including the BNZ building . Crushed concrete has been used on-site and for projects around the city including Makara bike park.
- [McMud Earthworks](#) – process treated and untreated wood pallets.
- Tip Shop – Recovery of doors, windows, some timber recovery.
- Poly Palace in Porirua has been working to create a commercially sustainable polystyrene recycling plant. Expol is also taking back polystyrene to go into manufacture of their insulation products.
- [Woods Waste](#) - some sorting of skip waste to extract metal, wood, cardboard and some building materials.



Tip Shop Wellington

Recommended Initiatives for Resource Recovery

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Wellington and regional assessment of infrastructure capacity and availability of sites for resource recovery.</p> <p>There should be a review of available land and property for resource recovery in the city. Resource recovery should be enabled at many different scales, from Circular Economy business hubs and drop-off locations through to large scale C&D recovery.</p> <p>Many of the regional councils have the ambition or are in the planning stages of putting in place resource recovery centres at differing scales. The potential for these to support work in WCC should be taken into account.</p> <p>If the landfill is extended or closed this impacts on the availability of land for resource recovery. In addition, the neighbouring C&D landfill is on leased Council land and there are opportunities to use this site for recovery operations.</p>	<p>Evidence gathering to support implementation of other initiatives.</p>	<p>1 year</p>
<p>Segregated kerbside collections, recycling centres and restrictions on residual waste capacity as well as residual collections.</p> <p>There should be a recycling optimisation review process. Data suggests that recovery across kerbside and composting is only 14% of Council handled waste streams. Recycling systems should be designed to make best use of funds, maintain quality of recyclate and ensure they are accessible for all householders. For example:</p> <p>Recycling centers for recycling drop-off that are accessible across the city, for items that are not economic to collect at kerbside and for areas where kerbside collections are not possible.</p> <p>Recycling centres can be flexible in terms of size, e.g. small scale e.g. supermarket car parks, and can also collect material source separated, resulting in a cleaner stream of material that can potentially be used for higher values.</p> <p>There is national work on kerbside optimisation and standardisation that can feed into this process. Changes may involve increasing segregated collection and reducing residual waste capacity.</p>	<p>Kerbside collection. Recycling drop-off. Segregated recycling. Increase in tonnage and quality of materials collected. Supply of materials into local and national product manufacture.</p>	<p>1-3 years</p>

Recommended Initiatives for Resource Recovery

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Investment in processing capacity for construction and demolition waste</p> <p>Wellington lacks C&D Waste recycling and reprocessing infrastructure. It is estimated that approximately 578,000 tonnes of C&D waste is being disposed of into landfill every year within the Wellington Region. This is a huge opportunity.</p> <p>There are other regional councils making progress in this space. Morrison Low has been working with Porirua Council to develop a business case for a resource recovery centre. In Porirua they will be demolishing a large number of houses so are looking at best options for dealing with these waste streams.</p> <p>There are established low-cost technologies to reprocess C&D waste, as demonstrated locally, by the Green Gorilla plant in Auckland and the use of concrete in Wellington’s Centreport project. Products used at a local level, reduce material supply transport emissions, and support local resilience.</p> <p>29 of Zero Waste Networks community enterprise members are active in the Construction and Demolition waste (C&D waste) space, running recycled timber yards, doing deconstruction projects, conducting research and crucially, providing education on waste reduction.</p>	<p>Crushing and screening to create secondary and recycled aggregates for use in construction projects.</p> <p>Community resource recovery locations for reuse of materials.</p> <p>Supply of reused construction products to increase recycled content in construction projects.</p>	<p>2-5 years.</p>

Recommended Initiatives for Resource Recovery

Initiative (refuse, rethink, redesign)	Examples of what would continue to operate, expand or duplicate	Implementation timeframe
<p>Resource Recovery Centre Network for Pōneke</p> <p>Work in partnership to create a network of interconnected reuse and resource recovery centres. A resource recovery network of independently operated sites, would work collaboratively under a common brand to provide communities with a 'one stop shop' for reuse, recycling, repair, upcycling and retail activities. Each site would deliver a range of similar services tailored to best fit the local community and environment. They would all focus on delivering a high quality user experience for households and businesses. Local centres would feed materials and products into regional and national hubs where scale is needed to make further processing and recycling viable.</p> <p>Centres provide drop off locations for hard to recycle items that aren't collected at kerbside, items that are part of regulated product stewardship programmes e.g. e-waste, and items that are part of voluntary product stewardship programmes e.g. silicon.</p> <p>Estimated that a RRN could divert 70% of Southern landfill waste.</p> <p>Would provide practical opportunity to partner with Mana Whenua and communities to achieve shared goals, build trust and confidence. Potential for Greater Wellington collaboration.</p> <p>Start with three CRC sites for WCC 1:70,000 pop. Build up to 14 1:15,000 pop.</p> <p>Job creation, local jobs and training e.g. Christchurch: 32 staff across 4 sites, Auckland: 80 staff across 9 sites. Zero Waste Network NZ: 707 staff across 30 sites.. Enable and empower change through Community hubs: sustainability, cohesion and resilience. Access to goods and resources for those in need.</p>	<p>Low cost items good quality second hand goods and materials.</p> <p>Sites for beverage containers returned through a container return scheme.</p> <p>Take back of end of life products like E waste and appliances.</p> <p>Workshop space for repair and refurbishment, including tool libraries.</p> <p>Community composting hubs and community gardens.</p> <p>Washing and sterilisation systems for the emerging reuse economy.</p> <p>Behaviour change and community engagement programmes.</p> <p>Increase in voluntary producer responsibility schemes.</p> <p>Increase in adoption of reusable and refillable packaging</p> <p>Increase in repair and reuse-</p> <p>Establishment of circular business hubs.</p>	<p>2-5 years</p>
<p>Change planning regulations to require consideration of efficient use of resources</p> <p>Require a Circular Economy Statement to accompany planning applications.</p>		

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<p>Adoption of sustainable and social procurement</p> <p>Incorporate zero waste and circular economy principles. Leverage the purchasing power of Council and create local markets for zero waste products and services and be a model for citywide change. This should encompass any construction of built assets, suppliers of goods and services and any organisations that receive funding from WCC e.g. WellingtonNZ. Use social procurement model to generate social value.</p>	<p>Community organisations involved in the delivery of resource recovery</p> <p>Local job creation</p>	<p>1 year</p>
<p>Support circular economy and zero waste business</p> <p>Provide free or low-cost physical spaces, particularly during incubation and initial operations, and financial assistance for other significant capital costs.</p> <p>Offer grants to cover transitional costs for small businesses which may operate on thin profit margins or face significant cash constraints.</p>	<p>Increase in circular economy and zero waste businesses</p> <p>Local markets for recovered materials</p>	<p>1 year</p> <p>Council can expand the grants and support already benign provided.</p>
<p>Enforcement and implementation support of waste bylaw and greater enforcement on private landfills</p> <p>The waste bylaw contains powers to shift how waste is managed in the city, but requires resources for effective implementation. Communication, education and enforcement.</p> <p>Provide support for householders in multi-occupancy buildings to implement waste systems.</p> <p>Put greater controls onto private waste contractors in the city.</p> <p>Promote availability of services from local businesses to provide education and advice on adoption of waste minimisation and circular economy practices for businesses.</p> <p>Make sure of the education and advocacy expertise available in the city.</p>	<p>Increased adoption of recycling services.</p> <p>Increase in quality of materials collected for recycling.</p> <p>Decrease in waste generated.</p>	<p>1 year</p>



National / International Case studies for Resource Recovery

- Auckland Resource Recovery Centre Network - [short video here](#)
- Auckland Council prioritised development of its [Resource Recovery Network](#) as a transformational project. That means it has the power to shift the city into a new zero waste model that reduces both waste and emissions.
- 9 [Community Recovery Centres](#) (CRC's) are [already operational](#), 3 are in development and the medium term goal is to establish 21 plus two larger resource recovery parks. These 23 sites will form part of Auckland's Resource Recovery Network which will also include commercial, social and community enterprises working towards zero waste by 2040. The long term goal is 64 Community Recycling Centre's 1:25,000 pop.
- Zero Waste Network members are reaching diversion rates as high as 75% where they control the transfer station.
- [Xtreme Waste](#) - Raglan
[Origin story](#)
[Videos](#)
- [Wastebusters](#) - Otago
[Videos](#)
- Zero Waste Network evidence submission to Government on Construction and Demolition waste contains numerous examples of how C&D recovery has been implemented internationally [here](#)
- [What is Revolve? | The first choice for second-hand shopping](#) (zerowastescotland.org.uk) Revolve is a quality standard for second-hand stores in Scotland and is awarded to stores that meet high standards in safety, cleanliness and service, giving shoppers that extra reassurance to shop second-hand first.
- [Reuse consortium - Community Resources Network Scotland \(crns.org.uk\)](#) Framework contract (Scotland Excel Domestic Furniture and Furnishings Framework) that has enabled reuse organisations to offers local authorities and their clients an alternative, sustainable and affordable reuse choice.



National / International Case studies for Resource Recovery

- London Circular Economy Statements are intended to demonstrate how a development, including any public realm and supporting infrastructure, will incorporate Circular Economy measures into all aspects of the design, construction and operation process. [Circular Economy Statement Guidance | GLA \(london.gov.uk\)](#)
- Wales sustainable procurement. [Wales procurement policy statement \[HTML\]](#) | GOV.WALES Policy supports Circular Economy, through collaborative, place-based procurement activity which nurtures resilient local supply chains.
- Green Construction Board (2020) Zero Avoidable Waste in Construction – how best to interpret it [here](#)