



| The journey towards a circular economy

Waikato Regional Waste Prevention
Action Plan 2020-2025

In nature, nothing is wasted. Resources are cycled in endless loops. In the circular economy model, smaller geographic and activity based 'loops' are more resource efficient and profitable. In this context, the most effective strategy for the Waikato region is to appropriately scale and initiate multiple 'loops' at local and regional level, while also linking into national and global scales.



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Executive summary

Waikato Regional Waste Prevention Action Plan 2020-2025 (Waikato Waste Prevention Plan) builds on the earlier *2012-2018 Waikato Waste Strategies* and sets out a fresh approach for the future. Guided by previous strategies, Waikato Regional Council's involvement in waste issues has encouraged innovative and progressive collection, diversion and education activities; supported local territorial authority (TA) actions to minimise waste; and built valuable relationships within and outside the waste and resource recovery industries.

While focus was previously on minimising waste, our aim now is to prevent waste all together through better design. What is not produced in the first instance does not have to be disposed of. This requires reimagining our system to favour products that reduce consumption through increased durability and reusability as well as items that can be repaired. The materials we use in our daily lives and for our economy are finite resources. Everyone involved in a product lifecycle must work together to move away from our current linear take-use-dispose economic thinking and to implement circular economy principles where end-of-life products go back into technical or biological cycles.

The circular economy model has the potential to boost the Waikato region by protecting businesses against scarcity of resources, volatile prices, and supply chains while helping to create new business opportunities. This is especially relevant as we face uncertainty from the implications of climate instability and world pandemic. In the circular economy model, smaller geographic and activity based 'loops' are more resource efficient and profitable. In this context, the most effective strategy for the Waikato region is to appropriately scale and initiate multiple 'loops' at local and regional level, while also linking into national and global scales. This can lead to the creation of local jobs and opportunities, while at the same time save energy and help reduce and mitigate the harm from climate change and biodiversity loss, and air, soil and water pollution.

Transition to a circular economy will be an iterative process that requires enduring relationships. This is achievable through strong partnerships with central government, local authorities, iwi and hapū, businesses and community organisations.



Objectives of a circular economy

Our purpose

Working together for a Waikato region that has a healthy environment, strong economy and vibrant communities.

Why waste prevention

Regional councils have a legislative mandate to achieve integrated management of the region's natural and physical resources and to regulate discharge of contaminants into the environment. The waste we generate and how we manage that waste influences our natural resources and the wellbeing of our region. Preventing waste will reduce discharge of contaminants into the environment and enable regional council to fulfil our mandates.

What we are doing

We are supporting a transition to a circular economy to achieve the balance between local and national 'loops' where waste can be designed out of our system, products and materials are kept in use, natural systems are regenerated, and social and cultural equity is increased.

How we'll do it

The Waikato Waste Prevention Plan communicates our strategic thinking, identifies existing priority workstreams and outlines focus areas that enable us to embark on new projects.

Key relationships

- Central government.
- Territorial authorities.
- Community and community organisations working toward waste prevention and minimisation.
- Industry, business, manufacturers and retailers.
- Iwi and hapū.
- Local government outside the Waikato region, especially that border the region.
- Educational institutions.

Priority work programmes

These long-term projects or programmes have already been initiated and are intended to continue for the duration of this strategy:

- Support community-based resource recovery through the Community Enterprise Peer Support programme
- Support the work of Para Kore Marae, Incorporated
- Support the safe disposal of hazardous waste through AgRecovery and/or hazardous waste collection events
- Coordinate cross boundary work, including investigate developing a resource recovery network
- Facilitate joint work, communication, education and networking through the TA Waste Liaison Group
- Conduct research and action-based projects that accelerate the circular economy

(see page 14 for more information)



Remember your reusables sign outside Raglan Wharf, created by the community based project Plastic Free Raglan

Summary of focus areas

In addition to priority work programmes, these focus areas will guide our work and allow further opportunities to be identified.

Focus area	Actions
<p>FOCUS AREA 1: Collaboration and partnerships</p> <p>Relationships are at the core of success. In order to develop the systems needed for a restorative and regenerative circular economy model, Waikato Regional Council will work as an enabler through developing strong relationships.</p>	Action area 1.1: Work with local government to provide partnership opportunities, additional support, research cross regional collaboration and education on waste issues and circular economy innovation.
	Action area 1.2: Work with iwi, hapū and marae to strengthen relationships and enable collective initiatives that expand iwi capability to participate in the circular economy.
	Action area 1.3: Work in partnership with community organisations already doing waste prevention work (such as Xtreme Zero Waste, Para Kore Marae and Enviroschools).
	Action area 1.4: Empower community to run their own waste prevention projects and enabling community engagement such as citizen science opportunities.
	Action area 1.5: Work alongside industry and business to support circular economy projects.
<p>FOCUS AREA 2: Foster research and innovation</p> <p>Looking both back at what has been done before and forward at how we can shape our future, Waikato Regional Council will initiate, collaborate and support research and data collection to make informed decisions.</p>	Action area 2.1: Support improved data collection related to waste tonnages, movements and composition.
	Action area 2.2: Undertake research when key trends, barriers, concerns and opportunities are identified.
<p>FOCUS AREA 3: Advocacy and legislation</p> <p>Through our roles in regional coordination and in research we can identify legislation that would enable circular economy and waste prevention. Waikato Regional Council will instigate discussion and provide a unified voice back to central government on waste issues and transition to a circular economy.</p>	Action area 3.1: Engagement with central government to encourage appropriate regulation to support the circular economy.
	Action area 3.2: Work collaboratively to clearly communicate the need for legislation and regulation for regulatory instruments to facilitate the circular economy.
<p>FOCUS AREA 4: Waste prevention and safe disposal of waste</p> <p>Waste that has not been designed out of our current system, legacy or unavoidable waste (such as in the event of a disaster) requires appropriate pathways. Waikato Regional Council will enable waste prevention, as well proper and safe disposal of waste.</p>	Action area 4.1: Where product stewardship is not in place, partner with others on hazardous waste services such as for Household Hazardous Waste, Agricultural Chemicals and E-waste.
	Action 4.2: Support and coordinate safe disposal of unavoidable waste, such as disaster waste or legacy landfill waste.

Guiding Principles

Ōhanga āmiomio The circular economy

In nature, nothing is wasted. Resources are cycled in endless loops.

Waste is not the product of one industry. Instead, all industries and people produce waste. The circular economy model aims to prevent waste and pollution in the first instance, through well-designed products and systems that ensure resources remain in use for as long as possible. This is an alternative to our current linear economy where resources are extracted, made into something, used and disposed of. While there are clear benefits for waste reduction from a circular economy, the circular economy should bring multiple benefits including gains for reducing climate emissions.

According to the Ellen McArthur Foundation, the circular model is based on the principles: design out waste and pollution, keep products and materials in use and regenerate natural systems^{1,2}. Te ao Māori encourages us to see things holistically and in connection with everything: the land, environment, communities, and people. Therefore, we have included a social element to the circular economy model. The principles that will guide our work in circular economy are in the diagram above.



Objectives of a circular economy

We recognise these are not new concepts, and different world views contribute to the discussion of circular use, providing equally as valid framework for waste prevention³. The circular economy model has captured imaginations across sectors, so we are using the model as a starting point. We endeavour to incorporate a variety of worldviews as part of the work carried out in this strategy.

See Appendix A for more information.

Xtreme Zero Waste in Raglan divert approximately 178,833kgs of waste from landfill each month.



¹ Ministry for the Environment website, <https://www.mfe.govt.nz/waste/circular-economy>

² The Ellen Macarthur Foundation, <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>

³ Such as Teina Boasa-Dean's reimagining of doughnut economics from a Tūhoe perspective <https://www.projectmoonshot.city/post/an-indigenous-view-on-doughnut-economics-from-new-zealand>

The improved waste hierarchy

In alignment with a circular economy the improved waste hierarchy, proposed through the *Rethinking Plastics in Aotearoa New Zealand* report⁴, prioritises rethinking waste generation in the first place in order to stimulate redesigned products and systems. This presents a shift from the well-worn “3R” hierarchy which has resulted in emphasis on recycling rather than prevention.

National context

We know that nationwide, the amount of material being disposed to landfills is increasing while the amount of resources diverted from landfill (via composting, reuse, recycling or other methods of diversion) is decreasing⁵. This trend is reflected in the Waikato region, where most local territorial authorities have identified an increase in the amount of material going to landfill since 2012⁶. An increase of waste to landfill is due to multiple factors. Cheap consumer goods are readily available without clear indication of environmental impact to the consumer, and few mandatory product stewardship schemes are in place to ensure resources are diverted. The increased transparency about how recycling has been managed overseas has resulted in necessary regulation of recyclables going offshore, affecting an already unstable recycling market that competes with the fluctuating price of new raw materials. Events such as the COVID-19 pandemic have highlighted the instability in the current systems we have in place, as most recyclables went to landfill during the lockdown period of 2020 over health and safety concerns and restricted export markets.

Despite New Zealand’s growing record of waste generation, there is evidence to suggest the way we think about pollution, waste and resource recovery is changing⁷. Councils and community organisations such as the Zero Waste Network and New Zealand Product Stewardship Council have called for manufacturers and producers to bear a heavier responsibility for the pollution they cause (via their products). In accepting this responsibility, manufacturers and producers are encouraged to take action at the stages they hold influence over-design, manufacture and sale.

International agreements

New Zealand is a signatory to a number of international environmental agreements:

- The Paris Agreement was adopted by parties under the United Nations Framework Convention on Climate Change (UNFCCC) on 12 December 2015. It commits all countries to take action on climate change.
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal aims to reduce the amount of waste produced by signatories and regulates the international traffic in hazardous wastes.
- The Stockholm convention focuses on banning the production and use of certain persistent organic pollutants and undertaking the environmentally sound management of persistent organic pollutant wastes such as obsolete chemicals and contaminated soils.
- The Minamata Convention on Mercury has specific relevance to mercury waste from sources such as lighting.

Bicycles at Seagull Centre in Thames being sorted for resale or repurposing.



⁴ <https://www.pmcsa.ac.nz/topics/rethinking-plastics/>

⁵ Reducing waste: a more effective landfill levy Ministry for the Environment Consultation Document

⁶ Information provided in the Waste Management and Minimisation Plans of Hamilton City Council, Hauraki District Council, Matamata-Piako District Council, Otorohanga District Council, Rotorua District Council, South Waikato District Council, Taupo District Council, Thames-Coromandel District Council, Waikato District Council, Waipa District Council and Waitomo District Council.

⁷ <https://www.beehive.govt.nz/release/time-turnaround-nz-s-rubbish-record-waste>



The waste hierarchy

Central government activities

At a national level, the New Zealand Government is making policy changes to address pollution and waste issues. As well as introducing a ban on microplastics in 2018 and plastic bags in 2019, the Ministry for the Environment's work programme on waste focuses on the following⁸:

- A plan to phase out low value and hard to recycle plastic packaging.
- Proposed priority product categories for regulated product stewardship schemes for:
 - packaging, including beverage containers and plastic packaging
 - tyres
 - electrical and electronic products (e-waste), starting with lithium-ion
 - batteries
 - refrigerants and other synthetic greenhouse gases
 - agrichemicals and their containers and other farm plastics.
- The development of a beverage container return scheme for New Zealand.
- The increase and expansion of the national landfill levy scheme.
- An investigation on how to improve kerbside and commercial recycling, reduce contamination of recyclables so more materials can be recovered, and increase onshore processing of plastics and other materials.
- Analysing where investment in innovation and resource recovery infrastructure is most needed to support New Zealand's transition to a circular economy approach.
- Developing a national circular economy strategy, starting with priority sectors where the greatest benefits can be gained from transitioning to a circular economy approach.

The Waikato regional situation

The Waikato region has five disposal sites associated with industrial operations and five municipal solid waste landfills. Most of our open landfills are quite small, except for Hampton Downs, which receives around 600,000 tonnes of waste per year, and Tirohia which receives 120,000 tonnes of waste per year. We also have more than 13 consented cleanfills of significant size. Two of these are what would be referred to as managed fill sites (Class 3). The rest are controlled fill sites (Class 4). At the time of writing, two consent applications were being processed by Waikato Regional Council for two new managed fill sites (Class 3) of quite significant size. Over 40 other landfill sites have closed as they could not meet modern environmental standards.

The council recognises that disposal to landfills is increasing and wastes from areas outside our region (such as from Auckland, Tauranga and as far as Gisborne) are being brought into the Waikato region for disposal. This means our environmental resources as well as our ratepayers may be disproportionately affected by the potential long term negative effects of landfilling.

In 2017, estimated waste disposed of to landfill for the Waikato region was 220,741 tonnes, which is 552 kg per capita. An estimated additional 300,000 tonnes of waste were being transported into the region from Auckland, Bay of Plenty and Gisborne (unpublished Regional Waste Stocktake, 2018). Construction and demolition (27.5%) and putrescible waste (food and green waste, 25.9%) are the two largest categories of waste going to landfill⁹.



⁸ <https://www.mfe.govt.nz/waste/waste-and-government>

⁹ 4546_Waste_Strategy_web_2015.pdf (waikatoregion.govt.nz)

How waste and recycling moves through the regions.

By 2022, Matamata-Piako, Hauraki, and Waikato district councils have a goal in their Waste Minimisation and Management Plans to reduce residential per capita waste to between 316kg and 351kg per year, which would be a reduction of around half of the current amount. Thames-Coromandel District Council has a goal to reduce to 599kg and Waipā to 450kg. Other Waikato councils have opted for a percentage reduction over a period of years.

Auckland has a goal to reduce total regional waste to 582kg per capita and residential to 88kg by 2028.

Regional council responsibilities

Regional councils have a legislative mandate to achieve integrated management of the region's natural and physical resources and to regulate discharge of contaminants into the environment. They are also responsible for investigating pollution incidents – prosecuting and enforcing clean up where appropriate. The waste we generate and how we manage that waste has an influence on our natural resources. Preventing waste will reduce discharge of contaminants into the environment and enable regional council to fulfil these mandates.

Under the Local Government Act 2002, a local authority (regional council or territorial authority) must have particular regard to the contribution that solid waste collection and disposal makes to its communities.

Regional councils also have responsibilities under the Resource Management Act 1991 to:

- achieve integrated management of the region's natural and physical resources
- regulate discharge of contaminants into the environment
- investigate land for the purposes of identifying and monitoring contaminated land
- investigate pollution incidents – prosecuting and enforcing clean up where appropriate.

There has been longstanding Regional Council involvement in the provision of household hazardous waste collections and agricultural chemical collections – both areas where territorial authorities do not have a specific legislative obligation.

Nurdles (plastic pellets) collected on Whangamata beach.



Waikato Regional Council

The Waikato Waste Prevention Plan aligns with Waikato regional council's 10-year strategy, Waikato Regional Policy Statement and Waikato Wellbeing Project.

A main driver for Waikato Regional Council involvement in waste is provided by the Waikato Regional Policy Statement¹⁰ which states:

6.5.7 Waste minimisation

Waikato Regional Council will:

- (a) work with territorial authorities, industry and community groups to facilitate and encourage initiatives for the minimisation and reuse of waste; and
- (b) facilitate the collation and dissemination of regional waste data to support the identification of waste management priorities and trends.

The Waikato Regional Policy Statement is discussed in more detail in Appendix B.

Under the Waikato Wellbeing Project¹¹, goals for achieving a more environmentally sustainable, prosperous and inclusive Waikato region by 2030 are being set using the Sustainable Development Goals framework.

The most relevant SDG goals are:

11 - Sustainable cities and communities

12 - Responsible consumption and production

13 - Climate action.

As part of the Waikato Wellbeing Project, under SDG 12 Responsible consumption and production, the goal of reducing waste to landfill in the Waikato region by 50% has been set.

Waikato Regional Council 10-year strategy ¹² strategic priorities include:	Relevance
Water Wai Biodiversity and biosecurity Rerenga rauropi, tiakitanga taiao Coastal and marine Takutai moana	The types of waste we create and how it is disposed of influences the health of our fresh water, coastal areas and biodiversity. For example, the way plastics interact with the environment can pose risks to ecosystem, human and animal health ¹³ .
Climate	We can improve our climate impact when we reduce waste. For example, in New Zealand 122,547 tonnes of avoidable food waste goes to landfill every year. The emissions created in producing and disposing of this food equates to 325,975 tonnes of CO2 emissions ¹⁴ .
Sustainable Infrastructure	Our natural resources will be better utilised when infrastructure supports transition to the circular economy. From a waste perspective, local solutions with a national strategic lens like a network of community-based resource recovery centres could contribute to a healthier environment and communities.

¹⁰ <https://www.waikatoregion.govt.nz/council/policy-and-plans/regional-policy-statement/>

¹¹ <https://www.welenergytrust.co.nz/wp-content/uploads/2019/07/Waikato-Wellbeing-Project-Presentation-180719.pdf>

¹² <https://www.waikatoregion.govt.nz/council/about-us/wrc-strategy/>

¹³ <https://www.esr.cri.nz/our-research/research-projects/aotearoa-impacts-and-mitigation-of-microplastics-aim/>

¹⁴ <https://lovefoodhatewaste.co.nz/heres-one-easy-way-to-tackle-climate-change-that-you-may-not-know-about/>

Integrating with territorial authorities

While the collection and management of end-of-life household material is often viewed as a function of territorial authorities, the principles of the Local Government Act 2002 state a local authority, including regional councils, should actively seek to collaborate and co-operate with other local authorities and bodies to improve the effectiveness and efficiency with which it achieves its identified priorities and desired outcomes.

Strong and enduring partnerships between Waikato councils, including the regional council, supports the effectiveness and efficiency of services to communities in the region. This includes supporting the goals and objectives identified by territorial authorities, and set out in the *Local Government Waste Manifesto 2020 Update*¹⁵, produced by the national Territorial Authority (TA) Officers Forum¹⁶.

Supporting community action

The Waikato community sector has been leading efforts to introduce innovative waste avoidance and minimisation activities for the past 20 years. Waikato Regional Council acknowledges the work of organisations such as Para Kore Marae Incorporated, Seagull Centre, Xtreme Zero Waste and the South Waikato Achievement Trust in contributing towards changing the consumption and consumerism that drives waste generation, and providing community led action including:

- providing advice about the journey to zero waste
- compost centres turning food, green waste, problem plants and compostable packaging into compost for local food production, creating closed loops and circular economies
- community resource centres for materials and value-added products
- employment hubs
- innovation hubs.

Working in partnership with the community sector, and supporting them to continue their work, is a key part of the circular economy. Investing in community resource centres, employment hubs and innovation hubs helps generate employment while reducing waste to landfill, and using social procurement models to deliver key actions such as behaviour change and public education provides security of funding to community organisations while delivering key actions from The Waikato Waste Prevention Plan.

Processing E-Waste for recycling at the South Waikato achievement Trust.



¹⁵ <http://www.wasteminz.org.nz/wp-content/uploads/2020/07/Local-Government-Waste-Manifesto-2020.pdf>

¹⁶ The Territorial Authority Officers Forum is a sector group of the private sector industry representative body WasteMinz. The TA Forum provides an opportunity for staff from Territorial Authorities to share information and cooperate nationwide

Supporting Māori community action

Waikato Regional Council is committed to growing its partnership with iwi Māori through considered collaborative engagement as befitting a true partner. We can do this by seeking ways to embrace te ao Māori perspectives and culture to deliver benefits to iwi Māori and the community. Working in partnership with iwi, and organisations that support waste minimisation, will enhance our ability to improve environmental and social wellbeing while transitioning to a circular economy.



Bridget, Ngatiriti, Harina and Claudine volunteering to reduce waste at the Waikato Tainui Games for Para Kore Marae Inc.

Waikato Regional Waste Prevention Action Plan 2020-2025:

Priority work programmes

These long-term projects or programmes have already been initiated and are intended to continue for the duration of this strategy.

Facilitate joint work, communication, education and networking through the TA Waste Liaison Group

Established in 1992, the purpose of the Waikato & Bay of Plenty Waste Liaison Group (the TA Waste Liaison Group) was originally to provide a forum for local government from the Waikato and Bay of Plenty regions to come together. Since being established, the TA Waste Liaison Group has been expanded to include councils from Gisborne, Ruapehu, Taranaki, New Plymouth and South Taranaki. The primary focus of the group is to discuss shared objectives coordinate activities between councils and provide recommendations that reflect the collective agreement of the TA Waste Liaison Group regarding significant waste minimisation, management and recycling issues. WRC will continue to coordinate this group in partnership with group members.

Support the work of Para Kore Marae, Incorporated

Waikato Regional Council initiated Para Kore in 2008 and what started out as three pilot marae, now entails more than 540 marae, kura, kōhanga and organisations nationwide working toward zero waste. Para Kore's vision is Oranga Taiao, Oranga Marae, Oranga Whānau. The purpose of the organisation is to educate and advocate from a Māori worldview perspective for a world without waste. WRC will continue to work with Para Kore to support this Kaupapa.

Support community-based resource recovery through the Community Enterprise Peer Support programme

Reinvigorated in 2018, this programme aims to building the capacity of our resource recovery sector. Using the expertise we already have in the region, such as through mentorship from Xtreme Zero Waste (Raglan) and the Seagull Centre (Thames) and drawing on the skills of the Zero Waste Network, this programme supports community, social enterprise and territorial authorities.

Coordinate cross boundary work, including investigate developing a resource recovery network

WRC has coordinated several cross-boundary initiatives, working with our partners in and out of the region. There is strong interest among community and local government to

establish a network of resource recovery centres across the region and identify areas where infrastructure can be shared across boundaries. WRC will continue to be an enabler and “join the dots”.

Support the safe disposal of hazardous waste through AgRecovery

Agrecovery, a not-for-profit charitable Trust, runs a product stewardship scheme for agricultural chemicals and associated containers. To avoid people disengaging from the AgRecovery scheme and disposing of chemicals inappropriately, WRC has offset the disposal cost of any old, unidentifiable or chemicals from non-supporting companies that could attract a charge for the user. Product stewardship may change the nature of this relationship, however we will seek to continue to support the agricultural industry to redesign, reuse and safely dispose of waste.

Conduct research and action-based projects that accelerate the circular economy

WRC has initiated a research project looking into how local government can engage in circular economy. From this research, a number of case studies and pilots will be suggested to be worked on cross organisationally with the view of developing a common understanding of circular economy practice.



The Goldmine Shop in Coromandel Town diverts waste from landfill through resale of usable goods.

Focus areas

In addition to already established work programmes, WRC will look for opportunities through the following four key focus areas

FOCUS AREA 1: Collaboration and partnerships

Relationships are at the core of success. To develop the systems needed for a restorative and regenerative circular economy model, Waikato Regional Council will work as an enabler through developing strong relationships.

Action area 1.1: Work with local government to provide partnership opportunities, additional support, research cross regional collaboration and education on waste issues and circular economy innovation.

Waikato Regional Council is in regular communication with both the local authorities of the Waikato region and other regional authorities. This allows for co-ordination and efficiency of operations and provides a way to share experiences about best implementation practices and solutions to common problems.

As well as research as set out in Action area 2.2, local government and partner organisations will be enabled to investigate and undertake projects to support the development of a circular economy in the Waikato region. This may include application to MfE's Waste Minimisation Fund.

Waikato Regional Council should ensure the availability of support and encouragement for all priority stakeholders, including local government. This could include cross regional collaboration, education and support, such as navigating the Resource Management Act consenting process.

See Appendix C for more information.

Action area 1.2 Work with iwi, hapū and marae to strengthen relationships and enable collective initiatives that expand iwi capability to participate in the circular economy.

The development of the circular economy in the Waikato region provides opportunities for collective initiatives that expand iwi capability, provide iwi or marae-based business opportunities and facilitate zero waste education from a te ao Māori world view. Future initiatives will aim to work closely with iwi, hapū and marae¹⁷ to strengthen existing relationships and foster further innovation.

Action area 1.3 Work in partnership with community organisations already doing waste prevention work (such as Xtreme Zero Waste, Para Kore Marae and Enviroschools).

Connections and partnerships with non-government organisations in business and the community fosters innovation and strengthens the loops of the regional circular economy.

Action area 1.4 Empower community to run their own waste prevention projects and enabling community engagement such as citizen science opportunities.

Community should be enabled to run their own projects relevant to their special places and to address local issues. Waikato Regional Council will help break down perceptual and resourcing barriers for community to help transition to a circular economy. This could be by acting as a connector for productive networking, supporting with education and mentorship or assisting with the consenting process. Navigating consent processes under the Resource Management Act 1991 and regional planning rules might be complicated for community and local authorities. Consents for waste minimisation projects may require applications to both regional councils and to territorial authorities, and for those without a planning or resource consent background identifying whether consents are even required may be only the first challenge.

Action area 1.5 Work alongside industry and business to support circular economy projects.

Traditionally, under the make-use-dispose model, the focus has been on the 'dispose' part of a product's life. Disposal was 'managed' – with collection and disposal of household materials either by simply transporting it to landfill with minimal recovery of useful materials, or (more recently) 'minimised' – with an additional focus on recovery, primarily for recycling. In moving to a circular economy model, the focus needs to be widened to include all stages of the product life cycle; and all stakeholders involved in each stage. While some individuals or businesses provide leadership in the change to the circular economy, others may require support or intervention by Waikato Regional Council.

See Appendix D for more information.

¹⁷ Initiatives will be in alignment with the Waikato Regional Council Māori Engagement Framework He Ritenga Mahitahi

FOCUS AREA 2: Fostering research and innovation

Looking both back at what has been done before and forward at how we can shape our future, Waikato Regional Council will initiate, collaborate and support research and data collection to make informed decisions.

Action area 2.1 Support improved data collection related to waste volumes, movements and composition.

Obtaining good data on waste tonnages, composition, movements and disposal is a continuing issue for waste minimisation efforts. Nationally, territorial authorities only control around 12 to 20 per cent of the waste generated in their cities or districts²³. Private sector waste operators and waste facility owners – who also own most of the landfills in New Zealand – control the remainder. While central government collects data on waste disposed of to some landfills, these comprise only around 11.6 per cent (41 of the approximately 351) of consented landfills¹⁸.

Without good quality data on waste generation – where it comes from, what it is comprised of and where it goes – it is difficult to make good decisions on how to manage it. We will engage in project that aim to collect good data and address identified challenges

Action area 2.2 Undertake research when key trends, barriers, concerns and opportunities are identified.

Innovation will play a key part in the systemic changes required to rethink our ways of producing and consuming, to transform waste into high value products and enable movement up the waste hierarchy for new products and services. Identifying and researching trends, barriers, concerns and opportunities provides direction and contributes to the competitiveness and modernisation of the Waikato region.

Activities which will help overcome barriers or concerns, or capitalise on opportunities may be identified through the analysis of information, as a result of central government actions, or when this could support Waikato territorial authorities.

FOCUS AREA 3: Advocacy and legislation

Through our roles in regional coordination and in research we can identify legislation that would enable circular economy and waste prevention. Waikato Regional Council will instigate discussion and provide a unified voice back to central government on waste issues and transition to a circular economy.

Action area 3.1: Engage with central government to encourage appropriate regulation to support the circular economy.

A strong and co-operative relationship between central, regional and territorial government is important to ensure

appropriate mechanisms, legislation and regulation are in place to support the circular economy within the Waikato region. While regional and local geographic loops provide greater efficiency and profit, if these are not supported at all levels, outside influences (geographically) can destabilise the system. For example, an effective local scheme to reuse materials in a district may be overwhelmed if large volumes from outside the area are introduced to the loop.

Building strong and trusting relationships with central government organisations, and key individuals within government, will enable Waikato local authorities to effectively communicate areas where regulation or legislation can assist to maximise effective and efficient loops at regional or local levels.

Waikato Regional Council can act as a connector between stakeholders – aware of who is doing what, when and how – and identifying new or emerging opportunities and partners who can participate. This includes awareness across council departments, for both regional council and each local territorial authority.

This role as a central point of connection is invaluable to ensure information flows to and from the many parties involved in the circular economy – from decision makers to those on the ground managing material streams.

Action area 3.2: Work collaboratively to clearly communicate the need for legislation and regulatory instruments to facilitate the circular economy.

Cooperative submissions between the Waikato and Bay of Plenty local authorities will ensure councils of the Waikato region are able to communicate important information, concerns and ideas to those who can enact the changes needed to transition to the circular economy.

In alignment with the *Local Government Waste Manifesto 2020*²⁵ we will advocate for the:

- introduction of a container deposit scheme for plastic, aluminium and glass
- expansion and increase the waste levy to the international best practice amount of \$140 per tonne
- implementation of mandatory co-designed product stewardship schemes for key products
- standardisation of household rubbish and recycling collection systems
- mandated reuse or recycling of packaging used and made in New Zealand.
- In addition, we will communication of the benefits of regional council involvement in waste issues highlights the need for greater clarity in the legislative mandate for regional councils.

¹⁸ <http://www.wasteminz.org.nz/wp-content/uploads/2020/07/Local-Government-Waste-Manifesto-2020.pdf>

FOCUS AREA 4: Promote waste prevention and safe disposal of waste

Waste that has not been designed out of our current system, legacy or unavoidable waste (such as in the event of a disaster) requires appropriate pathways. Waikato Regional Council will enable waste prevention, as well proper and safe disposal of waste.

Action area 4.1 Where product stewardship is not in place, partner with others on hazardous waste services such as for household hazardous waste, agricultural chemicals and e-waste.

Where product stewardship schemes are in place, local authority support for these is important. However, where such schemes are not yet established, regional council services should be considered, in partnership with community resource centres or the private sector as appropriate. In the past such services have included:

- agricultural chemical collections for the rural sector
- collection events for household hazardous waste
- drop-off services at council funded locations or via community or private sector facilities
- e-waste collection events have been sporadically facilitated by Waikato Regional Council in conjunction with local territorial authorities, private sector and community partners.

Action 4.2 Support and coordinate safe disposal of unavoidable waste such as for disaster waste or legacy landfill waste

Some legacy or disaster waste is unavoidable and impossible to prevent. In these instances, Waikato Regional Council has a part to play in the safe handling and disposal of these wastes.



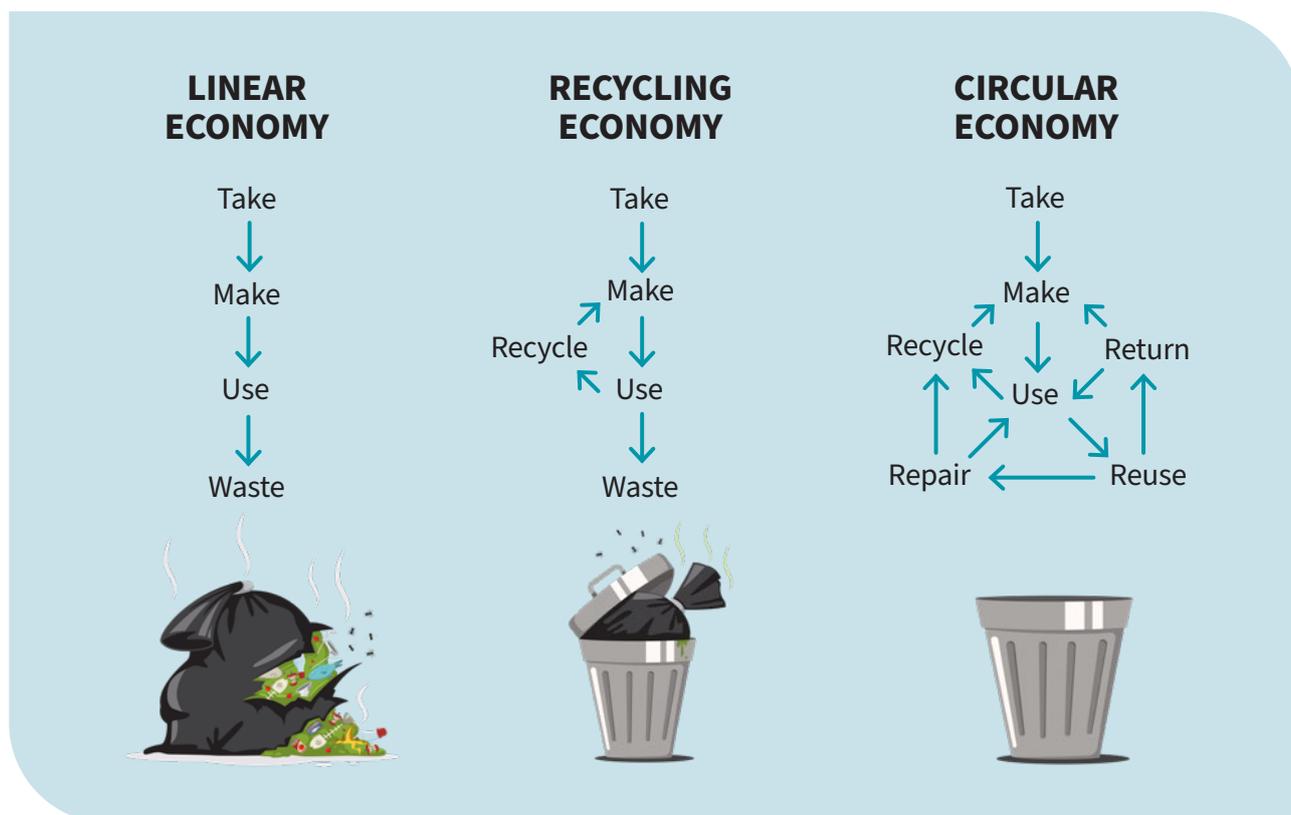
Appendix A: Alternative economy principles

There are a number of models from different world views which lead us away from a linear economy to the circular economy¹⁹

Consumption happens only in biological cycles, where food and biologically-based materials (such as cotton or wood) are designed to feed back into the system through processes like composting. These cycles regenerate living systems, such as soil, which provide renewable resources for the economy.

Technical cycles recover and restore products, components and materials through strategies like reuse, repair, remanufacture or (in the last resort) recycling.

Circular economy approaches 'design out' waste and typically involve innovation throughout the value chain. Products can be redesigned to be used longer, repaired, upgraded, remanufactured or eventually recycled. Production processes can be based more on the reusability of products and raw materials, and the restorative capacity of natural resources, while innovative business models can create a new relationship between companies and consumers²⁰.



Doughnut model

The doughnut model was developed by Kate Raworth²¹. This is a circular economy model where the inside ring of the doughnut outlines the minimum requirements – the “social foundation” – for a good life, including income, work, health, social networks and political participation. The outside ring signifies the ecological limits of the planet, such as climate change, ozone layer depletion and a decline in biodiversity. In between these layers represents “a thriving city” where everyone’s needs, and the planet’s, are being met. Teina Boasa-Dean has reimaged the doughnut economy model from a Tūhoe Māori perspective, with the environment as its foundation, and social elements on the outer ring²².

¹⁹ From The Ellen MacArthur Foundation: <https://www.ellenmacarthurfoundation.org/circular-economy/infographic>

²⁰ *Towards a circular economy: business rationale for an accelerated transition*; Ellen MacArthur Foundation

²¹ <https://www.kateraworth.com/doughnut/>

²² <https://www.projectmoonshot.city/post/an-indigenous-view-on-doughnut-economics-from-new-zealand>

Appendix B: Waikato Regional Policy Statement (RPS)

Waikato Regional Council is obliged to prepare a regional policy statement (RPS). The RPS provides an overview of the resource management issues of the region and policies and methods to achieve integrated management of the natural and physical resources.

The RPS provides the primary driver for Waikato Regional Council's involvement in waste minimisation activities, as set out in the objectives and policies of the RPS.

Objective 3.9 Relationship of tangata whenua with the environment

The relationship of tangata whenua with the environment is recognised and provided for, including:

- (a) the use and enjoyment of natural and physical resources in accordance with tikanga Māori, including mātauranga Māori; and
- (b) the role of tangata whenua as kaitiaki.

Objective 3.10 Sustainable and efficient use of resources

Use and development of natural and physical resources, excluding minerals, occurs in a way and at a rate that is sustainable, and where the use and development of all natural and physical resources is efficient and minimises the generation of waste.

Policy 6.5 Energy demand management

Development should minimise transport, energy demand and waste production, encourage beneficial re-use of waste materials, and promote the efficient use of energy.

6.5.7 Waste minimisation

Waikato Regional Council will:

- (a) work with territorial authorities, industry and community groups to facilitate and encourage initiatives for the minimisation and reuse of waste; and
- (b) facilitate the collation and dissemination of regional waste data to support the identification of waste management priorities and trends.

6.9.2 Reporting on development and infrastructure trends

During its five-yearly policy effectiveness reporting (Section 35 Resource Management Act),

Waikato Regional Council will, in consultation with territorial authorities, infrastructure providers and tangata whenua, report on development and infrastructure trends and pressures (including ecological footprint, urban water use, energy use, waste generation).

6A Development principles: General development principles

New development should:

- s) encourage waste minimisation and efficient use of resources (such as through resource-efficient design and construction methods)

Appendix C: Local authority activities

Local authorities meet regularly at national, regional and sub-regional levels to share information and identify joint initiatives to work on. These groups include:

- **Nationally:** Waikato Regional Council representatives are active in the Regional Contaminated Land and Waste Special Interest Group (CL&W SIG) special interest group. Reporting to the CEO Forum (a national forum of CEO's of regional councils) the CL&W SIG identifies issues in waste and contaminated land which are raised as national or regional trends potentially requiring co-ordinated action. Working on projects collaboratively with other regional councils, and in partnership with community and business organisations across regions, builds resilience, adds robustness to projects and amplifies project outcomes. Examples include cross-regional partnerships to build community resource centres, and deliver long term sustainable behaviour change programmes centred on community resource centres, employment hubs or innovation hubs.
- **Regionally:** The Waikato and Bay of Plenty Waste Officers Liaison Group meets roughly four times each year, facilitated by Waikato and Bay of Plenty regional councils. This provides a valuable opportunity for local territorial authorities and invited stakeholders to network and discuss key issues. Many innovative projects have sprung from this facilitated group and continuation is a key element for delivering on the Waikato Waste Prevention Plan. Examples include research into rural waste in collaboration with Bay of Plenty and Canterbury regional councils; an investigation into disaster waste management (including a template process for territorial authorities); and jointly developing templates for activities such as waste assessments, plans and bylaws. This group will continue to take a leading role in the delivery of the Waikato Waste Prevention Plan.
- **Sub-regionally:** In addition to the liaison group, the Sub Regional Waste Action Group (SWAG) – comprising of officers from Waikato and Waipā districts and Hamilton city councils, as well as Waikato Regional Council – provides opportunities for collaboration at a sub-regional level.

Sub-regional collaboration provides opportunities to work together for support and to achieve service efficiencies among adjoining local territorial authorities. Examples include co-ordination of public waste minimisation messaging, support for sub-regional services, and information sharing on best practise for waste services and behaviour change initiative.

Appendix D: Prevailing stakeholder responses to each stage of the product lifecycle

Table 1 Prevailing stakeholder responses to each stage in the product lifecycle

Stakeholder	Stage	Design/ manufacture	Retail	Consumers/ households	Re-use/repair/ recycling	Processing/ recycling sector
Designers/ manufacturers		Some redesign of products occurring	Some response to retailer demands	Some response to consumer demands	Some recognition of issues	Some recognition of issues
Retailers/ wholesalers		Starting to demand design changes	Starting to provide product options	Some response to consumer demands	Some recognition of issues	Some recognition of issues
Consumers		Demand for new product choices and producer responsibility	Demand for new product choices and producer responsibility	Moderate behaviour change	Moderate uptake of reuse, repair and recycling	Some recognition of issues
Recycling collectors		Communicating issues	Communicating issues, service provision	Service provision	Responding to issues	Responding to issues
Recycling processors		Communicating issues	Communicating issues	Communicating issues	Communicating issues	Responding to issues. Developing infrastructure.
Central government		Minimal regulation/ considering regulation	Minimal regulation/ considering regulation	Supporting local government to respond	Recognising issues at end of life	Recognising issues at end of life
Regional council		Communicating issues. Partnerships for education/R&D/ response	Communicating issues. Partnerships for education/R&D/ response	Communicating issues, partnerships with TAs/community	Partnerships with private sector/ community	Support improvements to processing capability
Territorial authorities		Communicating issues	Communicating issues	Service provision/ education partnerships with private sector/ community	Recognising issues at end of life, service provision, partnerships with private sector/ community	Recognising and responding to issues at end of life, supporting development of infrastructure
Community/zero waste sector		Communicating issues	Communicating issues.	Education and services	Education/ service provision	Recognising and responding to issues at end of life.
Tertiary education sector		Recognising issues in design/ manufacture	Recognising issues in design/ manufacture	Recognising consumer concerns	Recognising issues at end of life	Recognising issues at end of life
Professional bodies & industry groups		Variable recognition of issues in design/ manufacture	Variable recognition of issues in design/ manufacture	Starting to recognise consumer concerns	Variable recognition of issues at end of life	Variable recognition of issues at end of life

Acknowledgements

Nga mihi nui ki a koutou katoa. Thank you to all those involved in the creation of this strategic action plan, including:

Zenzic Consulting conducted consultation with stakeholders and provided an early framework.

Key people from the following organisations and councils who provided their opinions and views:

Go Eco

Jacqui Forbes (Para Kore Marae Inc)

Rick Brown (Seagull Centre Thames)

Russell Ensor & Gary Olney (South Waikato Achievement Trust)

Waiuku Zero Waste

Rick Thorpe (Xtreme Zero Waste)

Kirsty Quickfall (Hamilton City Council)

Ruth Kreichbaum & Steve de Laborde (Hauraki District Council)

Bob Brown (Rotorua Lakes District Council)

Andrew Pascoe (South Waikato District Council)

Brent Aitkin (Taupō DC),

Tim Senington & Catherine Taylor (Tauranga City Council)

Pat Cronin & Phil Ellis (Waikato District Council)

Sally Fraser (Waipā District Council)

Greg Boyle (Waitomo District Council)

Nigel Clarke (Whakatāne District Council)

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He taiao mauriora

Healthy environment

He ōhanga pakari

Strong economy

He hapori hihiri

Vibrant communities

Updated June 2021
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