

Getting to Zero Waste

Tīkapa Moana Hauraki Gulf Islands
Waste Plan 2018

Amended plan adopted by the Environment and Climate
Change Committee on 8 September 2022 (ECC/2022/79)





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1 Summary of intent

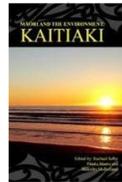
This plan charts a path towards Zero Waste for four islands in the Tikapa Moana - Hauraki Gulf marine area: Aotea Great Barrier, Waiheke, Kawau and Rakino. It also signals forthcoming work on how boaties and other marine users in this area can share disposal costs of the waste they create. As well as reducing waste to landfill, the intention is to significantly reduce the waste that is polluting the gulf. The plan recognises that Zero Waste to 2040 requires joint leadership by both the council and island communities.

This plan sits within the Auckland Waste Management and Minimisation Plan (WMMP) 2018. It identifies how the Auckland-wide vision and strategy will be implemented in the specific context of the Hauraki Gulf islands (HGI).

Hauraki Gulf Island-wide waste goals



Divert more organic (food and garden) waste from landfill and develop systems for on-island handling of organic material



Support mana whenua aspirations relating to waste in the gulf islands



Divert more recyclables from landfill and develop ways to reuse more recyclables locally on islands (e.g glass, paper and card)



Establish community recycle centres (CRCs) on Waiheke and Aotea Great Barrier by 2020



Bring in a range of refuse bin and bag sizes available at different charges for Aotea and Waiheke



Develop a system to ensure marine and boat users pay their share of waste costs



Support community action and innovation to turn waste into resources



Maximise and enhance waste assets in the gulf islands, including the Waiheke Transfer Station and Claris Landfill

2 Tikapa Moana - Hauraki Gulf Island based waste goals

<p>Aotea Great Barrier</p> <ul style="list-style-type: none"> • Everybody composting their food and green waste. • Moving towards zero recyclables in domestic refuse bags. • Establish a Community Recycling Centre (CRC) by 2020. • Claris Landfill improvements, charges and alternatives. • Reduce waste coming on to the island. • Support creative iwi and community action, education and behaviour change. • Reduce commercial and construction and demolition (C&D) waste. • Reduce visitor and boatie waste. • Encourage more on-island use of waste streams. 	<p>Waiheke</p> <ul style="list-style-type: none"> • Community engagement and behaviour change to reduce waste to landfill. • Increase recycling and reuse of materials on Waiheke. • Establish a CRC by 2020. • All green and food waste is composted, using on-island solutions and maximising local economic development opportunities. • Reduce waste coming onto the island. • Reduce commercial and C&D waste to landfill. • Reduce visitor and boatie waste.
<p>Kawau</p> <ul style="list-style-type: none"> • Investigate options for charging for refuse on Kawau and identify the approach. • Develop an agreed approach to inorganic material. • Improve the Sandspit Wharf waste service. • Support community-led composting, waste minimisation and community education on Kawau. 	<p>Rakino</p> <ul style="list-style-type: none"> • Everybody composting their food and green waste. • Divert recyclables from landfill and reduce cross contamination of recyclables. • Develop local uses for cardboard. • Work together to divert reusable inorganic materials from landfill. • Tailored community education and ongoing support for community action and solutions.

3 Purpose

Hauraki Gulf Island communities play an important part in the growing movement in Auckland to approach waste differently. Living on an island fosters self-sufficiency and “number 8 wire” thinking. These island communities are often early adopters and leaders of more sustainable ways of living and are strongly motivated to minimise waste.

Auckland Council’s WMMP2018¹ maps the path to achieving the vision of Zero Waste to landfill for Auckland by 2040. It recognises the unique nature of the HGI and their need for tailored approaches.

This plan documents current activity, captures community aspirations, and identifies goals, and actions. It will be reviewed each time the WMMP is updated.

Appendix One shows how island communities, local boards and mana whenua were engaged in the development of this plan.



Aotea Great Barrier

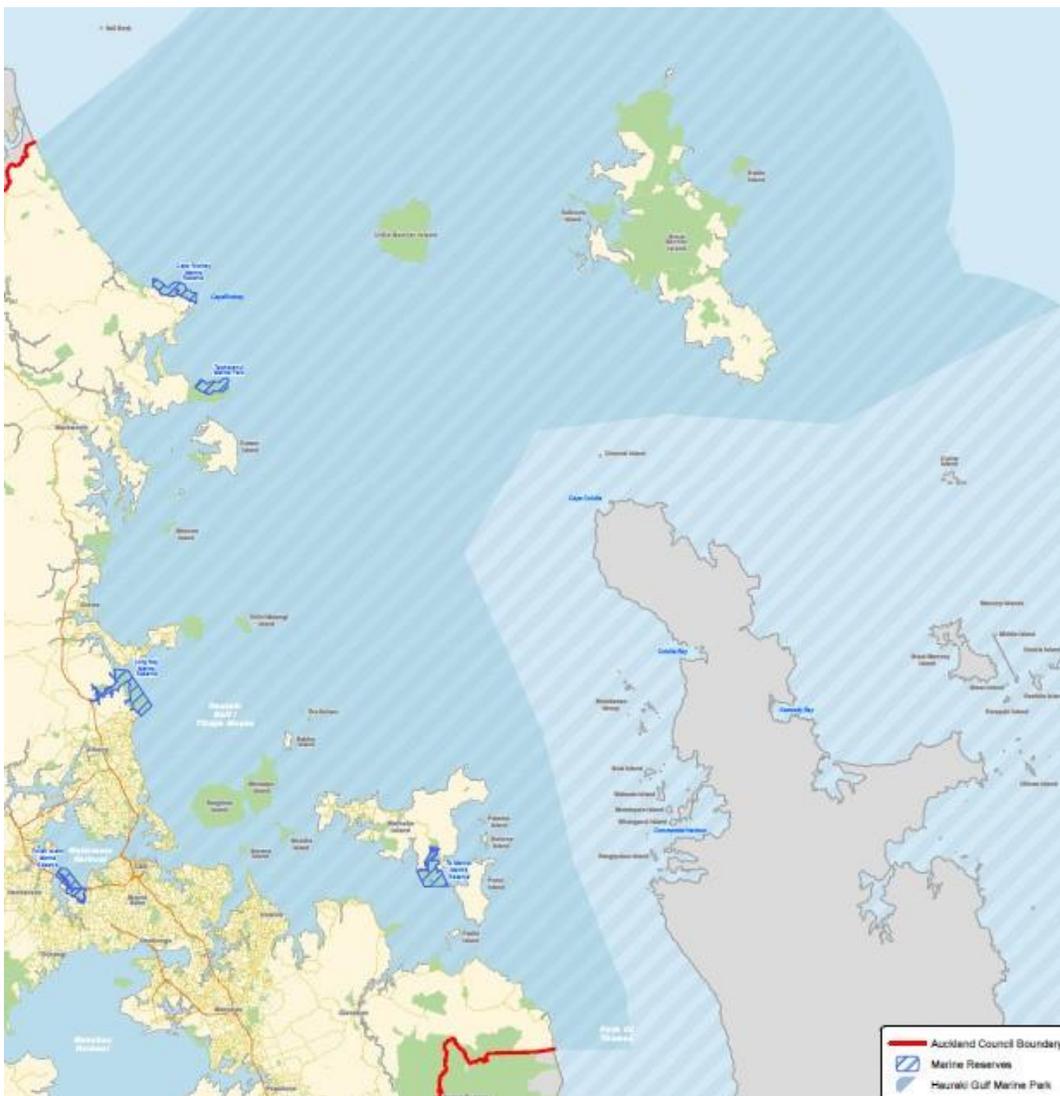
¹ Accessible at <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/docswastemanagementplan/auckland-waste-management-minimisation-plan.pdf>

4 Scope

Area covered

This plan covers the part of the Hauraki Gulf Marine Park that is within the boundary of Auckland Council.

This plan has specific sections for Aotea Great Barrier, Waiheke, Rakino and Kawau, and for marine and boat users. Other islands in the Hauraki Gulf, such as Rangitoto, Tiritiri Matangi, Motukorea (Brown’s) and Hauturu (Little Barrier), are managed by the Department of Conservation (DoC) or are privately owned. The Firth of Thames is within the jurisdiction of the Waikato Regional Council.



Hauraki Gulf Marine Park

5 Content of this plan

This plan outlines regional and waste goals for Aotea Great Barrier, Waiheke, Rakino and Kawau, and specifies actions relating to services. It also identifies mana whenua and community desires and issues relating to waste. It presents the approach in the short-to-medium-term to:

- refuse
- recycling
- food and green waste (organic waste)
- inorganic material such as building demolition material and household items
- waste facilities such as the Waiheke Island Transfer Station
- Claris Landfill on Great Barrier
- waste minimisation education and behaviour change
- supporting community action and innovation.

This plan does not include:

- beach and water clean-ups
- emergency and pollution clean-ups or waste material handling, including hazardous waste, response to storm events, rescue and recovery of adrift boats
- human effluent and other discharges from ferries and vessels. These are covered by Auckland Council's Unitary Plan
- waste and litter services provided in parks and reserves, or as part of road maintenance
- septic tank waste.

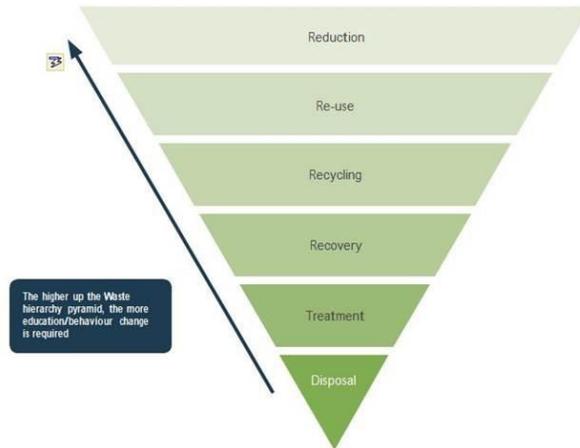
Existing commercial and community waste contracts on Aotea Great Barrier, Waiheke and Rakino will remain in place until they expire, unless the council and the contractor agree otherwise. From 1 July 2018, this plan will guide what is delivered via new contracts for service.

This plan can also inform applications to the council's [Waste Minimisation and Innovation Fund² \(WMIF\)](#) which supports community action and innovation to minimise waste.

² See <http://www.aucklandcouncil.govt.nz/EN/newseventsculture/communityfundingsupport/Pages/findagrants.aspx#383> for information on this fund.

6 Regional waste priorities for Auckland

The Auckland Plan includes the aspirational goal of Zero Waste to landfill by 2040³. Zero Waste involves redesigning resource life cycles so that minimal waste is created, and all products and materials can be reused. The aim is to operate from as high up this internationally recognised waste hierarchy as possible.



The WMMP focuses on the 20 per cent of the waste stream that the council has direct influence over; primarily the domestic kerbside collection service. Current regional priorities are to:

- introduce standardised variable charging for kerbside refuse collection, through rates
- introduce a kerbside organic waste collection of food and green waste in urban areas (and support home composting in other areas)
- establish a regional network of CRCs
- encourage waste reduction at source through informed purchasing and producer responsibility
- support community innovation, action and leadership, in part through provision of the council's WMIF.

The WMMP guides and encourages communities across Auckland to reduce, recycle and reuse as much as possible.

³ The [Auckland Plan](http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/theaucklandplan/Pages/theaucklandplan.aspx), <http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/theaucklandplan/Pages/theaucklandplan.aspx>.

7 Tikapa Moana - Hauraki Gulf islands' waste priorities

The WMMP sets the strategic direction for waste management and minimisation across all of Auckland, including the HGI. Waste services on the islands must support the vision and goals of the region. A top priority for island communities is to remove organic (food and garden) material from waste streams and deal with this material on-island, mainly via composting.

There are eight priority areas for the HGI overall, underpinned by a focus on community engagement, education and behaviour change.



Divert more organic (food and garden) waste from landfill and develop systems for on-island handling of organic material



Divert more recyclables from landfill and develop ways to reuse more recyclables on-island (glass, paper/card, tin, aluminium, etc)



Bring in a range of bin and bag sizes available at different charges for Aotea and Waiheke (see section on funding)



Support mana whenua aspirations relating to waste in the gulf islands



Establish a Community Resource Recovery Park and a CRC on Aotea Great Barrier



Develop a system to ensure that marine and boat users pay their share of waste costs (see section on marine and boat users)



Support community action and innovation to turn waste into resources



Maximise waste assets in the gulf islands, including the Waiheke Island Transfer Station and Claris Landfill

8 Mana whenua

“Tangata whenua ethics and values can provide the framework to explore strategies and techniques to deal with solid waste in the Auckland region, as modern concepts of valuing natural resources, reusing, recycling materials, and care with disposal of residual waste have many synergies with the Tangata Whenua world view” ([Waste Management and Minimisation Plan](#), Auckland Council 2012, p27).

Mana whenua have a role and responsibility to exercise kaitiakitanga⁴ in accordance with their kawa or protocols. This role is to sustain the mauri of the natural environment for current and future generations. To exercise kaitiakitanga, mana whenua have advised that they need to participate in decision-making on waste management and minimisation policies, and be able to design and deliver waste programmes that meet the aspirations of whanau and hapū.

Waste minimisation is noted in iwi management plans. For example, the Hauraki Iwi Environmental Plan 2004 notes that:

"Unsustainable levels of solid waste continue to be generated by communities and businesses in the Hauraki tribal region. Changing people's waste management behaviours to perceiving waste as a resource will be difficult. Landfills and contaminated sites are the by-product of inefficient waste management practices by individuals, households and groups."⁵

As well as including waste management and minimisation in their environmental and kaitiaki roles and responsibilities, Ngāti Rehua Ngātiwai ki Aotea have identified waste minimisation and turning waste into resources as an economic opportunity for their people.

These objectives align with the Zero Waste goals of the WMMP.

Disposal of human ashes in the Hauraki Gulf Tikapa Moana is noted as a particular issue for mana whenua, but is outside the scope of this plan.

Support for mana whenua aspirations

One of the eight HGI goals in this plan is shown below, including how it will be given effect.

⁴ Kaitiakitanga is the exercise of guardianship by the Tangata Whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship (Resource Management Act 1991).

⁵ See *Whaia te Mahere Taiao a Hauraki - Hauraki Iwi Environmental Plan*, 2004, page 12, at http://www.hauraki.iwi.nz/resources/publications_pdf/HMTB%20Env%20Plan%20to%20PDF.pdf.

Support mana whenua aspirations relating to waste in the HGI		
Seek to understand and enable mana whenua aspirations relating to waste in the islands	Engage meaningfully with mana whenua on waste issues in the islands	Identify and progress waste-related opportunities with mana whenua in the islands

Opportunities for mana whenua, iwi and hapū relating to waste will continue to be identified and progressed in the Hauraki Gulf, especially on Aotea Great Barrier and Waiheke.



Para Kore ki Tamaki – Zero Waste Marae

Para Kore ki Tamaki is a Zero Waste programme for marae across Auckland. It was developed by, and is run by, Ngāti Whātua Ōrākei, and is based on the national Para Kore programme. The Para Kore team has supported Piritahi Marae on Waiheke and Kawa Marae on Aotea Great Barrier on their journey towards Zero Waste.

Piritahi Marae, Waiheke

9 Funding

Providing waste services to Aotea Great Barrier, Waiheke, Kawau and Rakino is more expensive than on the mainland due to the islands' isolation and the expense of shipping materials off-island for disposal or recycling⁶.

Since 2010, each rateable property on these islands has been charged a set targeted rate for waste services annually. Kawau rateable properties are not charged a targeted rate as there are no on-island waste collection services⁷.

As the targeted rate does not cover the full cost of providing service to these islands, waste collection services are subsidised through regional rates funding.

The WMMP recommended continued subsidisation of the cost of waste services to the HGI in the short-term – at this stage, until 2025. This gives time for all aspects of waste services to the HGI to be determined. The aim is to reduce the level of subsidy over time by reducing the waste produced on-island and introducing the option of smaller bins at a lower charge. Waiheke, Great Barrier and Rodney Local Boards were closely involved in this process and will continue to make recommendations to the Governing Body as required.

Indicative waste costs for the four islands receiving ratepayer-funded waste services are shown in the table below. These costs are updated from the financial information prepared in 2015 to inform the council's long-term plan discussions.

Indicative costs – 2015/2016	Waiheke Island	Aotea Great Barrier Island	Rakino Island	Kawau Island
Eligible rateable properties	5412	688	114	302
Cost per rateable property for waste services - including GST	\$471	\$1710	\$1638	\$179
Targeted rate for waste services paid by each rateable property	\$242	\$242	\$242	None
Indicative regional rates funding subsidy per rateable property (incl GST)	\$229	\$1468	\$1396	\$179

⁶ Auckland Council Waste Assessment 2011 Appendix F: Issues paper 5: Geographically Remote Areas Waste Management and Resource Recovery.

⁷ The council does, however, provide three Molok bins, located at Sandspit Wharf for Kawau residents to dispose of household refuse and recycling

As agreed in the WMMP 2012 and reinforced in the WMMP 2018, refuse, recycling and inorganic collections across Auckland, including the HGI, are rates-funded. Visitors to Aotea Great Barrier and Waiheke have the option of buying pre-paid refuse bags.

A range of bin sizes available at different charges is being introduced from 2024/2025 to better connect waste generation with the costs of disposal and help to incentivise waste minimisation.

How charging might work for Kawau, as well as for marine and boat users and for visitors to the islands, will be investigated in 2018. Residents and ratepayers will be consulted through the council's annual plan process.

See the [WMMP](#) for more on funding of waste services.

10 Aotea Great Barrier

He aha te mea nui o te motu Aotea. He moana, he whenua, he tangata.

What is the essence of Great Barrier Island?
It is the sea, it is the land, and it is the people.⁸

The Great Barrier Local Board vision is to “create the world’s most liveable island”. Supporting more sustainable living underpins this vision. Since 2015, the board has funded community discussion to develop a shared vision for the island’s environmental future. Waste management and minimisation have featured strongly in these conversations.

Key features of the Aotea Great Barrier community are presented below.

	<p>Around 900 permanent residents (2013 Census) 462 households 44% one-person households 60% public land administered by Department of Conservation</p>
	<p>Mainly European and Māori Ngāti Rehua Ngatiwai ki Aotea is the local iwi 91% European, 18% Maori, 3% Pacific, 1% Asian 17% born overseas</p>
	<p>Older and lower income Median age 54, the oldest in the Auckland region \$30,100 median household income 53% employed, 149 local businesses, three local schools</p>

See the [Great Barrier demographic report card](#)⁹ for more on the island’s community.

People come to the island for a unique way of life and residents live an alternative “off the grid” lifestyle, with local power, water, septic and drainage systems. Community motivation for sustainable living and doing things differently tends to be high.

⁸ [Great Barrier Local Board Plan 2014](#).

⁹ Accessible at <http://stateofauckland.aucklandcouncil.govt.nz/demographic-report-card/great-barrier-local-board-2013/>.

Great Barrier – Waste Stats



Refuse into Claris landfill (tonnes 2015/16)

Kerbside Refuse	224
Commercial Refuse	51
Public Drop Off Points Refuse	97
Port Fitzroy Barge	4
Inorganic and mixed load	265
TOTAL REFUSE	641

Recycling (tonnes 2015/16)

Cardboard	50
Glass	111
Aluminium	2
Tin Cans	2
Plastic	4
Recycling (Mixed)	19
TOTAL RECYCLING	188

Summer barge (tonnes 2015/16)

Recycling (11) Rubbish (4) **TOTAL 15**
(Glass made up 9 tonnes, Plastic 2 tonnes)

Cost of waste services (2015/16)**

Total annual cost is approximately \$850,000, or around \$1700 per rateable property (including GST). Great Barrier ratepayers pay around \$240 of this per property and the rest is subsidised by regional rates funding. Staged reduction of this subsidy is intended.

Support for community action

Council resources community education and behaviour change, local waste minimisation and community led waste action and solutions.

**Financial information for Aotea Great Barrier is updated from information prepared for the council's 2015 Long Term Plan discussions.

Key issues



Reducing the high cost of waste services on the island



Public drop-off rubbish and recycling points being used as dumping sites



Influx of visitor and boatie waste in holiday periods



High levels of food/green waste and recycling going to landfill



Claris landfill is nearing the end of its life



Minimising packaging coming on to the island

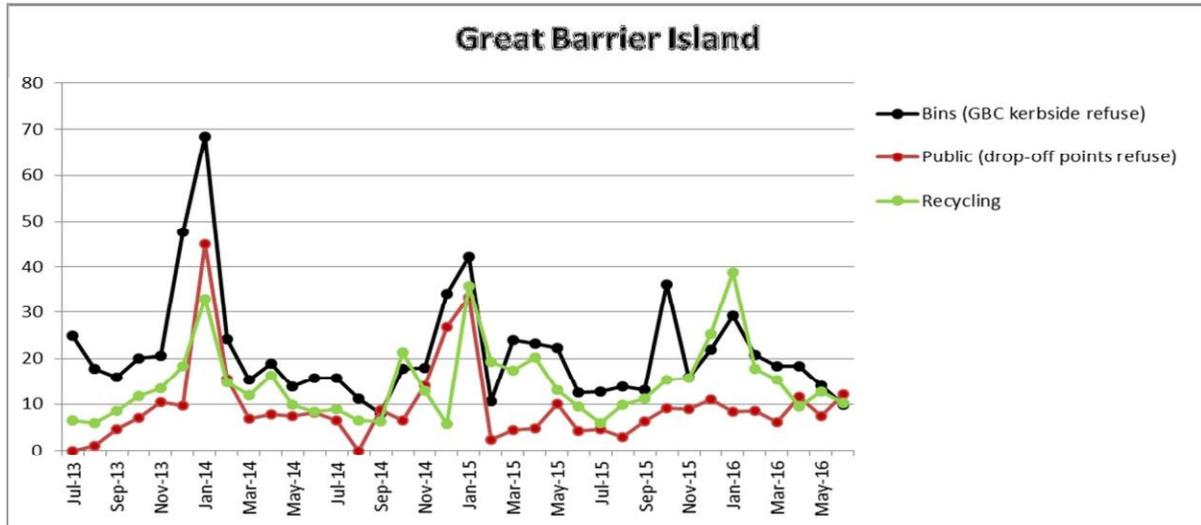


Supporting on island use of waste streams such as glass, building material and cardboard

Aotea Great Barrier waste profile

Claris Landfill is the main point of waste disposal on the island. Recycling (glass, plastic, tin, steel) is shipped to Auckland for sorting and diverting to markets for reuse¹⁰. Some card and paper is used on-island and the rest is shipped to Auckland. The remaining refuse material goes to the landfill which is also the only disposal point for septic tank sludge. The resource consent for this landfill expires in 2027, its capacity is dropping, and work has begun to explore alternatives for waste disposal.

The population increases over summer and holiday period with visitors and boaties, with consequent increases in waste volumes. This graph shows waste tonnages from mid-2013 to mid-2016, with kerbside refuse collection volumes trending down, recycling volumes increasing slightly and a decrease in refuse volumes at public drop-off points. See Appendix Two for a breakdown of refuse volumes by season and source (kerbside, dropoff, summer barge or commercial), and of recycling by season and type (card, glass, tin, etc).



Residential waste and recycling collected on Great Barrier Island 2013-16 (tonnes)

What is going to landfill?

The latest analysis¹¹ of refuse bags in September 2014 (winter season) and January 2015 (summer season) showed that food waste comprised 30.6 per cent of the weight of the average kerbside bag in winter and 45 per cent in summer. This may be linked to concerns about composting encouraging dogs and rats, and visitors dumping food waste before leaving the island.

The waste audit found that 58 per cent of the winter and 62 per cent of the summer contents of kerbside refuse bags could be diverted from landfill. The island currently has no kerbside collection of plastic, aluminium, steel, tin and glass containers, which could help explain the high proportion of recyclable materials in its refuse. The weekly tonnage

¹⁰ See <http://www.makethemostofwaste.co.nz/> for more on how recycling is handled.

¹¹ Waste Not Consulting (2015), *Survey of Solid Waste on Great Barrier Island*, prepared for Auckland Council.

of C&D waste has also increased in every survey since August 2010, though the biggest waste issue on the island is household waste.

The latest waste audit noted a drop in card and paper levels found in kerbside refuse collected. Kerbside card and paper recycling was introduced in late 2013 and the next waste audit will clarify the extent of card and paper in kerbside refuse collected (and going to landfill).

In 2016/2017, the council worked with the community to develop a new way to collect, reuse and recycle inorganic items with a view to establishing a CRC where these items could be repaired and reused on the island. This will result in local employment, income generation and reduced waste to landfill.

The relatively high waste costs on the island are linked to visitor influxes and the higher costs of providing services. Currently, there is \$1460 (approx.) shortfall between the cost of waste services (around \$1700 per rateable property) and what ratepayers pay through a targeted rate (\$240)¹². The difference is a subsidy that is paid through regional rates funding. The planned staged reduction of this subsidy makes it a priority to reduce the costs of waste collection services on the island.

Okiwi Passion – Growing local food and waste wise kitchens

Okiwi Passion is a market garden that aims to reduce the island's dependency on Auckland for its food supply by growing an extensive range of produce and seedlings for local gardeners. Produce is available at a small local market and via a fruit and vegetable box delivery service. Most of the island's cafés are supplied with salad greens from Okiwi Passion. The group also helped form the North Barrier Co-op for purchasing bulk organic dry goods. This has around 20 members and is run on volunteer labour. Caity Endt provides workshops teaching locals and visitors how to compost, be waste wise in the kitchen and be more self-sufficient with food. Okiwi Passion was featured in July 2016 on *Country Calendar*.



Caity Endt from Okiwi Passion leading a cheese-making Workshop

¹² Financial information for Aotea Great Barrier is updated from information prepared for the council's 2015 Long-term Plan discussions.

Great Barrier Island Community Gardens

The Great Barrier Island Community Garden sits on DOC land beside the Medlands Church. It receives community waste such as coffee grinds from a local café, shredded paper from council offices, and waste carpet for making paths and use as mulch. Compost and other gardening related courses are offered. Residents and visitors are free to help themselves to the produce and leave a koha in the honesty box. Local food outlets use the fresh herbs grown in the gardens.

A key role of the community garden is its communal worm farm .



Locals using the communal worm farm at the community garden.

Sarah Harrison – resource gatherer, artist and potter

Sarah Harrison set up the “Rat Shed” in Shoal Bay Tryphena, as a place for people to take unwanted items to find a new home. People are welcome to come and take anything they find. Sarah also creates art out of objects collected from these items. She looks for the creative and functional potential in everything and tries to keep materials out of the Claris Landfill. "I eye up everything that comes in... what can that be used for, by whom and if not, how can it break down?"

Sarah traces her reuse journey back to her childhood on Aotea Great Barrier. Her family made do with what was around them and adapted things to meet their needs. Inspiration has also come from visiting third world countries and seeing people’s resourcefulness in finding creative solutions.

“The artist’s role is to inspire and encourage people to look at ‘trash’ in a different light and to keep those conversations around waste minimisation flowing. We are not necessarily going to sort the problem singlehandedly, but hey, every drop in the bucket helps to fill it eventually!”



Sarah Harrison on her “Heineken” wall



The “Rat Shed”, Shoal Bay, Tryphena

Iwi and community drivers

“Environmental responsibility means being authentic. Sustainability won’t just happen. It’s a belief, an attitude, a journey of social responsibility and we know that together everything is possible.” Ngāti Rehua Hapū Management Plan¹³.

“We could become a Zero Waste island like Capannori¹⁴ in Italy.” (local resident).

Aotea is an important ancestral home of Ngāti Rehua Ngātiwai ki Aotea people. The Ngāti Rehua Ngātiwai ki Aotea Hapū Management Plan 2013 comprehensively sets out what is important to the iwi. In relation to waste, what is most important is that Ngāti Rehua are fully engaged in meaningful discussions about how waste is managed, any changes being considered, opportunities to exercise kaitiakitanga, and to develop social and economic opportunities regarding waste.

The Ngāti Rehua Ngātiwai ki Aotea Trust Board has identified waste minimisation as an area of possibility for its hapū in terms of employment generation and supporting its aspirations as kaitiaki. In 2013, the iwi received WMIF support to explore the feasibility of resource recovery enterprises on Aotea Great Barrier. Ngāti Rehua will proactively seek ongoing opportunities for its people as waste management and services evolve on the island.

Alongside iwi, other residents are engaged and passionate about the island and its future. As the stories above and below show, there are many community waste initiatives with high interest and energy around waste locally.

Since 2013, almost \$70,000 from the council’s WMIF has gone to groups on Aotea Great Barrier.

Multiple surveys, workshops and discussions have been held with the local community about waste. Feedback supports maximising on-island handling of waste, with the goal of a self-sustaining system that deals with the majority of waste on-island. Major community drivers and concerns relating to waste are summarised below.

¹³ Ngāti Rehua Ngātiwai Ki Aotea Hapu Management Plan, 2013, p10.

¹⁴ See the Story of Capannori <https://www.zerowasteurope.eu/2013/09/the-story-of-capannori-a-zero-waste-champion>.

Priorities	Reducing waste costs
	Reducing waste created and sent to landfill
	Being more enterprising, creative and self-managing of waste
We want	Kerbside collection and well managed drop-off points for visitors and residents with boat/remote access
	More food and green waste composting
	More on-island handling of waste, creating income and jobs
	A CRC
We are concerned about	Boaties and visitor waste polluting the island
	The level of packaging (plastic and card) coming on to the island
	Having to pay more for waste

Stonewall Store

The Stonewall Store at Tryphena models sustainability and waste minimisation. It has stopped using plastic bags, buys from local suppliers, increased its bulk food bins, and now supplies a wide range of dry goods and cleaning products in bulk. Food scraps are supplied to a farmer with pigs, and cardboard/paper is reused, composted or separated for recycling. Only eco products are used in cleaning the store. Owner Joss also supports an island cooperative buying group and a weekly local produce market outside her store.



Waste goals and key actions for Aotea Great Barrier

These goals and actions draw on iwi, community and council priorities, and will be pursued by working together.

Goals	Key actions	
	Community will	Auckland Council will
Everybody composting their food and green waste.	<ul style="list-style-type: none"> • Keep food and green waste out of refuse bags. • Increase home and community composting, mulching and chipping. 	<ul style="list-style-type: none"> • Continue to resource local community education, composting and behaviour change. • Help develop organic waste processing systems and find solutions for managing noxious weeds.
Moving towards zero recyclables in domestic refuse bags.	<ul style="list-style-type: none"> • Keep recyclables out of refuse bags. • Recycle properly at drop-off points. • Promote through community education. 	<ul style="list-style-type: none"> • Introduce a kerbside recycling service in 2017/18 for all recyclables. • Support on-island reuse of paper, glass and other materials.
Establish a CRC by 2020.	This is a major initiative. It involves trialling a new inorganic approach; understanding what material can be utilised on-island; developing reuse and repair initiatives; and building capacity to run a Community Recycling Centre by 2020.	
Claris Landfill improvements, charges and alternatives.	<ul style="list-style-type: none"> • Keep food and green waste, recycling and reusable inorganic material out of landfill. 	<ul style="list-style-type: none"> • Introduce gate charges for all waste to landfill and sludge (not reusable inorganics or recyclables). • Reduce opening hours. • Continue to introduce sustainability features to the landfill. • Start work on landfill alternatives.
Reduce waste coming on to the island.	<ul style="list-style-type: none"> • Develop a local action plan to reduce packaging, e.g. communal ordering and bulk buying, becoming plastic bag free, 	<ul style="list-style-type: none"> • Support community efforts to reduce waste coming onto the island.

Goals	Key actions	
	Community will	Auckland Council will
	negotiating with big suppliers to minimise packaging, and developing safe on-island drinking water sources.	
Support creative iwi and community action, education and behaviour change.	<ul style="list-style-type: none"> • Develop local awards and incentives to reward waste leaders, hold an annual event. • Share inspiring local stories. • Attend regional and national gatherings such as Community Recycling Network hui. 	<ul style="list-style-type: none"> • Continue to resource community education, action and behaviour change and support iwi initiatives.
Reduce commercial and C&D waste.	<ul style="list-style-type: none"> • Keep food and recycling out of landfill. • Minimise packaging, model Zero Waste practices. • Explore options for keeping C&D waste out of the landfill. 	<ul style="list-style-type: none"> • Work with local community and business to reduce C&D waste going to landfill.
Reduce visitor and boatie waste.	<ul style="list-style-type: none"> • Promote Aotea Great Barrier as a Zero Waste, sustainable community. • Promote a pack in/pack out policy for visitors. 	<ul style="list-style-type: none"> • Develop a disposer-pays system for boaties. • Review waste coming onto the summer barge. • Identify better management options for visitor waste.
Encourage more on-island use of waste streams.	<ul style="list-style-type: none"> • Continue community initiatives to use all paper and card on-island for composting. 	<ul style="list-style-type: none"> • Research on-island uses for glass and support community-led solutions.

These goals and actions will be pursued with a view to reducing waste costs and supporting community-led solutions and initiatives. Examples include ensuring all occupied households have food waste and compost bins, and developing communal access to wood chipping and mulching.

Developing a CRC by 2020 is seen as a game changer. There is interest in this becoming an environmental hub for the island which can showcase sustainable living and drive positive environmental and social change.

Short-term waste cost reductions will come from introducing landfill charges for refuse and reviewing the number of public drop-off recycling points. The introduction of a range of bin size options for refuse from 2024/2025, including the HGI, will further reduce waste costs for some and incentivise waste minimisation.

Claris Landfill going more “eco”

Developments are underway at Claris landfill, including recycling bays and a public “living loo” toilet block (see www.naturalflow.co.nz/). Upgraded solar panels will run all electrics, the weighbridge, amenities and the living loo, making the site fully self-sustaining for power needs.

Waste services for Aotea Great Barrier to 2020

Over the next three years, waste services will change:

- Kerbside recycling for all recyclables will be introduced in 2018/2019. This will include glass, plastic, tin, aluminium, paper and card. Weekly in summer and fortnightly in winter.
- Reduced public drop-off sites for recycling from 2018/2019, taking the time to get the number right (‘retired’ sites can be used for education and community use).
- A new approach to inorganic collection and on-island use of inorganic materials will be trialled, with steps taken towards establishing a Community Recycling Centre by 2020.
- Summer barge to remain in place until a disposer-pays system for boaties is introduced.
- Gate charges to be introduced in 2017/2018 for all refuse to landfill and continue with reduced landfill opening hours over winter.

Reduced and comingled¹⁵ public drop-off points

The open and unmonitored nature of the drop-off points allows the service to be abused by poor sorting of recyclables and illegal dumping of material not suitable for the sites.

Reducing drop-off points once kerbside recycling is introduced and requiring more material to be taken to Claris Landfill for disposal or recycling will improve recycling rates and reduce service costs. Over 2018/2019 a trial will be undertaken to keep four source separated drop-off points, combined with a weekly comingled kerbside collection that will be kerb sorted by contractors.

Landfill changes

Use of the Claris Landfill has long been free to residents and businesses on Aotea Great Barrier, making this an attractive option for refuse and unwanted items. It also means that there is little incentive to minimise waste and the landfill fills up faster.

Over and above the kerbside and public drop-off refuse collection, approximately 45 tonnes of material per year enters Claris Landfill from commercial and residential users. A gate charge to bring refuse to the landfill will reduce the cost burden on ratepayers and encourage minimisation by commercial and residential users.

Any further changes to landfill hours will be consulted on with the community to ensure appropriate access.

Standardised waste charging

The council's WMMP 2018 signals a move to standardised charging for domestic refuse to landfill region-wide in 2024/2025, including the HGI. Refuse collection will be charged through the rates and a range of bin and bag size options will be available at different charges.

Developing a disposer-pays system for boaties for their waste will also be investigated. Any changes here will need to be accompanied by a community education and awareness campaign. See the section on marine and boat users for more information.

The table below summarises waste services and likely service changes up to 2020. Any significant changes to these services will involve consultation and communication before introduction.

¹⁵ Comingled means all recycling goes into one bin (card, paper, glass, tin, etc).

Service type	Service to 1 July 2017	July 2017 – June 2018	From July 2018 – June 2019	From July 2019
Refuse collection	Weekly kerbside refuse collection	Continue	Continue	Continue
	Illegally dumped refuse removal and abandoned vehicle collections	Continue	Continue	Continue
	Litter bins and loose litter collections	Continue	Continue	Continue
Recycling collection	Weekly kerbside collection of paper and card only	Weekly kerbside collection of paper and card only	Full kerbside recycling with kerbside sort by contractors (weekly summer, fortnightly winter)	Full kerbside recycling (weekly summer, fortnightly winter)
	13 drop-off recycling sites (not comingled)	13 drop-off recycling sites (not comingled)	Reduced number of recycling sites (keep source separated and review)	Continue, review as necessary

Service type	Service to 1 July 2017	July 2017 – June 2018	From July 2018 – June 2019	From July 2019
Inorganic collection	Annual kerbside inorganic collection	New annual approach to inorganics developed, based on 2016/2017 trial	Continue with new annual service	CRC established
Summer barge at Fitzroy	Refuse and recycling bins for boaties' waste provided December to February each year	Develop a marine users' disposer-pays system.	Disposer pays system for boaties, in line with the WMMP	Disposer pays system for boaties
Claris Landfill	Introduce gate charges for all refuse to landfill in 2018	Continue	Seek to increase cost recovery for the landfill operation.	Seek to increase cost recovery for the landfill operation
Community education and support	On-island waste minimisation education and support for community action.	Continue	Continue	Continue

Any significant changes to the services above will be consulted upon and communicated appropriately, before being introduced.

Aotea Great Barrier has clear opportunities and the community leadership to make major strides towards becoming a zero waste island. This can happen swiftly, by working together and employing more of the creative thinking and community energy for change that is already so evident.

11 Waiheke Island

“This is an environmentally aware community that cares deeply about protecting and cherishing the environment, the land, the water, the air”.¹⁶

“We support community-driven initiatives to reduce waste going to landfill”.¹⁷

The Waiheke Local Board vision is to create the world’s most liveable city at the local level. Its area includes Waiheke Island, Rakino Island and over 10 other small islands in the Hauraki Gulf Marine Park. Rakino has its own section in this plan and the other islands are either administered by the Department of Conservation or are privately owned, with no council waste services.

Waiheke Island is around 15,500 hectares¹⁸ and a 35-minute ferry ride from downtown Auckland. The following mana whenua groups claim customary and historical interests in the island: Ngāti Paoa, Ngāti Maru, Ngai Tai ki Tāmaki, Ngaati Whanaunga, Ngāti Tamaterā, Te Patukirikiri and Ngāti Te Ata Waiohua¹⁹. Key features of the Waiheke community are presented below.



Around 8,340 permanent residents (2013 Census)

- 3618 households - 30% were unoccupied at the time of the 2013 Census
- 66% of households are couples with children
- 33% one person only households



Mainly European/Pakeha and Maori

- 90% European, 11% Maori, 3% Pacific, 3% Asian
- 28% born overseas



Older aged and middle income

- Median age 45.3, the second oldest in the region (after Great Barrier), 19% aged 65 and over
- \$51,100 median household income, median personal income \$27,200
- 61% employed, over 1000 local businesses, three local schools

¹⁶ Essentially Waiheke – Draft for Public Consultation, August 2016, see <http://shapeauckland.co.nz/consultations/essentially-waiheke-review/>.

¹⁷ [Waiheke Local Board Plan](http://www.aucklandcouncil.govt.nz/EN/AboutCouncil/representativesbodies/LocalBoards/Waihekelocalboard/Documents/waihekelbp2014.pdf), 2014, page 18, see <http://www.aucklandcouncil.govt.nz/EN/AboutCouncil/representativesbodies/LocalBoards/Waihekelocalboard/Documents/waihekelbp2014.pdf>.

¹⁸ See <http://stateofauckland.aucklandcouncil.govt.nz/terrestrial-report-card/waiheke-reporting-area-2014/>.

¹⁹ *Essentially Waiheke – Draft for Public Feedback 2016*, page 7, referencing Paul Monin, 2012, *Gateway to Waiheke*.

²⁰ Accessible at <http://stateofauckland.aucklandcouncil.govt.nz/demographic-report-card/waiheke-local-board-2014/>.

See the [Waiheke Island Demographic Report Card](#)²⁰ for more on the island's community.

Waiheke Island has a history of proactive leadership regarding waste, which remains strong today (see the stories later in this section). Significant gains were made in the diversion of waste to landfill during the eight years that waste was managed by a community-owned social enterprise, and these gains have continued. Waiheke was one of the first communities in Auckland to undertake comprehensive community recycling.

Waste reduction messaging became a celebrated art form in the Waiheke 'junk to funk' extravaganza, and waste minimisation features strongly in local events such as sustainability festivals, Zero Waste events such as the Ostend Market and the local Santa parade.

The proximity of Waiheke to downtown Auckland sees the population grow to more than 30,000 in the summer months. Thousands more visitors arrive by ferry and private boat for short trips.

In November 2015, Waiheke Island received international attention when it was rated the fifth best destination in the world to visit in 2016 by [Lonely Planet](#)²⁰ and the fourth best island in the world in the [Condé Nast](#) Best Islands in the World List²¹.

Waiheke waste profile

The Waiheke Transfer Station includes a resource recovery facility and a secondhand shop (the New Hope Shop). It is the main point for the collection and sorting of waste prior to being shipped off-island to the mainland for recycling or disposal. Waiheke also has community-based waste solutions and initiatives underway, provided by a range of organisations.

Inorganic collections are annual from 2016. In 2016/2017, the council worked with the local community to develop a new way to process and reuse inorganic items on-island, with a view to establishing a Community Resource Recovery Park from 2020. This is an exciting development for Waiheke that will result in local employment, income generation and reduced waste to landfill.

The indicative annual cost of waste services on Waiheke is \$2.89 million²². Currently, there is a difference approximately \$230 between the cost of waste services (approximately \$470 per rateable property) and what Waiheke ratepayers pay through a targeted rate (\$240). The shortfall is subsidised through regional rates funding. A staged

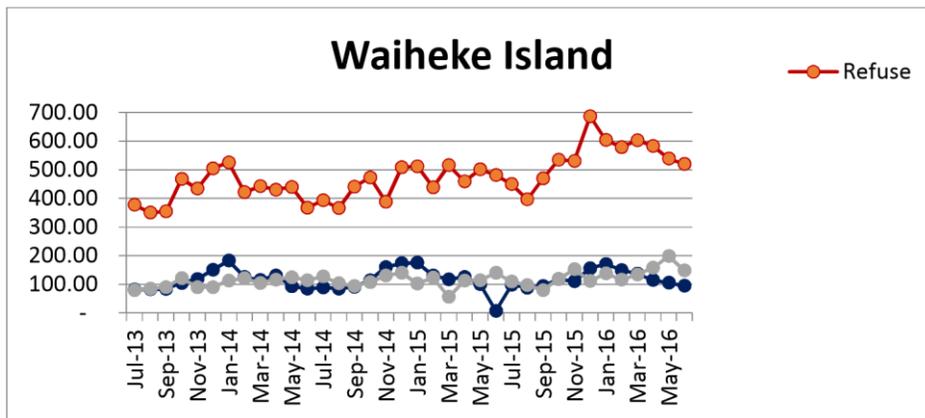
²⁰ See <https://www.lonelyplanet.com/best-in-travel/regions/5>.

²¹ See <http://www.cntraveler.com/galleries/2014-10-20/top-30-islands-in-the-world-readers-choice-awards-2014/17>.

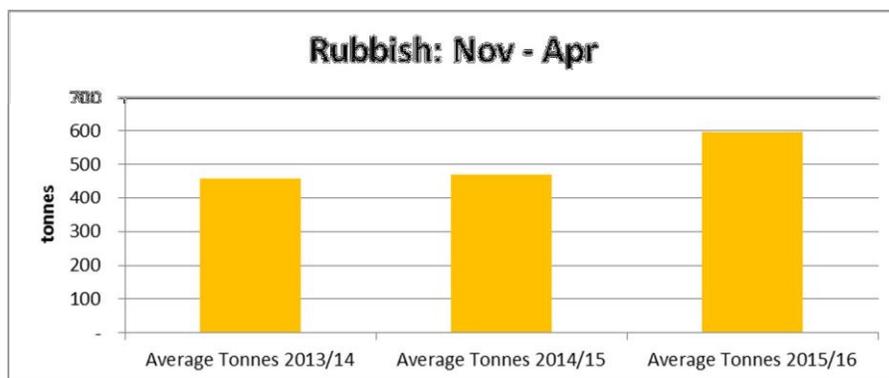
²² The figures in this paragraph are from 2014/15 and were prepared to inform discussions on council's long-term plan.

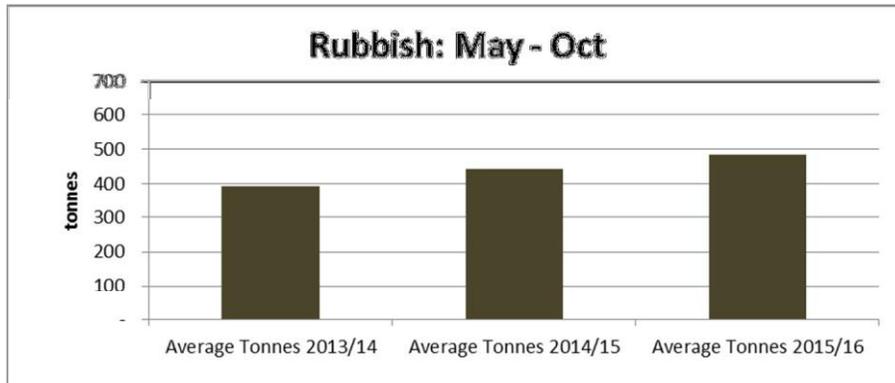
reduction of this subsidy is planned and reducing the costs of waste on the island is a priority.

Waiheke experiences visitor and boatie influxes over the summer and holiday periods, with consequent increases in waste volumes. The graph below shows waste volumes from mid-2013 to mid-2016. The volume (tonnes) of refuse generated on Waiheke has increased overall in the last three years, with a high point during the peak period in December/January 2016. Recycling volumes tend to double over the summer period (November to January), and varying volumes of green waste are disposed of, with a high point in May 2016.

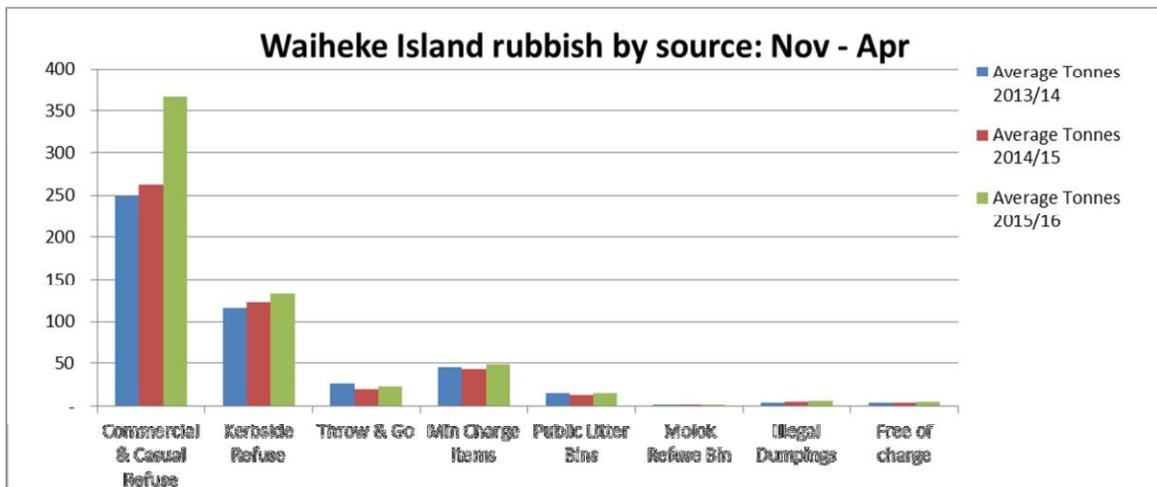


The chart below shows increasing levels of refuse volumes over the last three years in the peak season (Nov-Apr) and the winter season (May-Oct). The increase was especially marked in 2015/2016.

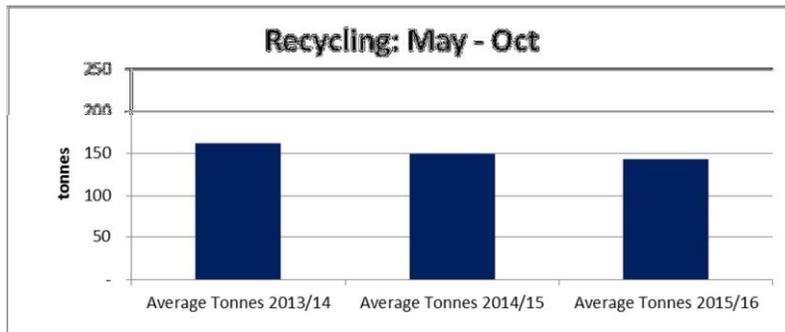
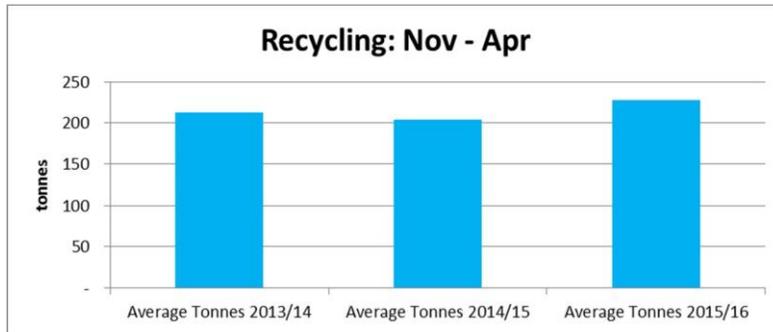




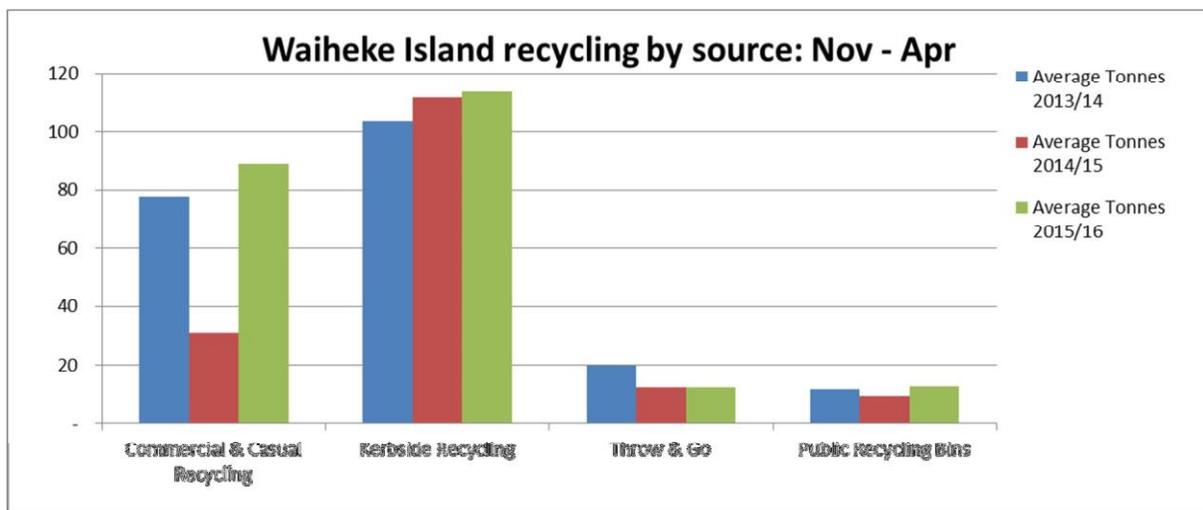
When considered by source of refuse, the greatest source overall and increase in volume in 2015/2016 is from commercial and casual refuse (businesses, visitors and residents), as shown in the chart below. This is likely to reflect a high number of visitors and a busy season for commercial operators in 2015/2016.



The chart below shows an increase in recycling volumes in the peak (Nov-Apr) months between 2014 and 2016, but a decrease in recycling volumes in the off peak (May-Oct) months over the last three years (likely to be predominantly residents).



When considered by source, there was a significant jump in commercial and casual recycling in 2015/2016 in the peak season (possibly supported by a strong focus on Zero Waste events on the island), though kerbside (residential) recycling volumes over the last three years have remained fairly constant.



Community engagement process

The Waiheke section of this plan seeks to address the unique challenges of this popular island and reflect the clear aspirations of an engaged community.

In response to a request for local input to this plan, a small group of people involved in community led waste initiatives on Waiheke was resourced by Auckland Council to help develop its content. Community goals and priorities for waste were a key area of interest.

A new partnership called the Island Waste Collective (IWC) was created to manage this process and engage the community. IWC established a steering group consisting of members of local organisations, subject matter experts, council staff, the Waiheke Local Board and people involved in developing Essentially Waiheke (see next section).

Key stakeholders attended workshops including:

- an initial waste plan engagement community workshop
- reuse and recycling workshop
- commercial waste and recycling workshop
- organic waste workshop
- steering group workshops
- final community workshop.

The following presents waste goals, key actions and directions arising from the council and the Waiheke Island community.

Essentially Waiheke

In 2016, the Waiheke Local Board funded a community process to refresh a 10-year plan for Waiheke. Called *Essentially Waiheke*, the plan aims to enhance the mauri (life force or essence) of Waiheke's places and people. Involving more than 600 people over eight months, the plan builds on earlier iterations in 2000 and 2005. It describes the character of Waiheke Island and its people, and presents a vision of Waiheke in 2035.

The central challenge identified in this plan is how Waiheke can retain its special character, while experiencing ongoing pressures relating to population growth, urban development and high levels of visitors. Fear of losing the special nature of Waiheke through unsustainable development is the greatest concern for locals. The process also included specific waste questions, with feedback reflected in this plan.

Essentially Waiheke includes a clear vision for waste on the island which encourages community waste management and embraces a Zero Waste philosophy to reduce waste to landfill. It also promotes:

- community gardens and sustainable farming activities
- a local recycling centre
- organic and local food systems.



The council funds the Waiheke Resources Trust to reduce food waste, save money and support home composting through an initiative called Kai Conscious Waiheke (see the Kai Conscious story further below)

Waiheke Island – Waste stats



Rubbish (tonnes 15/16)	
Refuse into Transfer Station (business/casual)	4,057
Kerbside Refuse	1,459
Throw & Go Bins	226
Min Charge Items	486
Public Litter Bins	152
Molok Refuse Bin	7
Illegal Dumping	45
Free of charge*	62
Contaminated recycling	5
Noxious Weed Amnesty (15/16 only)	90
Total rubbish tonnes	6,589

Recycling (tonnes 2015/16)	
Transfer Station Recycling	796
Kerbside Recycling	1,187
Throw & Go Recycling	114
Public Recycling Bins	124
Molok Recycling Bin	9
Total recycling tonnes	2,230

Summer barge (tonnes 15/16)	
Refuse	6
Recycling, incl paper/card	5
Inorganic	1
Total	12

Cost of waste services (2014/15)**

Total indicative annual cost is \$2.89 million, or around \$470 per rateable property (including GST). Waiheke ratepayers pay around \$240 of this per property and the rest (\$230) is subsidised by regional rates funding.

Other activities

- Waste education and community contracts
- Composting courses
- Waste Minimisation Innovation Fund grants

Issues



Desire for greater community management of waste on Waiheke



Desire to minimise all waste at source and build a zero waste culture



Minimise waste from visitors and boats



Reduce household, commercial and food waste



Increase community recycling, resource recovery and composting



Increase on island use of waste streams such as glass, building material and cardboard

*Free of charge (FOC) applies to community based businesses that experience illegal dumping issues – e.g. Red Cross, SPCA and Marae. Other areas across the region do not receive FOC services.

**Financial information for Waiheke is updated from information prepared for the council's 2015 Long Term Plan discussions.

Ostend Market - Zero Waste by 2017

Ostend Market has been running every Saturday since the late 1970s. In recent times, instead of using the standard refuse bins, waste stations peopled by friendly locals help visitors sort their waste into recyclables, compostables, Bokashi food waste or as a last resort, landfill. By the end of 2017, the organisers of the market aim to have dispensed with the landfill option altogether.

The Ostend Market is a social enterprise, with proceeds from stall holders' fees going to the Waiheke Community Childcare Centre. The Bokashi waste collected on market day is dug into the Ostend Community Garden. The children of the Waiheke Community Childcare Centre have two plots in this garden, and learn to grow their own vegetables.

This Zero Waste approach was developed with assistance and advice from the Waiheke Resources Trust, Home Grown Waiheke and Auckland Council.

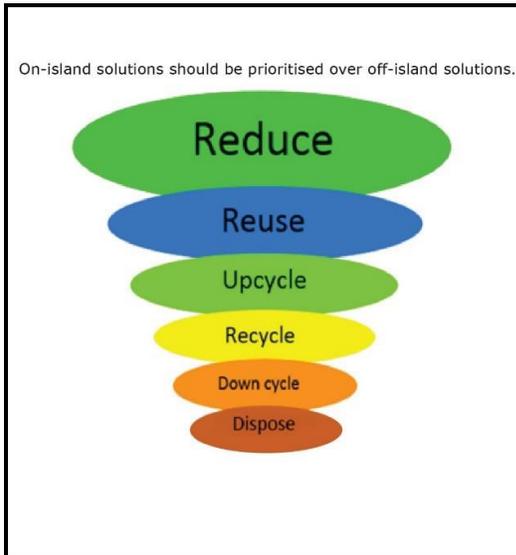
The onus is on stallholders to minimise waste by using compostable cups and packaging in place of polystyrene and single-use plastics such as bags and straws, and examining their operations to eliminate of any non-recyclables. Since many of the island's businesses operate at the market, the Zero Waste message has a ripple effect out into local businesses and the wider community.



Waiheke waste goals and actions

The Waiheke community shares Auckland's commitment to Zero Waste by 2040 and the widely accepted waste hierarchy, amended to reflect the community's preference for onisland solutions.

Waiheke waste hierarchy



Waste goals and actions for Waiheke

Drawing on community and council priorities, waste goals and key actions for Waiheke are as follows. These will be pursued by the community, iwi and council working together.

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
Community engagement and behaviour change to reduce waste to landfill.	Engage and educate the Waiheke community to ensure it has a clear vision for waste on the island which encourages community waste management and embraces a Zero Waste philosophy, to reduce waste to landfill.	Continue to provide funding and resources for community waste engagement and education on the island.
Increase recycling and reuse of materials on Waiheke.	<ul style="list-style-type: none"> • Learn from Xtreme Zero Waste Raglan, HGI and others. • Keep recyclables out of refuse bags. • Recycle properly at drop-off points. • Incentivise and communicate how to recycle right on Waiheke. • Seek to understand what motivates people to recycle, and what doesn't. • Support local collaboration and initiatives to reuse and recycle, such as op shops. • Encourage and celebrate the "gifting" culture on Waiheke for reuse and recycling items'. 	<ul style="list-style-type: none"> • Support community initiatives to improve recycling on Waiheke. • Provide clear information at the Transfer Station on what can be recycled there. • Do a Waiheke waste audit (SWAP Analysis) in 2017 for household and commercial waste. • Investigate a local Waiheke waste levy at the Transfer Station, which could be used to fund local initiatives (see last box in this table).
Establish a Community Resource Recovery Park from 2020.	This major collaborative community, iwi and council initiative involves: <ul style="list-style-type: none"> • trialling a new inorganic approach in 2016/17 • learning from this to understand what material can be used on-island 	

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
	<ul style="list-style-type: none"> • developing reuse and repair initiatives • building capacity to run a Community Resource Recovery Park • working together to develop an inspiring and effective Community Resource Recovery Park from 2020. 	
All of Waiheke's green and food waste is composted, using onisland solutions and maximising local economic development opportunities.	<ul style="list-style-type: none"> • Keep food and green waste out of refuse bags. • Increase home and community composting, mulching and chipping. • Continue education to reduce household food waste. • Develop a community-led campaign to support businesses to divert food waste and compostables from landfill. • Investigate infrastructure to support kerbside and commercial organic collection. • Explore and support local enterprise opportunities around organic material, for example how to continue a viable organic waste service. 	<ul style="list-style-type: none"> • Continue to resource local community education, initiatives, composting and behaviour change. • Help develop organic waste processing systems and find solutions to management of noxious weeds. • Waste audit/SWAP analysis to include commercial and green waste analysis. • Work with the community to increase on-island use of organic material and composting, including enterprise opportunities. • Support a community-led food waste campaign for businesses. • Consider charging for green waste drop-off.
Reduce waste coming on to the island.	Develop a local action plan to reduce packaging, such as communal ordering and bulk buying, becoming plastic bag free, and negotiating with big suppliers to minimise packaging.	Support community efforts to reduce waste coming on the island.
Reduce commercial and C&D waste to landfill.	<ul style="list-style-type: none"> • Work with local businesses to reduce, reuse and recycle and engage with product 	<ul style="list-style-type: none"> • Support on-island reuse of paper, glass and other material.

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
	<p>stewardship.</p> <ul style="list-style-type: none"> • Assess on-island community engagement strategies to see what is most effective and opportunities to improve. • Explore options for keeping building and demolition waste out of the landfill, including Waiheke School’s demolition to be reused and recycled in the community. • Explore options and feasibility to reuse more materials on-island and infrastructure to support this. For example a shredder for hard plastics and a glass crusher. • Trial engineered composite board (ECB). This is a process that converts unwanted and low value waste materials destined for landfill into a viable and saleable product. This avoids transport and disposal costs of waste offisland. 	<ul style="list-style-type: none"> • Support local community and businesses to reduce building demolition material going to landfill. • Provide data on volumes and trends for C&D material on Waiheke. • Investigate the feasibility of comingled public recycling drop-off at the Transfer Station.
<p>Investigate opportunities for the reduction of cleanfill entering landfill sites on the island.²³</p>		<ul style="list-style-type: none"> • Research to quantify the average annual amount of cleanfill generated each year. • Investigate issues related to cleanfill in terms of assessing capacity, infrastructure and feasibility for on-island compared to off-island solutions. • Investigate an exchange scheme for sites wishing to remove cleanfill to exchange with

²³ Goals and actions relating to cleanfill and road construction waste were added by the Waiheke Local Board at their 22 June 2017 meeting.

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
		<p>those requiring cleanfill.</p> <ul style="list-style-type: none"> • Work with planners to find creative solutions to reduce removal of earth and redistribute fill onsite.
Investigate the issues related to road construction waste and opportunities for diversion.		Work with Auckland Transport to investigate issues and opportunities to recycle road construction waste and identify actions that will enable this.
Reduce visitor and boatie waste.	<ul style="list-style-type: none"> • Promote Waiheke as a Zero Waste, sustainable community. • Promote a pack in / pack out policy for visitors. 	<ul style="list-style-type: none"> • Develop a disposer-pays system for boaties. • Review waste coming onto the summer barge. • Identify better management options for visitor waste.
Further enabling actions identified by the Waiheke community.	<ul style="list-style-type: none"> • Agree a process and methodology for presenting waste costs transparently, including the split between household, commercial and visitor tonnage or volume. • Investigate applying a local waste levy for refuse drop-off at the transfer station, to incentivise / fund waste reduction activities. The levy could be used for contestable funding for strategic and innovative community led waste intervention projects. • Ensure ongoing community involvement and participation in waste planning and delivery on the island. 	

Waiheke waste champions

The Waiheke community is passionate, vocal and proactive. Since the council's Waste Minimisation and Innovation Fund began in 2013, over \$185,000 of this funding has gone to groups on Waiheke. Here are just a few of the creative, community led waste initiatives underway on Waiheke.



Zero Waste Events Waiheke

Working to eventually make every Waiheke event Zero Waste to landfill (Waiheke Resources Trust).

Kai Conscious Waiheke

Waiheke Resources Trust, with support from Auckland Council, has been working to reduce food waste under the Kai Conscious Waiheke umbrella since 2013. Initially established in Blackpool, Kai Conscious has since expanded into one new community each year. It now exists in Blackpool, Rocky Bay, Oneroa and most recently, Surfdale.

Ongoing support is provided to established Kai Conscious communities, along with information to new residents through a "Welcome to Waiheke" pack which covers a broad range of sustainability topics and is available in English and Spanish.

Engagement is predominantly at household level, as well as community groups and local businesses. Events are held in local halls on awareness, education and support for waste issues, with a focus on reducing household food waste.



New Hope Shop²⁴

Located at the Ostend Transfer Station, proceeds from the sale of second hand goods go back into the community via three annual community funding rounds and hardship grants for individuals and families in need.



Countdown Waiheke gets rid of single use plastic bags



Countdown Waiheke store manager Dave Collo and BYO Bag Waiheke founder Deb Lyttle celebrate the supermarket's decision to ditch single-use disposable plastic bags.

²⁴ See <https://www.facebook.com/New-Hope-Shop-294457380733618/> for more on the shop.

Countdown Waiheke stopped providing single-use plastic checkout bags in May 2016. Shoppers can bring their own bags, buy compostable bags for 15 cents each, or reusable bags. This is a huge victory for the group BYO Bag Waiheke, which has spent the last five years educating the community about the damage single use plastic has on marine life.

It has successfully lobbied most shop owners on the island to look at alternatives to plastic bags and given out several “local hero” awards to businesses. It has also encouraged individuals to use reusable bags – like those produced by the BYO Bag sewing bee, which has sewn more than 1200 to date.

Home Grown Waiheke Trust Surfdale Community Project

Home Grown Waiheke, supported by an Auckland Council Waste Minimisation and Innovation Fund grant, has begun a weekly kerbside collection of food waste from homes in Surfdale. The first collection, on 11 August 2016, yielded 160kg of food waste from 40 households. Currently, 150 households have signed up for the collections. When participation reaches 250 households, Home Grown Waiheke estimates it will be collecting and composting a tonne of food waste a week.

Food and compostable waste from local events are also composted. The Matariki celebrations at Piritahi Marae took part, attended by 1500 people. The organic waste was mostly meat, fat and bones from the hangi, and was composted without difficulty.

Home Grown Waiheke has demonstrated that garlic, shallots, and broad bean plants are now thriving in compost made from the PLA cups used at the Cable Bay Fat Freddy’s Drop concert.

The aim is to compost all food waste and use it to grow food locally.



Waste wise workers at the Fat Freddy’s Drop concert on Waiheke Island, summer 2016

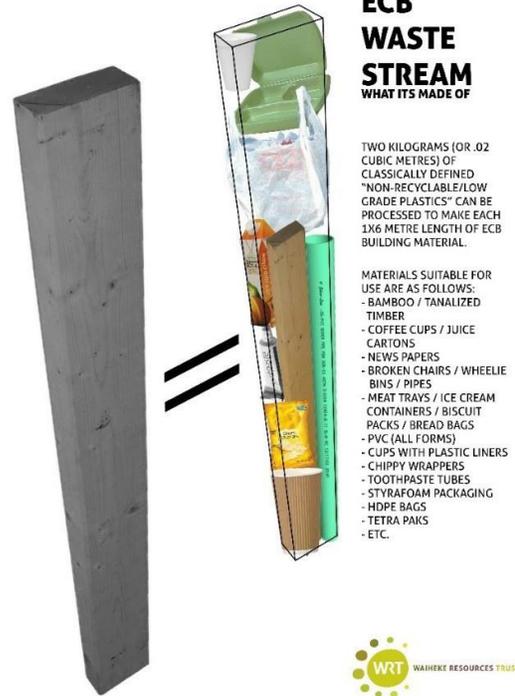
For more about the work of the Waiheke Resources Trust, see:

https://www.facebook.com/waihekeresourcetrust/photos/?tab=album&album_id=1084646011565819

Engineered (Eco) Composite Board – A Waiheke community-led project

Engineered Composite Board (ECB) is a technical process that turns a range of refuse products that typically go to landfill into reuseable products and material. This material would be sold to the community for use in creating raised vegetable gardens, park benches or other crude constructions.

It has been estimated that ECB could collect and reuse up to 30 per cent of the waste sent to landfill on Waiheke. ECB holds promise for Waiheke and there is community interest in exploring this further.



Waste services for Waiheke to 2020

Waste service changes in the next three years are as follows:

- a review of the two Throw and Go bins at both ferry points and promotion of a pack in / pack out approach to visitor waste for those on short visits to the island
- a move to fortnightly recycling collection in 2019/2020 with potential provision of recycling bags as an alternative to bins
- investigate the feasibility of a comingled public recycling drop-off service at the Transfer Station
- a new approach to on-island use of inorganic materials is being trialled with the intent to establish a Community Recycling Centre by 2020
- summer barge to remain in place until a disposer-pays system for boaties is introduced (see section on marine and boat users).

Inorganic collections were held every two years until 2016, when an annual bookable on-property inorganic collection service began. In 2016/17, a new approach to dealing with inorganic materials from the collection was trialled on Waiheke. The trial involved understanding what inorganic material can be use on the island; developing reuse and repair initiatives; and building local capacity.

Waste minimisation, education and behaviour change programmes are provided by on-island community partners.

Current waste collection contracts are in place until 30 June 2019. No substantial changes to refuse and recycling will occur before then. There is provision to renew the current waste collection services for one or two years after June 2019 at the council's discretion.

Standardised waste charging

The council's WMMP 2018 signals a move to standardised charging for domestic refuse to landfill region-wide in 2024/2025, including the HGI. Refuse collection will be charged through the rates and a range of bin size options will be available at different charges.

Developing a disposer-pays system for marine and boat users for their waste will also be investigated. Any changes will have to be accompanied by a community education and awareness campaign. See the section on marine and boat users for more information.

The table below summarises Waiheke waste services and likely service changes. Any significant changes to these services will be consulted on and communicated before being introduced.

Proposed services and charging

Service type	Service to 1 July 2017	July 2017 – June 2018	July 2018 – June 2019	From July 2019
Waiheke Transfer Station	<ul style="list-style-type: none"> Waste collection point for Waiheke, contract in place to 30 June 2019. Annual review of gate charges. 	<ul style="list-style-type: none"> Review future of operation. Annual review of gate charges. 	Review future of operation.	Review future of operation and implement approach from June 2020
Refuse collection	Weekly kerbside refuse collection.	Weekly kerbside refuse collection.	Proposed Throw and Go bins. Timing may change and is subject to confirmation.	Proposed Throw and Go bins.
	Illegally dumped refuse removal and abandoned vehicle collections.	Continue.	Continue.	Continue.
	Litter bins and loose litter collections.	Review of Throw and Go bins at both ferry points.	Potential disposer-pays for public refuse bins.	Continue.
Recycling collection	Weekly kerbside recycling collection.	Continue	Continue	Move to fortnightly recycling collection; potential provision of

Service type	Service to 1 July 2017	July 2017 – June 2018	July 2018 – June 2019	From July 2019
	Investigate the feasibility of a comingled public recycling drop-off service at the Transfer Station.			council-supplied recycling bags 1 July 2019 new contract/s let for recycling
Inorganic collection	<ul style="list-style-type: none"> • Bookable, annual onproperty collection of inorganic material. • Trial of a new inorganic processing approach begins. 	New annual approach to inorganic processing developed based on 2016/2017 trial.	Continue with new annual service.	Community Resource Recovery Park established from June 2020
Summer barge at Man O War Bay	Refuse and recycling bins for boaties' waste provided December to February each year.	Develop a marine users' disposer-pays system.	Proposed disposer-pays system for boaties, timed to align with disposer-pays for kerbside collections.	Proposed disposer-pays system for boaties.
Community education and support	On island waste minimisation education and support for community action	Continue	Continue	Continue

12 Rakino Island

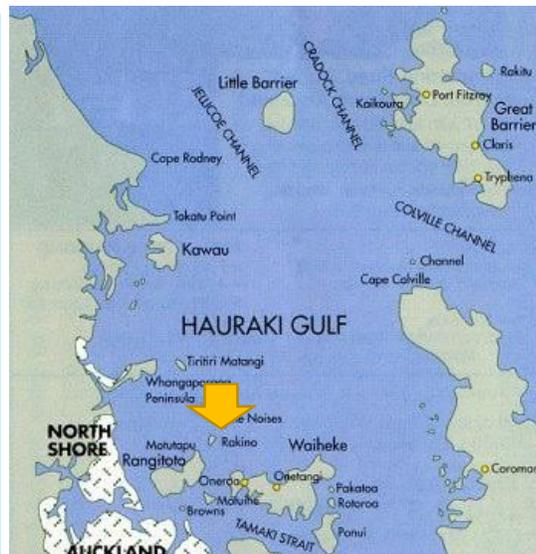
Rakino is part of the Waiheke Local Board area. Rakino lies north-east of Motutapu Island and has an area of 1.5km². The island is largely privately-owned, with around 114 dwellings and 20 people who are usually resident, though this number varies. The New Zealand Census combines the usually resident populations for Rangitoto, Motutapu and Rakino and in 2013 this combined population was 63. Most Rakino property owners live on the Auckland mainland or elsewhere and have baches on the island.

There are no shops or grid electricity on Rakino. Households generate their own power (mostly solar), and have their own water, septic and drainage systems. The island has a passenger wharf in Sandy Bay, with a freight wharf allowing barge access in the adjacent Home Bay. There is a ferry service to downtown Auckland. There is an active Rakino Ratepayers Association on the island. See the [Association's website](#)²⁵ for more information.

Rakino is free of animal pests such as rats, which makes effective handling of waste critical to ensuring the island remains pest-free.



Map of Rakino Island



Arrow showing location/scale of Rakino

²⁵ Accessible at <http://www.rra.nz/rakino/>.

Rakino waste profile

People on Rakino take their refuse and recycling to 11 drop-off bin stations located around the island. This is transported regularly to Home Bay for sorting and barging to the mainland for disposal and recycling. Home Bay is the main depot for waste collection and is the place where materials are stockpiled, awaiting transportation off the island.

An annual inorganic collection began in 2016 (previously it was biannual). The material collected is barged to the mainland for disposal. However, at least 30 per cent of the waste collected in this way shouldn't be disposed of via those services – lawnmowers, workshop refuse, and C&D waste.

Illegal dumping is also collected as required. Dumping of refuse at Home Bay by the waste stations is a significant issue. Twelve abandoned vehicles were taken off the island in 2015/2016. The cost of waste services in 2015/2016 was \$144,000, or around \$1640 per rateable property²⁶. Rakino ratepayers pay a targeted rate for waste services of \$242 annually per rateable property, with the remainder funded through regional rates.

On Rakino, the major waste issues are:

- the high costs of transporting waste
- high levels of inorganic material, including abandoned vehicles
- high levels of cardboard and of food waste, especially in summer months
- illegal dumping, alongside difficulty in identifying those doing this dumping.

²⁶ Financial information for Rakino is updated from information prepared for the council's 2015 Long-term Plan discussions.



Inorganic waste left beside rubbish bins at Home Bay

Rakino– Waste Stats



Refuse (tonnes 2015/16)

Refuse from public drop-offs	34
Inorganic collection	36
12 abandoned cars removed in 2015/16	

Recycling (cubic metres 2015/16)

Paper and cardboard	187
Glass and plastic	122
TOTAL RECYCLING (cu metres)	309

Key issues



Influx of visitor and boatie waste in holiday periods



High levels of food/green waste going to landfill



Illegal dumping and high levels of inappropriate and inorganic waste, including abandoned cars



Minimising packaging coming on to the island



Supporting on island use of cardboard

Cost of waste services (2015/16)

Total annual cost is approximately \$144,000, or around \$1640 per rateable property (including GST). Rakino ratepayers pay \$242 of this per rateable property and the rest is funded through regional rates.

Support for community action

Rakino Ratepayers Association obtained Waste Minimisation innovation Funding for an on island bokashi scheme. The Association has bigger plans (see story below).

Bokashi for all on Rakino

On Rakino, at peak times up to 44 per cent of waste volume is food and green waste. With the local nursery needing compost, ratepayers' association applied to the council's Waste Minimisation and Innovation Fund for subsidised Bokashi bins. Forty-four households paid \$20 each for two bins.

A bokashi bin exchange facility will be established and potentially a food waste bin that visitors and boaties can use to create more compost. Longer term, mulching and processing green waste is an aspiration to help the nursery provide more plants for locals.



Bokashi bin set deployed per household



Compost from a bin waiting to go into the ground



Rakino Nursery



Planting natives on the slope into West Bay

Community interests and priorities

Via discussions with members of the Rakino Ratepayers Association, members of this community would like the following.

Priorities	Waste services and community education that reflect the realities of the island.
	Increased composting and recycling to keep food and recyclables out of landfill.
We want	More transparency about waste costs and volumes.
	More food composting (in train as noted above).
	Alternative uses for cardboard.
	Effective approaches to inorganic material and dumping.
We are concerned about	Boaties, visitor and locals' waste polluting the island.
	Animal pests threat if waste is not handled properly.



The drop-off bin stations were renovated in 2016, including new signage.

Waste goals for Rakino

As agreed in the WMMP 2012 and reinforced in the WMMP 2018, refuse, recycling and inorganic collections across Auckland, including the HGI, will continue to be rates funded.

Developing a disposer-pays system for marine and boat users for their waste will also be investigated in 2017/2018. Any changes here will need to be accompanied by a community education and awareness campaign. See the section on marine and boat users for more on this.

Drawing on community and council priorities, waste goals for Rakino in the medium term are as follows. These will be pursued by the local community, the council and other stakeholders working together.

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
Everybody composting their food and green waste.	<p>Keep food and green waste out of refuse bins.</p> <p>Increase home and community composting, mulching and chipping.</p>	<p>Support local community education, composting and behaviour change.</p>
Divert recyclables from landfill and reduce cross contamination of recyclables.	<p>Keep recyclables out of refuse bins.</p> <p>Recycle properly at drop-off points.</p> <p>Promote recycling through community education.</p>	<p>Provide the local community with regular information on refuse and recycling volumes on Rakino.</p>
Develop local uses for cardboard.	<p>Seek to reduce cardboard coming on to the island and use all card on the island.</p>	<p>Support greater on-island use of cardboard.</p>
Work together to divert reusable inorganic materials from landfill.	<p>Keep reusable inorganic material out of landfill.</p> <p>Work with the council to divert reusable inorganic material from landfill.</p> <p>Seek to minimise illegal dumping.</p>	<p>Work with the Rakino community to divert more inorganic material from landfill and reduce volumes on the island.</p> <p>The waste team will work with Auckland Transport and the biosecurity team to remove illegal vehicles and help keep the island pest-free.</p>
Tailored community education and ongoing support for community action and solutions.	<p>Advise the council of any support needed for community action and solutions to minimise waste.</p>	<p>Provide support as required.</p>

Waste services for Rakino to 2020

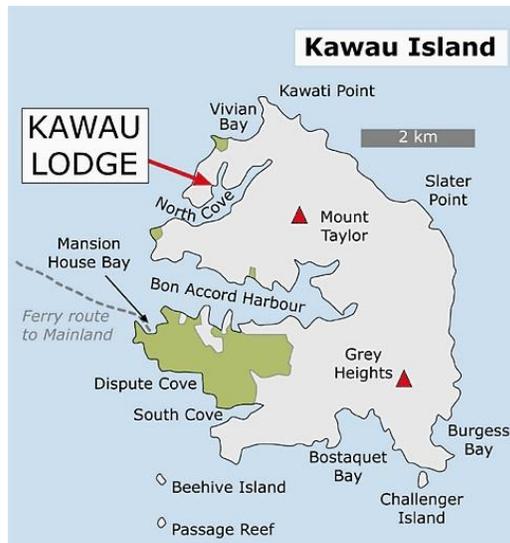
The waste services to be provided to 2020 are as follows.

Service type	Service to 1 July 2017	July 2017 – June 2018	July 2018 – June 2019	From July 2019
Refuse collection.	Eleven public refuse drop-off points, located around the island.	Eleven public refuse drop-off points.	Continue	Continue
	Illegally dumped refuse removal and abandoned vehicle collections.	Continue, but work with the community to reduce.	Continue.	Continue.
	Litter bins and loose litter collections.	Continue.	Continue.	Continue.
Recycling collection.	11 drop-off recycling sites.	Continue.	Continue.	Continue.
Inorganic collection.	Annual inorganic collection.	Continue.	Continue.	Continue.
Community education and support	Support for community education and waste minimisation, including council staff support for local initiatives.	Include an education campaign to increase onisland use of cardboard and reduce inappropriate waste and abandoned vehicles.	Continue.	Continue.

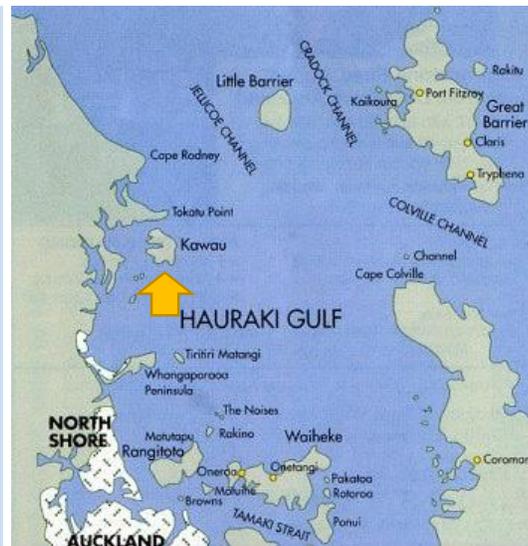
Any potential changes to waste related fees and charges from 2018/19 will be consulted on with Rakino residents and ratepayers.

13 Kawau

Part of the Rodney Local Board area, Kawau is located south of the Tāwharanui Peninsula, 8km by sea from Sandspit Wharf. At the 2013 Census, 78 people usually reside on Kawau, with 51 occupied and 303 unoccupied dwellings. The island is predominantly privately-owned, with around 10 per cent owned by the Department of Conservation and two council-owned wharf areas.



Map of Kawau Island



Arrow showing location/scale of Kawau

There are 14 iwi with an interest in the wider Rodney area²⁸ and the tribes of Ngatitai and Ngāti Wai were the early occupants of Kawau Island. In the 1830s the island was bought from local Māori, agriculture and copper mining began and ownership of the island changed hands many times, including ownership by Governor George Grey in the 1860s. The island began to be subdivided in 1912. See [here](#)²⁹ for more on the history of Kawau Island.

There is a strong ethos of self-determination and community spirit in the Rodney Local Board area, including Kawau. A Kawau Island Advisory Committee liaises with the board and there are a range of networks and community groups linked to the island, such as the Kawau Island Residents and Ratepayers Association ([KIRRA](#))²⁷ and Friends of Mansion House.

²⁷ See <http://kawauisland.org.nz/kirra/>.

Kawau waste profile

There are very limited council-funded waste services on Kawau Island. This includes no litter bins, inorganic waste collections or waste education programmes. The council does, however, provide three Molok bins at Sandspit Wharf on the mainland for Kawau residents to dispose of household refuse and recycling. Kawau residents are responsible for transporting their waste to the Molok bins, either in person or via one of the local barge operators.

The Molok bins are currently funded through rates. There is no targeted rate for waste is currently levied against Kawau ratepayers. The Molok bins are in lieu of a kerbside refuse and recycling service which is not feasible due to the geography of the island. The two Moloks for refuse each have a five-cubic-metre capacity and the recycling Molok has a three-cubic-metre capacity.

From 25 December to the end of January, the Moloks are emptied daily. For extra capacity during the busiest summer and holiday weekends, the council also provides nine-cubic metre skips are also provided at Sandspit Wharf.

Refuse from these Moloks is taken to the Snells Beach Transfer Station for disposal. Recycling is stockpiled at the Northland Waste yard and taken to Auckland for processing..



Accumulation of refuse around the Moloks on Monday 15 September 2014.

They had been emptied on Wednesday 10 September.

The Moloks are intended for domestic-type refuse generated by marina users, Kawau Island residents, holiday homeowners and visitors returning via the ferry. However, in practice they are also used by visitors to the wharf, commercial operators and local mainland residents.

Widespread misuse of the Sandspit Molok bins by Kawau and mainland residents, commercial operators and visitors is a significant issue. Around 37 per cent of the waste collected at these bins is inorganic-type material that does not belong in refuse or recycling bins and could be reused, recycled or recovered.

Waste volumes more than double over the peak summer period, with the resulting mess and ongoing concern for local residents. In addition, illegal dumping of inorganic material is common. This is unsightly and costly to clean up.

While information on the volumes and composition of materials collected via the bins is available, it is not possible to identify what material is from Kawau and what is from other sources.

An analysis of the composition of waste coming from Sandspit Wharf in September 2014. From this analysis:

- 21 per cent was compostable
- 34 per cent was recyclable
- 3 per cent was reusable
- 42 per cent required landfill disposal (i.e. was in fact refuse).

Key waste issues for Kawau are what to do with inorganic material generated on the island, how to improve the waste service provided at Sandspit Wharf and minimise its misuse, and how to charge for refuse.

Waste goals and actions for Kawau

From discussions with the Kawau Island Advisory Committee, the key issues are finding a solution for inorganic material and the community being more active and self-determining around how its waste is handled. Drawing on community and council priorities, waste goals and actions for Kawau in the medium term are as follows. These will be pursued by the local community, council and other stakeholders working together.

GOALS	KEY ACTIONS	
	Community will	Auckland Council will
Develop an agreed approach to inorganic material	Work with the council around options for inorganic material collection and funding.	Work with the Kawau community and Rodney Local Board on options for inorganic material collection and funding. This may involve consulting the Kawau community through the annual plan about a potential targeted rate for an inorganic collection.
Identify approach to charging for refuse, in relation to Kawau	Work with the council to identify issues and options for charging for refuse.	Work with the Kawau community to identify issues and options for charging.
Improve the Sandspit Wharf Molok bin waste service	Work with the council to improve waste services to Kawau via the Molok bins on Sandspit Wharf.	Work with the Kawau community and other stakeholders to improve the Sandspit Wharf Molok bin waste service, and minimise its misuse.
Support community-led composting, waste minimisation and community education on Kawau	<ul style="list-style-type: none"> • Keep food and green waste out of the Molok bins • Increase home and community composting, mulching and chipping. • Recycle properly at Sandspit Wharf. • Generate local action and solutions for waste. 	<ul style="list-style-type: none"> • Support local community education, composting and behaviour change. • Promote the Waste Minimisation Innovation Fund to the Kawau community.

Waste services for Kawau

The Molok bin service for refuse and recycling for Kawau residents and visitors will continue in the short-term, with additional skip bins as required from 24 December-6 February, plus long weekends.

The council will work with Kawau residents in 2017/2018 to review the Sandspit Wharf Molok bin waste service. Issues and options to discuss include:

- how to deal with inorganic material on Kawau (consulted on via the council's annual plan process)
- resolving issues with the Molok bins provided at Sandspit Wharf.

Standardised charging for refuse or waste sent to landfill is being implemented across Auckland in 2024/2025, including the HGI. How charging for refuse might operate for Kawau will be investigated and be developed in consultation with residents and ratepayers.

Developing a disposer-pays system for marine and boat users for their waste will also be investigated in 2017/2018. The disposer-pays service designed for marine and boat users may affect the revised waste service design for Kawau residents. See the section on marine and boat users for more information.

14 Boat users and coastal areas

There are three major marine areas within Auckland Council boundaries:

- the coastline of the Manukau Harbour
- the coastline of the Waitematā Harbour
- the Hauraki Gulf Marine Park incorporating islands and several popular sailing routes.

Current waste services for boat users

Current services for boat users in the HGI area are:

- a waste barge moored in Fitzroy Harbour, Aotea Great Barrier, between late December and end February each year
- a waste barge moored at Man o War Bay, Waiheke Island over the same period.

These barges contain bulk refuse and recycling bins, and are free for boat users.

While the Molok bins located at Sandspit Wharf are not intended for use by boat users, their location and easy access mean they are used as refuse and recycling bins by boat users and the public. Waste volumes more than double over the peak summer period, and issues related to dumping and mess cause ongoing concern for local residents and visitors.

Litter bins are provided at a range of boat ramps and wharves around the Manukau and Waitematā Harbours, with a council skip provided during summer at high use areas such as Martins Bay, Scotts Landing and Leigh in the Rodney area. Provision of these bins will be reviewed to align with the intent of the WMMP for people to be responsible for their own waste. These bins also are regularly abused through being used by locals.

Leigh Wharf (pictured right) is a popular site for boaties. The private bin service becomes overfilled. As noted, the council also provides a front loader bin at the wharf from December to February, for refuse only.



Martin's Bay – turning fish waste into resources

At the height of summer, the council-owned Martin's Bay Holiday Park fishers can produce 270 litres of fish waste per day. Composting this resource through a council supported Bokashi system turns waste into valuable compost.

In a processing area, fish waste is transferred to a 90-litre bin. A half shovel of sawdust is spread over the top, then finished with a sprinkle of Bokashi 'Zing' – a mixture of wheat bran, molasses and various micro-organisms. This is pushed down with an oversized masher to remove the air. The result is an 80kg bin of compost additive with minimal odour. Food scraps from the holiday park's kitchens are also added, further reducing waste going to landfill.

Holiday Park Manager Edwina Vine plans to provide schools and community groups with high quality compost – for free. "We don't want to sell it – we want to give back to the community."



Martin's Bay bokashi system and fish processing area.

Disposer-pays for boat users to be explored in 2018

Boat users produce significant amounts of refuse and recycling each year, as well as fish waste, but do not bear the total costs of disposal and recycling as this is funded through rates.

An appropriate charging system for boat users and coastal areas in the HGI will be developed.

A fair disposer-pays system for boat users to pay their share of costs needs to be workable, with benefits that outweigh the costs of establishing the system and enforcing it.

Options to explore include:

- Hauraki Gulf-specific or Auckland-region prepaid refuse and recycling bags, disposed of at island-based drop-off points and the mainland
- land-based bulk refuse bins and recycling facilities, with boat users purchasing appropriate prepaid bags for disposal at these points. This was trialled in the Bay of Islands in 2011/2012, with only around 40 per cent compliance; 60 per cent of the waste was in black sacks instead of the pre-paid bags. Unofficial audits of the waste

collected showed it was approximately a 50/50 split of refuse and recyclable material. Anecdotal evidence suggested the non-compliance was a combination of not knowing how the system worked and not wanting to pay.

- Coin-operated bulk refuse facilities (“Jack Trash” bins) could be used, or more sophisticated versions allowing paying by text or card. The Marlborough Sounds area has had a generally good experience of these.
- Thames Coromandel District Council trialled an honesty box-type system for refuse disposal. Compliance for this system was estimated at around 33 per cent.

Research²⁸ suggests those who own their own vessel and cruise the gulf for extended periods are likely to be the main users of a disposer-pays waste service. This group tends to be on the water for extended periods and visit shores less often. Other groups are considered more likely to store their own waste for the short time they are on the water and dispose of it once back on shore.

Composition data and feedback from boat users suggests recycling facilities for boat users would be worthwhile. Recyclable material is estimated at 33-50 per cent (by weight) of the waste coming from marine users. As noted, the provision of litter bin services at boat ramps and wharves will also be reviewed.

Boat users will need significant education and communication regarding any changes. This will need to extend beyond the Auckland area. Enforcement requirements could be reduced in some areas by ensuring that good education and communication material is available.

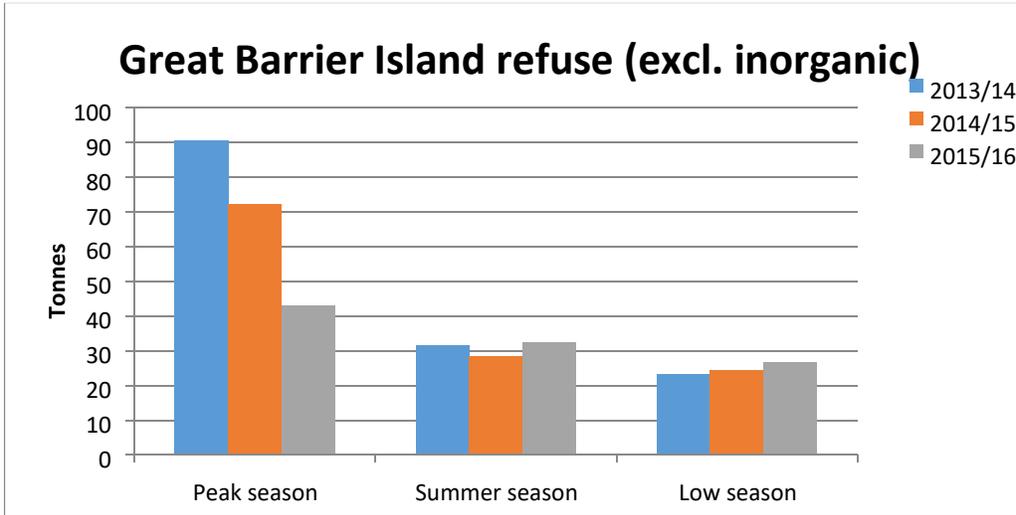
²⁸ Eunomia, 2012, *Marine Users – Disposer Pays Refuse Implementation Plan, A Report to Auckland Council*.

Appendix One: Mana whenua and community engagement undertaken to develop this plan

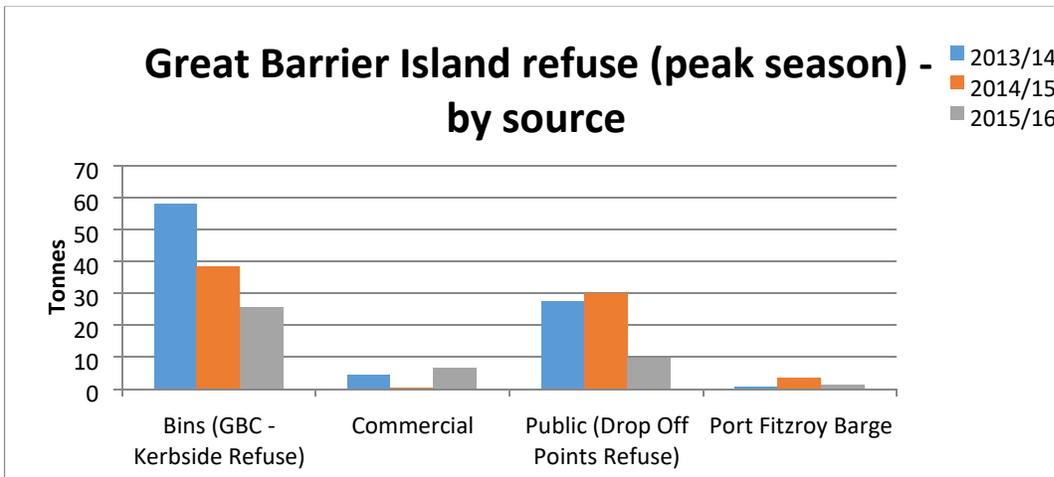
The table below summarises the engagement to help develop this plan. In all cases the significant documentation relating to each group and island was reviewed and the knowledge and expertise of Auckland Council staff was used throughout.

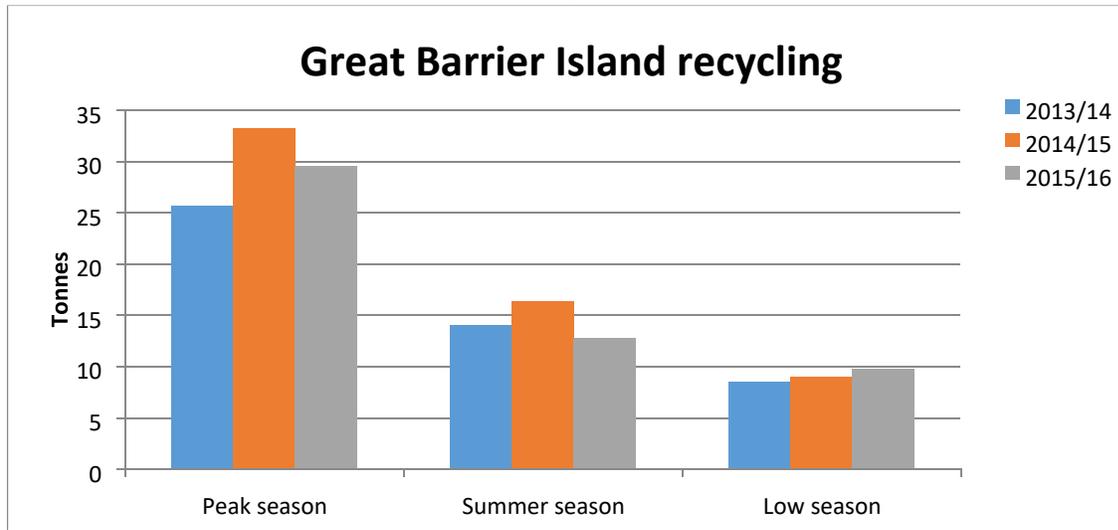
Who	Engagement processes
Mana whenua	<ul style="list-style-type: none"> • Presentation and discussion at Hauraki Gulf Forum • Presentation and discussion with Auckland Council's Infrastructure and Environmental Services Mana Whenua Advisory Group. • Discussion with Te Waka Angamua staff at Auckland Council.
Aotea Great Barrier	<p>Two workshops with the Great Barrier Local Board, waste contractors and Ngāti Rehua Ngātiwai ki Aotea.</p> <ul style="list-style-type: none"> • Door-to-door survey of residents on service options and proposals and survey promoted and accessible through local media. • Discussion with local community waste educator (Envirokiwi).
Waiheke	<ul style="list-style-type: none"> • Workshop with community waste stakeholders. • In response to a request from the community, a small group of interested local stakeholders was resourced to engage with Māori and the local community to identify community waste related goals and priorities. • Discussions with Waiheke Local Board representatives.
Rakino	<ul style="list-style-type: none"> • Discussions with the Rakino Ratepayers Association and review of a draft by the association.
Kawau	<ul style="list-style-type: none"> • Discussions with the Kawau Advisory Committee. • Discussions with Rodney Local Board representatives.
Department of Conservation	<ul style="list-style-type: none"> • Review of the draft plan.
Boat users	<ul style="list-style-type: none"> • A 2012 Eunomia report on disposer-pays issues and options for boat users in the gulf involved consultation with various stakeholders, which informed this plan.

Appendix Two: Aotea Great Barrier refuse and recycling volumes

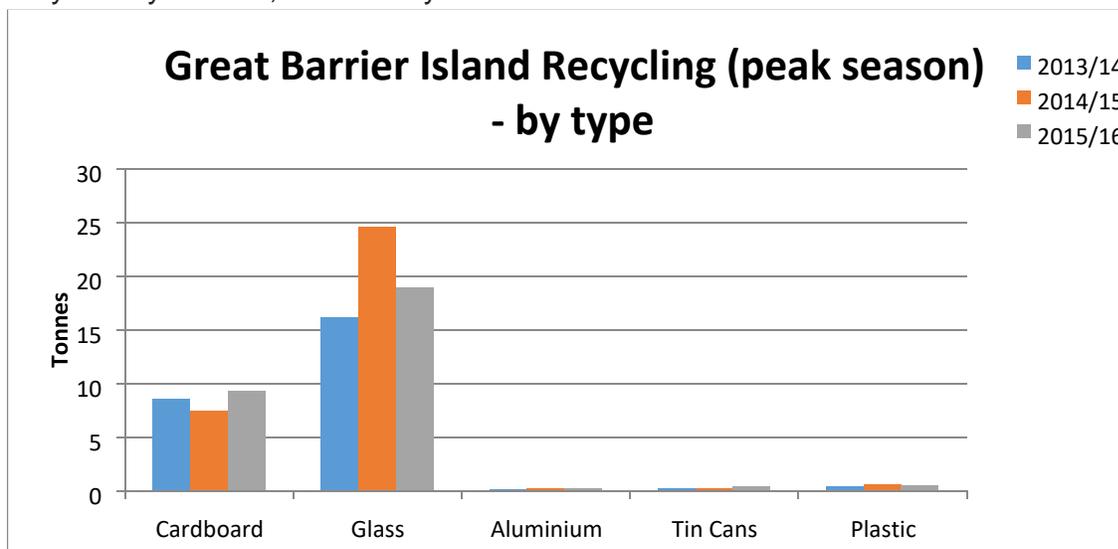


The chart above shows that refuse volumes have dropped significantly in the peak season, but are reasonably static in the summer and low seasons. The reduction in peak season is shown in both the kerbside refuse collection and public drop-off points – see chart below.





Recycling volumes are increasing slightly in the low season (likely to be predominantly residents); but fluctuate in the peak and summer seasons. Glass is the main item recycled by volume, followed by cardboard – see chart below.





Getting to zero waste. Tikapa Moana Hauraki Gulf Islands Waste Plan 2018, amended 2022

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Getting to zero waste

Tikapa Moana Hauraki Gulf Islands Waste Plan 2018