

Waste minimisation

A key part of waste minimisation is reducing and reusing waste, finding ways to reduce the waste created, or reusing materials that might otherwise be discarded. In an increasingly throwaway society, it is important to focus on recycling, reusing and recovery as key principles of minimising the amount of waste that ends up in landfill.

Regional waste management

In September 2008, the *Waste Minimisation Act 2008* was passed into law and became the basis for managing waste in New Zealand. The purpose of this Act is to encourage waste minimisation and a decrease in waste disposal in order to:

- ▷ protect the environment from harm; and
- ▷ provide environmental, social, economic, and cultural benefits.

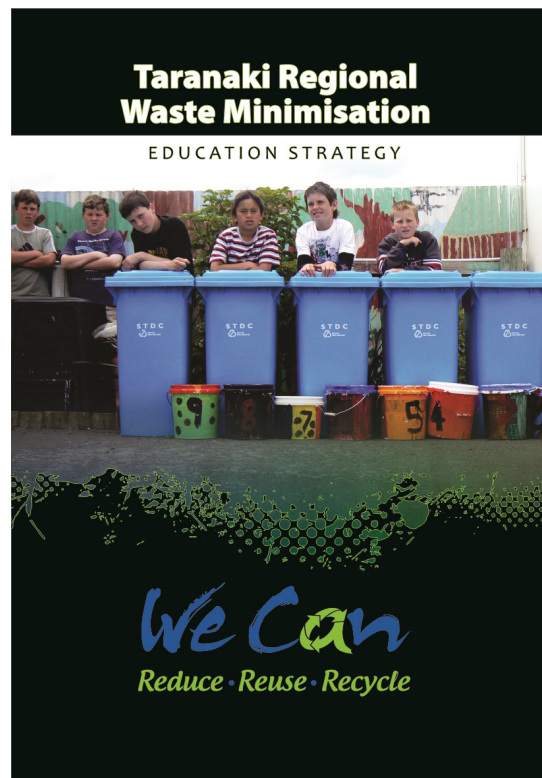
In 2009/2010 the Taranaki Solid Waste Management Committee was established. Administered by the Regional Council, this is a joint inter-council committee with decision-making roles. The committee provides a forum for New Plymouth District Council (NPDC), Stratford District Council (SDC), South Taranaki District Council (STDC) and Taranaki Regional Council to jointly consider and implement waste management issues of significance to the Taranaki region. In particular, the committee collaborates on the delivery of functions arising from the *Waste Minimisation Act 2008* (where it is efficient and effective to do so).

In 2011, the Taranaki Solid Waste Management Committee adopted the *Waste Management and Minimisation Strategy for Taranaki*. This strategy outlines how the region will manage waste. The goals of the strategy are to:

- ▷ reduce the harmful effects of waste; and
- ▷ improve the efficiency of resource use.

The strategy feeds into the district level waste minimisation and management plans produced by STDC, SDC and NPDC as required under the *Waste Minimisation Act*.

In 2013, the *Taranaki Regional Waste Minimisation Education Strategy* was adopted. This strategy focuses on education and is built on the strategy developed in 2011. Its purpose is to allow the Taranaki Solid Waste Management Committee “to effectively and efficiently communicate with and educate the community so that the entire regional community fully understands and appreciates the need to minimise waste and is empowered to take action”. Under the Taranaki Solid Waste Management Committee, the four councils in Taranaki also fund a Regional Waste Minimisation Officer, who works to promote sustainability and waste minimisation across the region.



Taranaki Regional Waste Minimisation Education Strategy.


Regional waste brand: 'We Can'

In 2012, the waste officers and communications staff at each of the four councils in the region developed a regional waste brand 'We Can'. The brand was approved by the Taranaki Solid Waste Management Committee in November 2012 and has subsequently been used for all communications involving waste or recycling. In the long term it is hoped that the brand will become recognisable to the public as representing waste-related activities in the region.



'We can' branding has been used in signage on waste collection trucks, in brochures and in other communications materials about recycling and in annual community awareness campaigns, such as TV Takeback.

Find out more

-  [Taranaki Regional Waste Minimisation and Education Strategy 2013 tinyurl.com/TRC8a](#)
- [Waste Management and Minimisation Strategy for Taranaki 2011 tinyurl.com/TRC8b](#)
- ['We can' \(TRC website\) wecan.org.nz](#)

Waste minimisation initiatives

Commercial service providers contracted by councils to collect kerbside recycling and other waste play a major role in recycling in the region. Recovery and processing of recycled goods is also undertaken by other companies. The councils in the region also actively support community and business efforts to minimise waste in the region.

Kerbside services

Each of the three district councils in Taranaki provides a kerbside recycling service. In the New Plymouth district, residents can recycle weekly and put unlimited recycling out for collection in plastic bags. The South Taranaki district also has a weekly recycling collection where residents are provided with a 120-litre wheelie bin. In the Stratford district recycling is collected monthly and residents are provided with a 240-litre wheelie bin.

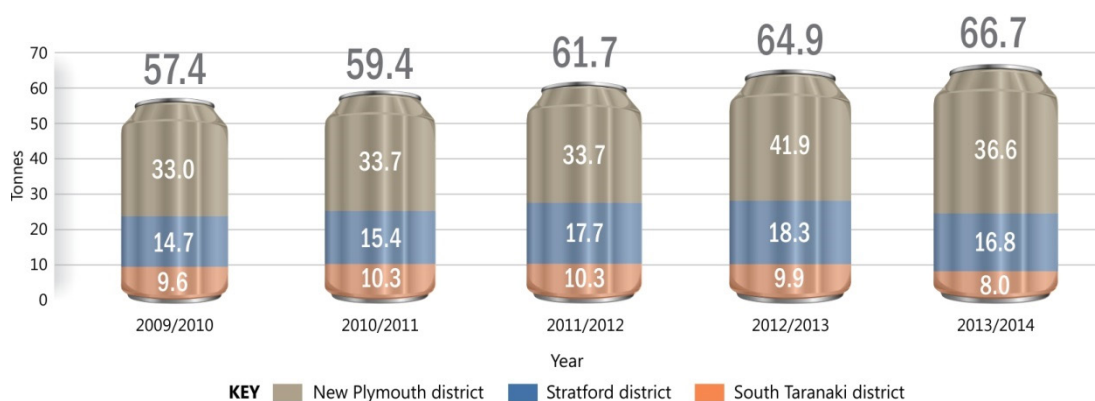
What's the story?

The amount of material recycled through council kerbside collections, at transfer stations and through council-provided school recycling services has increased in the region over each of the last five years.

In the 2013/2014 year, the overall increase in sorted recyclables for the region was smaller than for the previous two years, with reductions recorded in both the South Taranaki and Stratford districts. This is likely related to a period between October 2013 and February 2014, when a significant amount of material collected for recycling went straight to landfill while the contractor was setting up a new sorting facility.



Kerbside recycling is business as usual for students at St Joseph's School, Hāwera.



Kerbside recycling in the region has steadily increased over the past five years.

Composting

The South Taranaki District Council offers an optional fortnightly kerbside green waste collection using 240-litre wheelie bins. Residents in other districts can recycle their green waste through private contractors or at transfer stations. There is also an unquantified amount of green waste and food waste composted by residents at home.

2011 Rugby World Cup

The Rugby World Cup games at Stadium Taranaki (Yarrow Stadium) were a great success in terms of waste minimisation, with almost five tonnes of waste being recycled—an average of 46% of the waste over the three games.

The Regional Waste Minimisation Officer worked closely with New Plymouth District Council (NPDC) staff to implement waste reduction initiatives at the stadium during the Rugby World Cup. Recycling stations were set up for the public, including bin lids and flags provided by the 'Love NZ' Public Space Recycling Project. This was complemented by promotions on the big screen and PA announcements about using the recycling bins.

This recycling system will continue to be used for all events at the stadium in the future.



Electronic waste

In 2011, three council-supported electronic waste recycling sites commenced operation in the Taranaki region. These sites accept computers, televisions, stereos, printers and other e-waste. Following on from previous one-off e-day collections, establishing these sites allows residents to recycle their e-waste throughout the year rather than on one particular day.

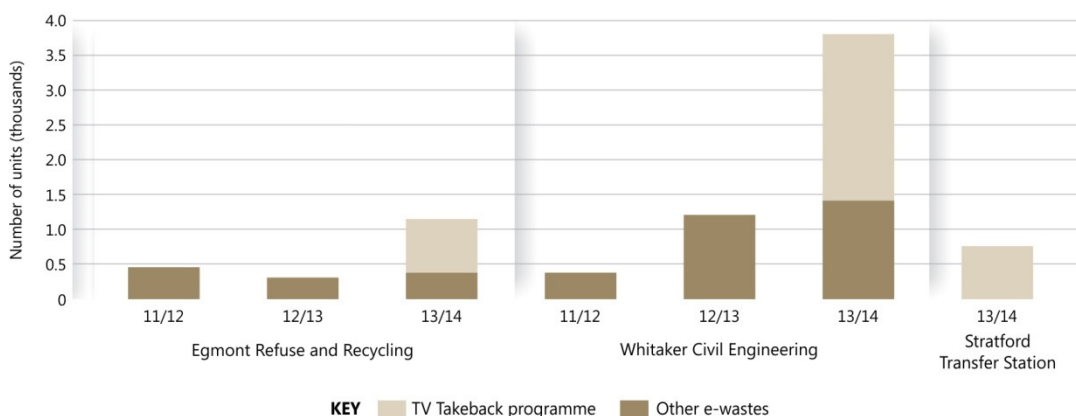
What's the story?

Current collection sites are located at Whitaker Civil Engineering on Corbett Road in Bell Block, the Stratford Transfer Station on Cordelia Street, and Egmont Refuse and Recycling on Scott Street, Hāwera. Until 2013, Egmont Refuse and Recycling also collected electronic waste from the Stratford district. The Stratford Transfer Station now accepts e-waste. Unfortunately no collection records were kept at the Stratford Transfer Station during the 2013/2014 year, except for the number of televisions collected as part of the TV Takeback programme.

Three sites collect electronic waste items for recycling (see graph *below* for results). Figures show that even when the televisions collected as part of the TV Takeback programme are excluded, the number of electronic items collected each year is increasing at a steady rate.



Recycling electronic waste has been well supported.



Electronic waste units collected 30 June 2011 to 30 June 2014.



Extensive advertising of the TV Takeback programme resulted in thousands of televisions being collected.

TV Takeback programme

During 2013, in association with the switchover to digital TV, the Government funded a TV Takeback programme. This programme allowed residents to recycle obsolete TVs at three electronic recycling sites and at selected national chain retailers for no more than \$5.

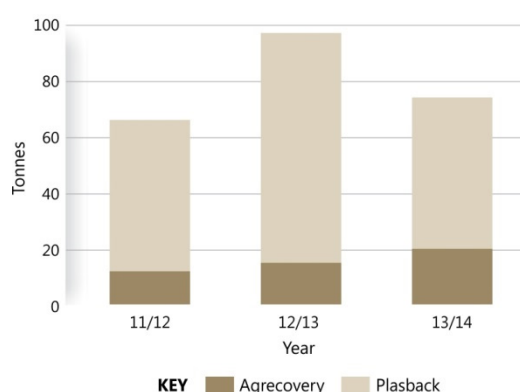
Various activities were undertaken to promote TV TakeBack. These included advertising on the *Taranaki Daily News* website, radio advertising, development of a webpage as part of the 'We Can' website, print advertising in local newspapers and information cards and bookmarks for the district council service centres. A total of 3,936 TVs were recycled through the council-supported electronic waste recycling sites.

Agricultural waste

The Council continues to support the farm plastics recycling programmes available in Taranaki. There are two main companies involved with this collection, Plasback and Agrecovery.

Plasback, established in New Zealand in 2006, currently recycles balewrap, silage sheet, polypropylene bags, HDPE drums, vineyard nets and twine. It also recovers HDPE drums.

The Agrecovery rural recycling programme enables farmers to recycle agrichemical plastic containers and drums. Reusable drums are also recovered. Silage wrap collection was discontinued from this programme during the 2013/2014 year.



The amount of farm plastics collected between June 2011 and 2014.

What's the story?

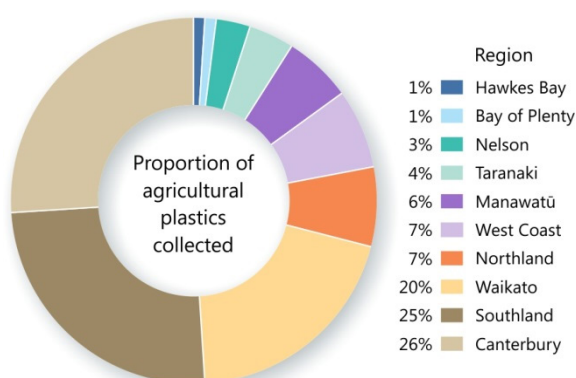
Data from farm plastics recycling programmes in the region appears to show that the quantity of waste collected by Agrecovery is increasing, with the quantity that Plasback collects remaining fairly constant over the long term. Further data is needed to confirm this as a trend.

National comparisons

Regional data collected by Plasback was used to compare Taranaki's agricultural plastics collection and recycling with other regions.



Plasback employees collect farm silage wrap for recycling.



The proportion of agricultural plastics collected in Taranaki during the 2013/2014 year was lower than many other dairying areas in New Zealand.

Project LiteClub

Project LiteClub works to promote sustainability in sports clubs. Clubs are provided with a number of resources to encourage sustainability, including sorting-at-source bins for recycling, and water and energy saving devices such as low flow shower heads and energy efficient light bulbs.

In the two visits to Taranaki to date, LiteClub staff have assisted 24 clubs, working with the clubs and with local waste businesses to help set up a detailed waste minimisation plan (and other support as needed). Four large New Plymouth clubs are now part of a waste minimisation acceleration programme, which includes an initial year of free recycling, provided with assistance from NPDC's Waste Levy Fund. The intention is to gather data over the year and use this for case studies to demonstrate the value of recycling to other clubs.

The Regional Waste Minimisation Officer provides local information and Project LiteClub has further visits to Taranaki planned to work with additional clubs.

Para Kore

Para Kore is a zero waste programme for marae. The programme is funded by the Ministry for the Environment and by the district councils in the region. The Taranaki Regional Council provides advice and support. Facilitators for the Taranaki area started working with marae in April 2013, with a plan to work with at least one marae in each iwi area. Para Kore facilitators are currently working with 12 marae: Meremere Marae, Oākura Pā, Otaraue Marae, Ōwae Marae, Puniho Pā, Te Pōtaka Pā, Waipapa Marae, Waiokura Marae, Wai-o-Turi Marae and three marae at Parihaka, Takitūtū, Te Niho o Te Atiawa, and Toroānui.



A waste audit at Tarawainuku Marae, Puniho Pā.

Business engagement

Between 2012 and 2014, Environmental Health Officers from the district councils surveyed 113 cafes and restaurants in the region on their recycling habits. The Regional Waste Minimisation Officer also offered assistance with recycling systems. During this process, businesses became more aware of recycling options for their waste and many made improvements to their existing systems.

School programmes

The Taranaki Regional Council offers an extensive waste minimisation programme for schools, where schools can take part in a series of three waste minimisation workshops. Initially a school learns about waste and why they should reduce, reuse and recycle. With the help of the Taranaki Regional Council Education Officer and the Regional Waste Minimisation Officer, the school then conducts a waste audit. The school uses the data gathered to produce a plan to start reducing, reusing and recycling their waste. The Council Education Officer completes a follow-up visit six to twelve months later, to look at the progress and measure the success of the school's waste reduction activities.



The Council's Education Officer helps students from Rāwhitiroa School with their waste audit.

Within these the five years the Council Education Officer has taken more than 50 lessons and nine waste audits have been completed.

Both the New Plymouth and South Taranaki district councils provide free recycling bins to schools to encourage recycling. The Regional Waste Minimisation Officer can also provide additional assistance to schools to help schools set up or improve their recycling systems.

The three district councils in the region also provide tours of their transfer stations, recycling facilities and landfills.

Puketapu Kindergarten teaches valuable lesson

You're never too old to learn, the old saying goes, and nor are you ever too young to learn about waste minimisation.

Take Puketapu Kindergarten in Bell Block, for example. It is attended by 60 children and has a staff of five—four teachers and an administrator. Not too long ago, the kindergarten generated two 240-litre bins of waste to landfill each week. There was no recycling, and no organic waste was composted.

However, an Environmental Education Awareness programme was developed, which quickly generated action to reduce, reuse and recycle. Waste minimisation is now part of the everyday programme and as well as a focus on recycling, there are five compost bins and five worm farms, the products of which are used in flower and vegetable gardens.

The kindergarten has halved its waste to landfill, from two to one 240-litre bin a week. It is also filling one 240-litre bin of recyclables each week, when previously there was no recycling.



Some seven litres of organic material is also used in compost or worm farms, instead of being sent to landfill, and is being turned into income, with wormcasts and worm juice sold from a stall at the gate.

Other initiatives have included leaf collections, pest management activities and can collections. The children are also encouraged to consider how healthy their lunches are, and to cut down on packaging.



Children learn about composting as part of gardening activities at Puketapu Kindergarten.

Find out more

-  Agrecovery recycling programme tinyurl.com/TRC8f
- E-waste initiatives* tinyurl.com/TRC8d
- Para Kore programme—zero waste for marae* tinyurl.com/TRC8h
- Plasback recycling programme* tinyurl.com/TRC8e
- Project Litefoot—energy and waste efficiency for sports club* tinyurl.com/TRC8g
- Waste minimisation study unit for schools (TRC)* tinyurl.com/TRC8i
-  *New Plymouth District Council* tinyurl.com/TRC8n
- Powerco Ltd* tinyurl.com/TRC8m
- Puketapu Kindergarten* tinyurl.com/TRC8j



House Maintenance Manager, Yvonne Kettle and Head Chef, Krishna Bogulla from New Plymouth's Devon Hotel.

Hotel embraces recycling

A New Plymouth hotel has massively increased its recycling and dramatically reduced its waste to landfill—and communication is the key to its success.

Within a year of starting a waste minimisation campaign, the Devon Hotel had achieved a 60% reduction in the rubbish it sends to landfill, from 1.2 tonnes a week to less than half a tonne, and a whopping 780% increase in the amount of material it recycles, from 110 kilograms a week to more than 850 kilograms. Food waste is sent to pig farms and at least two 240-litre bins of garden waste are also collected weekly for composting.

Laying on extra recycling bins was relatively easy and simple. The most complicated part was ensuring the recycling message got to all staff in what is a round-the-clock operation involving different shifts and many part-time and casual workers.

'A 60% reduction in the rubbish it sends to landfill ...'

"It was a case of getting the day shift all sorted, then starting again with the night shift," says the Devon's House and Maintenance Manager, Yvonne Kettle.

"It really was a matter of changing habits and changing mind-sets. It was sometimes difficult at first, and I had to take on the role of 'rubbish witch' for a while. But after a few weeks everyone started getting into the swing of things. Now everyone enjoys seeing what a difference it makes."

An eye-opener for her has been seeing how much cardboard is generated by the kitchen operation. "It all used to get dumped. Now it gets recycled, unless it has food on it or in it."

How did it all start? As part of a coordinated approach to waste minimisation by the region's four councils, the issue of recycling is raised when food premises are inspected. Thus the Devon's Head Chef, Krishna Bogulla, found himself completing a questionnaire on the subject—and saw potential for the hotel to improve.

Advice was sought from the Taranaki Regional Council's Waste Minimisation Officer, who works with industry sectors and individual firms to help them reduce the burden on Taranaki's sole landfill, and Waste Management NZ also worked closely with the hotel to set up its new system.

The rest is history, although Yvonne notes that continued commitment and communication are required.



A few of the hotel's many and well-used recycling bins.

Sustainability at Taranaki Regional Council

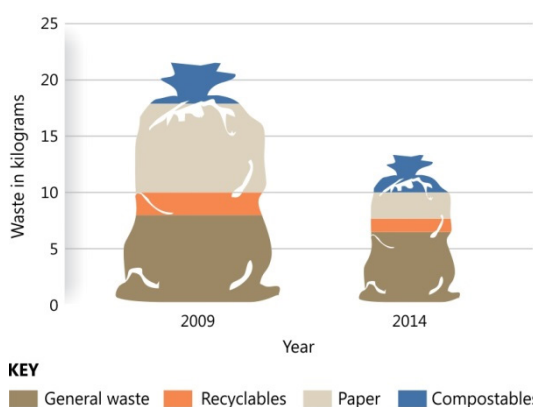
As an organisation, the Taranaki Regional Council operates internal waste minimisation initiatives. The Council's in-house sustainability group continues to promote sustainability within council and to identify improvements that can be made. In 2012, the waste collection services contract was reviewed and as a result a more comprehensive system was implemented. Council staff can recycle glass bottles, aluminium and steel cans, plastics (1 and 2), paper and cardboard. Food scraps are also composted. Each staff member has a brightly coloured paper recycling bin and general recyclables and food scraps bins are located in each work area.

In 2012, a section on 'Sustainability in the Workplace' was included in the staff guidelines document *Working for the Taranaki Regional Council*. This formalised what is expected from staff in relation to reducing waste and recycling. All new staff are introduced to the Council's recycling system as part of induction.

Waste audit

The Council has undertaken regular waste audits of the amount and type of waste disposed of from the main office building on Cloten Road. The most recent audit of February 2014 showed:

- ▷ The amount of waste going to landfill had reduced by 38% when compared with the first audit undertaken in December 2009, based on the number of full-time equivalent (FTE) staff. This is a total of 13.2 kilograms per person per annum—down from 21.5 kilograms.
- ▷ The compostables category (food waste and compostable paper) was the largest category with potential to be diverted from landfill, at 3.4 kilograms per FTE per year. This was followed by recyclable paper at 2.3 kilograms per FTE per year.
- ▷ The weight of other recyclables was 1.1 kilograms per FTE per year.



Significantly less waste was collected during the Council's 2014 waste audit compared with 2009, indicating a reduction in waste generated.



The Council's recycling checklist.



Council staff carry out a waste audit.



Recycling bin and worm farm at Hollard Gardens.

Into the ground go the grounds

Gardener Mitch Graham's fervent hope is that the world never grows tired of coffee. Every week the coffee grounds from two local cafes are fed into the compost at Tūpare, the New Plymouth heritage property where Mitch is the manager. And he's enthusiastic about the results. "It's been part of a renewed focus on composting and it's really paying off for us in a lot of ways."

Composting and broader waste minimisation have become important considerations at Tūpare, Pukeiti and Hollard Gardens, the three heritage properties owned and managed by the Taranaki Regional Council on behalf of the people of the region. And gardeners being gardeners, the approaches can be quirky and creative.

'Staff happily find new uses for any discarded material that might previously have been sent to landfill ...'

At Hollard Gardens, for example, there are worm farms in old baths and in boxes that double as park benches. And staff happily find new uses for any discarded material that might previously have been sent to landfill. With a bit of imagination, it is turned into sculptures, or furniture, or habitats to encourage insects and wildlife. Potatoes are grown in old tyres, and old fencing has been used to give the recycling bins that rustic look. The barbecue area at Hollards has been set up with recycling and composting bins to make it easy for users to do the right thing. These and other initiatives have resulted in a reduction of waste to landfill from four to five rubbish bags a week to one a week in winter and two to three a week in summer.

A major development at Pukeiti has been construction of three large compost pads, while track upgrades mean a mulcher can now be taken to most areas of the garden. The nursery has opted for reusable hard pots rather than plant bags, and while the café does sell coffee in takeaway compostable cups, it encourages patrons to remain in the café and enjoy their hot drinks in crockery cups. Those

compostable coffee cups, meanwhile, are collected and washed from February to October and reused as seedling containers in the Rainforest School's 'pot-a-plant' sessions. Being at the mountain end of Carrington Road, Pukeiti takes responsibility for its own recycling, with visitors encouraged to use the marked bins and recyclables stored on site until there is enough to fill a ute and take to the transfer station at Ōkato.

The Council's Regional Gardens Manager, Greg Rine, says it's been interesting to watch waste minimisation ideas being bounced around by staff at the gardens, and heartening to see staff adopt and adapt practices followed by their colleagues at the different locations. "Minimising waste to landfill is not only important in terms of protecting the environment and conserving resources, but also important because these days, garden visitors expect us to be doing it," he says. "The garden setting is an opportunity for us to be creative and have some fun with it. And there's a financial upside in being able to use our own compost."



Worm farm, complete with instructions, at Hollard Gardens.