



# Draft Zero Waste Management Plan



# Zero Waste Management Plan

The Zero Waste Management Plan seeks to address the issue of the volume of solid waste being disposed of into landfill.

This waste management plan is the Council's guiding document for dealing with its statutory duty of managing solid waste in terms of the Local Government Act 1974. The Zero Waste Management Plan (ZWMP) has been prepared in accordance with the Local Government Act 1974 & 2002 and is to be included in the Long Term Council Community Plan 2006-2016. The ZWMP seeks to encourage efficient waste management in the Kaikoura District with a view of promoting waste minimisation to achieve the community's goal of zero waste to landfill.

Zero Waste Plan Kaikoura 2007 (ZWPK) was developed to support the Kaikoura community's environmental, social and economic and cultural goals. The ZWMP focuses on the management of solid waste - all biodegradable waste, recyclables, inert material and compost waste.

The ZWMP is divided into the following five sections:

1. A Brief History of Zero Waste Movement in New Zealand
2. Kaikoura's vision: outlines the Kaikoura District's vision to achieve zero waste to landfill while considering local, national and international regulations and policies.
3. Current waste management in Kaikoura: describes the current (2006) collection, recycling and final disposal systems.
4. Future waste management in Kaikoura and;
5. Actions to achieve zero waste to landfill: briefly describes proposed programs to progress towards achieving zero waste to landfill and outlines areas where diversion may be improved.

## Explanation

This Plan forms an important part of the Council commitment to sustainability. It has been designed to capture both the moral and legal responsibilities of Council in terms of incorporating sustainability into its activities and decision making.

This plan is to be used to assist the Kaikoura District Council in their decision making process in all the aspects of Council operations. The ZWMP may be taken into account when making decisions under the Resource Management Act, the Local Government Act or other enactment or bylaw for which the Council is responsible. The ZWMP may be disregarded if it has no relevance to the decision being made, or if there is good reason to depart from The ZWMP.

The Local Government Act 2002 places a legal imperative onto the Council to adopt a "sustainability approach";

- this is expressed when the Act defines the purpose of local government, Part 2, Section 10,
- the principles that relate to local authorities, Part 2, Section 14,
- the requirements for decision making, Part 6, Section 77-81.
- and identifies four components that the Council must take into account and these are the social, cultural, economic, environmental well-being of present and future generations.

The Resource Management Act, sets out the things the Council must consider when making a decision in under that Act. Section 104(1)c of the Act states when considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have

regard to any other matter the consent authority considers relevant and reasonably necessary to determine the application.

**Note:** An annually updated Council Annual Plan forms part of the waste management plan. It contains information on specific actions and programmes the Council plans to implement or continue with. The Council's Annual Financial Plan and Program process affords an annual opportunity for public submissions. The Annual Plan will in future be available on the Council's website at [www.kaikoura.govt.nz](http://www.kaikoura.govt.nz).

## How to Use this Plan

The following information outlines how a project or proposal can be assessed against the ZWMP. The ZWMP is not a bylaw, therefore a permit or consent is not required to be issued under this plan. The ZWMP outlines what the community seeks to achieve (the objectives) in regard to Waste Management and how the community will progress the vision of waste minimisation. The ZWMP shall be assessed in the context of wider decision making processes including resource consents applications and local government functions.

In the next section of this plan, key objectives are outlined. These objectives are the five aims of the ZWMP in order to address the issue of solid waste disposal to landfill. A proposal should be assessed to see if it will have any contribution to the issue of solid waste to landfill and if so, shall include information on what that contribution would be. A short assessment of the proposal should then be made and include information as follows:

- Does the proposal have any relevance to the ZWMP? If no, why?
- If yes, then outline:
  - Details of how the proposal meets the five objectives outlined. Details may include waste diversion and minimisation processes that may be included in the proposal, waste diversion processes, re-use or recycling processes. This includes any attempts to separate waste, reuse in internal processes or divert to community recycling processes.
  - Details on how the project or proposal will manage any residual waste and why a higher volume of the residual waste cannot be diverted from the solid waste stream.
  - Details on how the project seeks to reduce the amount of waste produced. If the proposal is a new fast food outlet, for example, details of litter control mechanisms may be explained.
  - Details on how the proposal will encourage waste reduction and waste avoidance.
  - How the proposal will assist the Kaikoura community in complying with any additional legislative requirements in regard to waste.
  - If the proposal does not meet one or any of the objectives, an explanation as to why the proposal shall not meet the objectives should be included in the assessment. It may be necessary to consider social, economic and community wellbeing.

# 1. The Vision

The Kaikoura District's vision for waste management is progressively to decrease the volumes of solid waste disposed of into landfill, with a view to ultimately achieving zero waste to landfill.

This goal stems from the communities desire to balance economic growth with the responsible management of the communities resources and the protection of the unique natural environment of the district.

For a community to move toward sustainability, realistic steps must be taken while striving towards the ultimate goal of zero waste.

Adopting the Zero Waste vision in the Kaikoura District has created the opportunity to rethink the way waste is viewed and managed throughout the community. To provide a mechanism for sound environmental practices to be implemented and provides a context for many Councils decisions. The level of awareness regarding waste disposal reaches all levels of the Kaikoura community from the largest employers to elementary school children. Waste is something that the whole Community is involved in and new ideas come not only from local government but from the community as a whole.

## Objectives

To achieve the vision for a waste minimisation toward zero waste incorporates the principles of waste reduction, reuse, recycling, recovery and manage residual waste as highlighted in the following objectives.

No system is 100% efficient and with upgrading technologies available at Kaikoura's Resource Recovery Centre site, the actual physical goal of zero waste to the landfill is attainable. By aiming for Zero Waste, the goal of waste minimisation may be achieved. The higher the Kaikoura Community aims, the more waste can be minimised, and the closer the Community is towards Zero Waste. "Waste" in this context is not solid matter but any lost opportunity to reduce, re-use, recycle or manage residual waste matter in the most efficient manner possible.

Waste minimisation with the larger overriding goal of Zero Waste empowers individuals and the community. The objective is continuous improvement based on sound environmental practise that change the way the Community thinks about and disposes of waste. It focuses on awareness personal responsibility, creativity and efficient use of resources, to promote better social, economic and environmental outcomes for the entire community.

The five objectives of the ZWMP are:

1. Diversion of the maximize amount of resources from landfill.  
Continue to find more and better ways to reduce re-use and recycle material before they end up in the landfill.
2. Managing Residual Waste  
High environmental standards are most important in achieving sustainability and any residual waste must be treated to minimise adverse effects on the environment (water, air, biodiversity etc).
3. Reduce the amount of waste produced within the district  
This addresses the cause of "waste" and aims to reduce the production of waste.
4. Ensure social and economic well being of Community

The process of waste reduction and waste avoidance should encourage community participation and not hinder but add to the social and economic well being of the community.

5. Adhere to legislative requirements

Consider and include, as appropriate, relevant national and international legislation.

## 2. History

With a rise in purchasing power, economic expansion and an expanding tourism, the problem of waste disposal and its associated costs in New Zealand is growing. New Zealand with its clean green branding must balance this desired growth with sound environmental and economic policies to manage waste disposal.

While many products are manufactured outside of an area, local communities are responsible for all waste disposal. This is especially true in Kaikoura as there is little primary production in the District, and therefore much of the waste is *imported* into the District. This is in the form of products, packaging and foodstuff. In isolated areas, such as Kaikoura District, the cost of transport and other factors prohibits returning products to the producer at the end of its lifespan.

In New Zealand, Central Government dictates that local communities must bear the cost of the waste disposal. In the past communities have invested heavily on waste disposal systems; including waste collection services, waste sorting facilities and waste disposal facilities with little to no emphasis on reducing the actual amount of waste. With landfills reaching the end of their life spans and the rising cost of waste disposal, communities needed to find better alternatives to waste disposal.

Zero waste is a concept inspired by Nature. In the natural world, waste from one organism becomes resources for others, creating cyclical material flows in a state of constant equilibrium and balance<sup>1</sup>. This means that much waste is recycled or reused by the next creature in the food chain, that creature's waste is reused by the next creature and so on in the system. People have upset this balance of the waste stream by producing waste in a form and volume that traditional systems cannot sustainably break down, necessitating ever growing number of landfills as the population and the economy grows.

Founded in 1997, the Zero Waste New Zealand Trust set priority for New Zealanders to achieve maximum diversions of waste away from landfills. In 2002, New Zealand became the first country in the world to adopt a vision of Zero Waste. This vision is supported by The New Zealand Waste Strategy "Towards Zero Waste and a Sustainable New Zealand" published by the Ministry for the Environment.

Prior to the New Zealand Waste Strategy publication, individual local authorities had started to adopt Zero Waste targets. Kaikoura District Council was one of the early pioneers of this movement and set Zero Waste targets in September 1998<sup>2</sup>, becoming the first community in the South Island to do so. In its mission to achieve zero waste to landfill, Council ceased to collect household refuse from the kerbside - replacing this service with a comprehensive weekly recycling collection in most of the district. This was one of the first steps to shift the community's perception of waste disposal.

At this time the Kaikoura District Council also embraced the Green Globe program - an international program focused on environmental sustainability. Green Globe provides a framework for Kaikoura, as a tourism destination, to measure, manage and reduce the community's impact on the environment. The Green Globe program complements the goals and commitment of the community to achieve the goal of Zero Waste, specifically through the annual measurement and actions to reduce the production of solid waste.

The growing pressure put on the district due to tourism was another reason to embrace the Green Globe and Zero Waste vision. Kaikoura has had huge growth in visitor numbers since the 1990's,

---

<sup>1</sup> Getting there! The Road to Zero Waste Prepared for Zero Waste New Zealand Trust.

<sup>2</sup> See Appendix 2 – Council minutes September 1998

and the natural environment is a huge draw card to visitors, any measures that move toward the protection of this natural environment is positive for the visitor industry.

Kaikoura responded to its Zero Waste challenge by forming a joint venture company with local community group, Kaikoura Wastebusters. The new venture, with a Contractor currently managing Kaikoura's Resource Recovery Centre, was given responsibility for managing all the town's waste services and implementing the Zero Waste Policy. The aim is to develop low cost solutions to drive waste diversion to its maximum level.

### 3. Current Waste Management in Kaikoura

This section provides an overview of Kaikoura's current waste management systems highlighting the Kaikoura District's progress of achieving zero waste to landfill. The waste management systems include kerbside recycling collection, general recycling and final disposal of waste.

#### 1. Background

In its mission to achieve zero waste to landfill Council ceased to provide a household kerbside rubbish collection service 1998. In its place, a kerbside recycling pickup is undertaken in the urban area and a similar collection at strategic locations in the rural areas throughout the District each week. Recycling materials that are currently picked up are glass, plastics, aluminium and tin cans and paper. All other material is taken by the community to the Resource Recovery Centre.

To meet the waste requirements of the high visitor number, the Council provides and maintains public recycling and refuse facilities in both the urban and rural areas - in the form of recycling stations and refuse bins (for refuse and recycling).

The Resource Recovery Centre, including the recycling and commercial refuse collections, landfill operation and site are managed by a contractor on behalf of Kaikoura District Council. The Kaikoura Landfill Management Plan 2006 (Connell Wagner) provides further detail of the management structure and operational procedures associated with the landfill.

Kaikoura's Resource Recovery Centre, established in 2000, employs an integrated waste management strategy: the aim of the Centre is two-fold: to achieve the Zero Waste vision while providing sustainable employment for members of Kaikoura's community by using waste material as a resource.

Kaikoura's Resource Recovery Centre provides a service for rate payers: collecting recyclables from the urban area and from strategic locations in the rural areas and managing the landfill and recycling programs. Kaikoura's Resource Recovery Centre also offers user-pays collection for local businesses of both recyclables and refuse and generates funding to better manage waste through programs such as Trees for Travellers.

#### 2. Recycling

Currently Kaikoura's Resource Recovery Centre collects and manually sorts all recycling, dividing it and preparing it for transport or sale at the Resource Recovery Centre. The following items are collected:

- Paper & cardboard: Newspapers, magazines, phone books, junk mail, office paper, computer paper, envelopes, cardboard, paper towels (clean), toilet paper tubes, egg cartons etc.
- Plastics: all hard plastics, regardless of plastic identification code and all clean soft plastics (bags, wrapping etc).
- Metal: steel and aluminium cans, clean pie plates and dinner trays.
- Glass: all clean glass.

Other items that can be dropped off to Kaikoura's Resource Recovery Centre and are diverted from landfill:

- Batteries.
- Organic and Green Waste.
- Appliances, Electronic and Computer Waste.

- All scrap metals.
- Offal not suitable for composting.
- Hydrocarbons (waste oil).
- Non-Hazardous Chemicals.
- Gardening supplies
- Clothes, Toys, Books
- Other retail goods suitable for reuse

The Kaikoura District faced a huge problem in adopting the Zero Waste vision. Limited income from a small rating base stretched to meet the requirements of the small population and large visitor numbers. Residents demand for increased services and low rate levels result in the Kaikoura District Council supporting innovation and resourceful solutions with low capital input to achieve sound environmental practice and customer service. Kaikoura District Council and Kaikoura's Resource Recovery Centre has worked both together, independently and with the community to implement the following waste minimisation initiatives:

- Weekly kerbside recyclables collection for town and some rural settlement residents (residual waste is taken to the resource recovery centre as needed by residents or picked-up through a local bin collection agency.).
- Weekly recyclables pick up for outlying areas.
- On demand recyclables collection for business.
- Skip-bin hire for the construction industry.
- IWK designed and built an enclosed composting unit to handle organics, including greenwaste and foodwaste which is sold back to the community as quality compost.
- A stockpile of those materials that are currently uneconomic to recycle but could have value in the future.
- A thriving re-use shop of diverted materials including clothing, household items and building materials and other materials suited to re-use.
- Use of crushed recovered glass as a filter medium for leachate control.
- Compaction and baling of residual waste to maximise landfill space.
- First community in New Zealand to provide recycling bins in public places.
- Provision of public recycling bins at Community events.
- Education aimed at changing the community perception about waste management and fostering a sense of pride in the districts response to the problems of waste management
- Reusable grocery bags as part of the Fantastic No Plastic Campaign

### 3. Landfill

The landfill waste is termed "residual waste". Currently, everything that is not diverted for recycling, reuse or special treatment/disposal and complies with the Environment Canterbury resource consent regulating the use of the landfill is disposed in the district's landfill. An average of 30% of residual waste is pressed in a mechanical compactor and baled, helping reduce its impact on the lifespan of the landfill.

Non-sorted waste is a large contributor to residual waste. This waste is unsorted, and usually arrives from businesses, commercial rubbish bin operators or private households. Much of this waste arrives in black polythene rubbish bags. The non-sorted waste is a wasted resource and much of the volume could be diverted from landfill if the systems were in place to sort and educate dumpers of the issues around the non-sorted waste.

Composition of landfill waste - Table 1

Solid Waste Analysis Protocol (SWAP) below, is a summary of a survey conducted by the Ministry of Environment in 2004 - highlighting the composition of waste entering the Kaikoura landfill. This analysis of waste demonstrates that 23% of waste in the landfill is organic. If organics, paper, plastic and other recyclables were removed from the waste stream, diversion could lift from 56% to as high as 94%.

**Table 1: Solid Waste Analysis Protocol**

Paper	14.1%
Plastic	10.8%
Organic	23.3%
Ferrous Metal	3.7%
Non ferrous Metal	1.6%
Glass	3.5%
Textiles	4.8%
Nappies/Sanitary	6.3%
Rubble/concrete	14.2%
Timber	10.8%
Rubber	5.8%
Potentially Hazardous	1.2%
Total	100%

The Wastebusters movement was a group started in 1997 and sought to bring change to the Community by reducing the volume of waste entering the landfill in Kaikoura. This was the beginning of the community support to the reduction of the volume of the landfill waste and since this date, recycling has become an ordinary part of living in Kaikoura. A huge sector of the community support the reduction of waste and separating waste for recycling has become second nature for many people. A small sector of the Community continues to put all their waste into landfill bags, and it is this sector that continues to contribute to the residual waste stream. Due to the volume to residual waste remaining at a constant proportion, it is up to the Community leaders to seek new methods to continue to reduce the amount of residual waste and gain Community participation.

## 4. Future Waste Management in Kaikoura

The future management of recycling and residual waste in the Kaikoura District must consider the following:

1. Impact of waste
2. Social & environmental benefits of waste minimisation.
3. Future direction of Kaikoura District waste management

### 1. Impact of waste

If more waste is diverted away from landfill, the impact of the landfill on the environment is reduced. Potential impacts on the environment from landfill operations are outlined in Table 2.

Actions planned to achieve zero waste to landfill are considered in Section 4: Actions to Achieve Zero Waste to landfill.

**Table 2: Environmental Impact of Landfill Operation**

	<b>Impact</b>	<b>Landfill Local Kaikoura</b>	<b>Offsite Modern Landfill</b>
Leachate	Potential impact through contamination of waterways and soil in runoff area. Culturally unacceptable	Leachate effluent is meeting the Environment Canterbury consent requirements. However the amount is unknown.	Leachate is collected in tanks. Amount is known. Outflow-points known and intakes are working. Leachate is collected and treated at treatment plant
Gas flux	Potential impact through air contamination and soil contamination in immediate site. Potential health hazard	Amount unknown No monitoring Collection not cost effective	Monitored and amount after closure quantified and collected and used appropriately.
Ground sealing	Positive impact as removes risk of contamination through uncontrolled leachate runoff & gas flux	Fine siltstone	Fine siltstone plus a liner system (four layers of three different materials)
Transportation	Discharge of carbon dioxide and minor contaminants Risk of truck accidents in marine environment Cost of Transport	Final disposal emissions and transport costs are at a minimum	Emissions caused by transport of residual waste to other location Greater cost to transport

Many of the environmental impacts from landfill sites can be managed and reduced through modern technology and best practise landfill design. However, landfill sites use up valuable land resources and may create future health and contamination risks. Some research suggests that landfill designs are not infallible and environmental impacts still exist despite management. Landfill sites offer a finite solution for a problem that is expanding exponentially and should be seen as one of the tools of waste management rather than the solution.

For communities, managing waste is expensive and requires ongoing capital expenditure. Establishing new landfill areas are expensive requiring extensive engineering and must meet higher environmental standards while ongoing capital expenditure is required at closed landfills due to

ongoing management and monitoring. Additional cost comes from the infrastructure and staff required to manage and run a landfill.

In addition, turning usable materials into waste by disposal in landfills means valuable resources are lost from industry and production processes. While much material is produced from “cheap” resources, it must be considered that the resources on this planet are finite and one day we may be reliant on recycled material in industrial processes. Therefore, for a myriad of reasons, waste minimisation is good common sense. Given the districts isolation and the rising cost of transport, the Resource Recovery Centre offers a valuable resource for the community by providing a cheaper, environmentally friendly and less time consuming solution to the big box retailers in Christchurch.

The actual cost of Residual Waste Disposal is not truly reflected in dollar value, as the cost is ongoing in maintenance, environmental and social impacts. Nor is the Community served through a user pays system. A user pays system means the Community is required to pay the full cost of waste disposal and this amount would not be offset by income from the sale of recyclable goods, this requires the consumer to meet the cost of waste disposal, so while not directly apportioned through rates, the community is paying. Regardless of whether the Council pays for disposal through rates, or it is a user pays system; funds spent on land filling waste are a direct cost and a loss to the community.

Table 3, below, compares costs associated with using landfill options available to the Kaikoura Community. Transportation of waste highlights that total costs of disposal are likely to be more expensive at other offsite landfill, as up to 44% of the costs for final disposal relate to transport. The calculations are calculated on a cost per tonne, including GST, expressed in percentage due to financial sensitivity.

Table 3. Percentage cost comparison between disposal at Offsite and Local Landfills.

**Table 3: Cost comparison of offsite and local landfill**

Cost area	Local Landfill	Offsite Landfill
Operational- Cost generated by the process of final disposal mechanical compression	75%	52%
Staffing Cost generated through management of residual waste on site i.e. weigh bridge	25%	25%
Transport Cost generated from transport from the recovery depot to the land fill	0%	44%
Total	100%	121%

It clearly demonstrates the likelihood that cost will increase for the community in the future when the current landfill reaches capacity. However if the amount of residual waste is greatly reduced before the landfill reaches capacity, this may extend the life of the landfill or lower the overall cost to the community in dollar terms as sending the waste offsite may be reduced or remain at current level

In addition, waste may be included in the Governments Emissions Trading Scheme (GETS) by 2013. The gas targeted by the Emissions Trading Scheme is primarily methane and methane is

produced through organic matter decomposing without oxygen. Oxygen is excluded from the landfill process by the compaction, lining and capping processes, therefore any organic matter that is present in the residual waste stream is breaking down without oxygen. This organic content of waste may be subject to costs associated with GETS Separating organic matter from the waste stream would help to balance any additional the cost related to GETS while extending the capacity of the on-site land fill or reducing the cost of transport to landfills outside of the district.

In the future the actual cost of Waste disposal may increase through the imposition of increased central government levies. These levies may result in charges for methane gas production. Charges may also be incurred for residual waste volume, and charge for the waste that could be diverted from landfill but is not.

## 2. Social & Environmental Benefits of Waste Minimisation.

Saving money is only one of the benefits to the Kaikoura Community of minimising waste to landfill. There are many social and environment benefits. Some of the direct benefits are outlined below in Table 4. The indirect benefits are outlined as follows:

Tourism – our clean environment is our nation’s biggest asset. The international perception of New Zealand as a clean green country and the confirmation of that perception by visitors from abroad rely on the health of our environment. It is vital to the success of our local tourism operators and more widely linked to the success of our export and nation-wide tourism industries.

Imports – by maximizing the recycling and reusing of materials and products, we can significantly cut down on imported materials and make sure that those we do import are used to the full. In addition, maximum usage reduces costs, carbon emissions and other pollution related to the transportation of imports.

Global Warming/Climate Change – Landfills are a source of greenhouse gas emissions. Large scale waste elimination will help the district meet our obligations under Green Globe and Communities for Climate Protection. In addition, by separating organic waste from landfill waste, the incidence of methane emissions is reduced. Methane is a potent greenhouse gas with a high global warming potential (i.e., warming effect compared to carbon dioxide). When averaged over 100 years each kg of CH<sub>4</sub> warms the Earth 25 times as much as the same mass of CO<sub>2</sub>.

Local Economic Development – Local business, jobs, and wealth can be created from the processing and reusing of materials previously discarded as waste. In other districts, small businesses have developed using products that were previously waste sent to landfill.

Employment – The recovered-material industry in New Zealand is already a significant part of the economy.

Liability – our long term waste disposal costs will be greatly reduced and the ongoing maintenance cost of existing landfill sites is reduced.

**Table 4: Benefits of Waste Minimisation**

<b>Social</b>	<b>Environmental</b>
Direct Cost reduction in waste disposal	Less waste to landfill
Raw material available for industry	Lower contaminant level in landfills
Lower future cost of resources	Less risk of environmental hazard from transporting waste
Health hazards from landfills reduced	Less impact on the environment from transporting waste
Health hazards from transportation of waste reduced	Resources are available for future use

<b>Social</b>	<b>Environmental</b>
Future lower costs for infrastructure funding	Less risk to water & soil from landfill contamination
Increased business & wealth from recycling	Greater land area available for utilisation

### 3. Future Direction of Kaikoura District Waste Management

Following the resolution by Kaikoura District Council to move toward a Zero Waste target, after some initial reservations the majority of the Kaikoura Community supported the vision of Zero Waste. Some sectors of the Community opposed the move to stop landfill waste collection and found the inconvenience of transporting ones own waste to the landfill as unacceptable.

In the past the Kaikoura Community has been a leader in the field of waste minimisation and the district has a reputation both nationally and abroad as a “Sustainable Community”. With the central government’s moving to introduce waste minimisation legislation, the Kaikoura Community must continue to lead the way and continue along the path toward zero waste. The next section will look at ways in which the district is trying to keep its promise to the vision of zero waste.

However, complacency can result in a lack of integration between the goal of Zero Waste and the actual behaviour of the community. As with all endeavours, the Kaikoura Community needs to continue to work towards the goal and the Kaikoura District Council can offer leadership and support the goal and the vision for the Kaikoura Community.

This section outlines the methods used to by the Kaikoura District Council to continue to lead the community toward the goal of Zero Waste. The goal is necessary to future proof the community against adverse effects from changes in the waste sector, these may be legislative changes, or increases charges for solid waste disposal that effect the communities wellbeing.

## 5. Actions to Achieve Zero Waste to Landfill

With the vision of zero waste as the goal for waste management throughout the Kaikoura District and in consideration of economic, environmental and social costs and benefits of meeting this goal, the following targets have been set through the LTCCP 2006-2016:

- Introduce Zero Organic Waste to Landfill (ZORG) during 2006/07 financial year.
- Enhance the provision of recycling collections in the rural areas by 2008.
- Achieve ZORG to landfill by 2010.
- Achieve Zero waste to Kaikoura landfill by 2015.

Following community consultation through the 2007/2008 Annual Planning process the following amendments were made, altering the time frames indicated through the LTCCP.

- The provision for major funding for a household ZORG collection through a series of rate payer funded recycling bins has been removed for the 2007/2008 year
- The provision to enhance the rural recycling collections has been removed for the 2007/2008 financial year.

### Tools for Monitoring the Progress Towards Zero Waste

Monitoring the diversion rate of waste away from landfill and surveying community satisfaction with the services provided by the Council and Innovative Waste, will continue to detail our community's progress towards achieving zero waste.

Annual progress reports will be available through Council, Community Satisfaction Survey Reports and the Green Globe Benchmarking reports, all available through the Kaikoura District Council website: [www.kaikoura.govt.nz](http://www.kaikoura.govt.nz).

Commitment to achieving zero waste to landfill has not diminished and over the next ten years, implementing the new initiatives, will assist in achieving zero waste to landfill in the Kaikoura District.

As with any plan, the vision starts with people. People are the most valuable resource and people will be the solution to the problem. Transitional waste solutions design people out of the problem. In Kaikoura, the Community is the solution to the problem and it is necessary to educate and provide the solutions to enable people to achieve the Zero Waste vision.

In Kaikoura we have been lucky to be part of a nationally funded solid waste audit, so the major sources of waste is understood. It is important to have a picture of the major waste sources which enables the Kaikoura District Council and Kaikoura's Resource Recovery Centre to identify opportunities for waste reduction programs and initiatives.

### 1. Enhanced Rural Recycling Collections

Providing rural communities with a recycling collection service can increase the diversion of material away from landfill. Collections to service the majority of rural and coastal communities throughout the District should be developed. This encourages people to recycle as their recyclable are easier to dispose.

Currently only coastal areas receive a recycling collection, with some settlements already delivering weekly to a central collection point. In other locations, rural residents must bring their own recycling to the recycling centre. The current system of excluding some areas does not promote recycling, nor does it create equity within the community, with some residents receiving the service

and some not. The uncontained central recycling point may create nuisance problems with uncontrolled recycling materials.

At the time of writing, some sectors of the Community had indicated that a central recycling point would not enhance their rural recycling collection service, and an initiative must be introduced to ensure the entire rural area is serviced with a recycling collection.

**Actions:**

- Rural recycling options presented to Council for consideration.

Decision on additional rural collections.

## 2. Zero Organics to Landfill (ZORG)

Organic waste is generally waste material which is comprised of animal or vegetable matter and typically from which compost can be produced. Usually organic waste can be kitchen and garden waste, and does not include septic waste.

Removing organics from the waste stream is a top priority. Removing organics from the waste stream will dramatically reduce the amount of material going to landfill, help prevent methane gas and leachate production in landfills, and return much needed organic material to land. It is also important from an economic point of view as it reduces contamination of the inorganic fraction of the waste resource stream, increasing returns on recyclable goods.

Zero Organics (ZORG) is designed to remove organic matter from the refuse filling the landfill (approximately 23-40% of the current waste stream). The result of such a programme along with other initiative may lift diversion of waste from landfill to 80%.

This program shall include incentives and information to encourage residents to use compost bins and worms farms to dispose of organic matter at home. Facilities shall be promoted that enable residents and businesses to drop organics at the Resource Recovery Centre free of charge and processed to generate compost. In the future ZORG may be fully implemented through the introduction of kerbside receptacles to collect organics and recyclables from urban residents.

**Actions:**

- Education on separation of organics and home composting.
- Awareness of organic drop off made available at Resource Recovery Centre
- Encouraging home compost and composting amenities made available for purchase at Resource Recovery Centre and Kaikoura District Council.
- Kerbside receptacles to collect organics to be considered through annual planning process.
- Initiative a user pays organic collection for Commercial premises in Kaikoura.

## 3. Enhanced Urban Recycling Collection Program

The urban recycling collection service is currently servicing the entire urban area, and new urban areas as established. At the time of writing, the urban recycling collection service currently does not provide bins or receptacles for recycling. Residents put their recycling out for collection in plastic bags, tied in bundles or in their own bins. On windy days this creates unintended litter which can create a negative perception of recycling and endanger marine life. A future option to promote easy and tidy recycling may be provision of wheelie bins or other plastic bins to householders for recycling, or alternatively use sacks, similar to other rural districts in New Zealand, eg Hurunui.

**Action:**

- Consultation with Community regarding the provision for recycling bins, allowance for recycling bins in the Annual Plan.
- Kerbside receptacles to collect organics to be considered through annual planning process.
- Investigation into the processing of construction and demolition waste and options available of disposal.

#### 4. Plastic Bag Free District

To align with the Kaikoura District Council's sustainability commitment, the Kaikoura community now has an alternative to plastic bags. The arrival of 10,000 reusable bags printed with a Fantastic No Plastic logo have been distributed to householders and school children, and are available for purchase at supporting businesses around Kaikoura. The initiative is for the Kaikoura community to reduce their plastic bag consumption around the District.

Reducing the number of plastic bags entering landfill is a significant contribution to Kaikoura's Zero Waste to landfill commitment. Plastic Bags may take up to 500 years to break down and are a contributor to landfill volume. It is estimated that plastic bags account for 2% of the waste stream in Kaikoura.

The initiative works toward reducing the amount of plastic for recycling. By reducing the volume of plastic for recycling, the cost of recycling the product and shipping the product to a recycling point is reduced. This contributes to Kaikoura's commitment to reducing greenhouse gas emissions by reducing the volume in the industrial process required to reuse plastic and the greenhouse gas produced through shipping the product for reuse.

In addition, most plastic is imported into New Zealand. Thus reducing consumption of plastic bags will contribute to a reduction in shipping volume and make some contribution to reducing greenhouse gas emissions from shipping.

Additional protection for Kaikoura's marine environment is provided through a reduction in plastic bags. Plastic is a huge polluter of our natural environment. Marine animals can mistake plastic bags and packaging as food sources. Few marine animals can digest plastic, and many fatalities result from ingestion of the plastic bags. This is particularly important for Kaikoura as much of the tourism relies on our natural environment and abundant marine life.

Utilising alternative receptacles for collecting recyclables and organics may remove the need for plastic bags to contain items for recyclables collection. Households and school children throughout the District have been provided with re-usable shopping bags to facilitate the support of this waste reduction initiative.

The Plastic Bag Free initiative has been successful in promoting the awareness of waste from consumerism. The initiative is also well supported by businesses as it reduces overheads by avoiding purchase of packaging by businesses. The result is a positive outcome for the District as the initiative has been successful in raising awareness of plastic use, and reinforcing Kaikoura's sustainability strategy for visitors.

**Action**

- **Continue to promote the switch from plastic bags to reusable bags.**

#### 5. Joint Education Initiatives

Kaikoura District Council and Kaikoura's Resource Recovery Centre form a partnership to target District issues and initiatives to improve waste minimisation in the future.

## 6. Construction and Demolition Waste

Building and construction industries, including the demolition industry produce massive amounts of waste, it's just the nature of the business. Waste from building and construction (demolition) has traditionally just been disposed of to landfill, however new technologies are allowing the waste from this sector to be recovered.

Choosing to divert waste away from landfill and directing back into recycling streams has economic advantages as well as being an environmentally sound decision. Currently the Resource Recovery Centre makes available an on-site skip service, which can be delivered to the construction site and in which contractors are asked to separate waste onsite. By separating on site, the contractors may save a huge amount in the cost of Waste Disposal as opposed to disposing of all the waste to landfill.

Some contractors are obligated under contract or resource consent to divert waste.

### Action

- Continue to make available recycling skips for construction (demolition) sites
- Work with industry to reduce waste at the source.
- Continue to investigate disposal options for the waste stream.

## 7. Commercial Collection

The Resource Recovery Centre currently operates a commercial recycling pick up service. This service is provided to Commercial premises including visitor accommodation, camping grounds and businesses. Commercial premises can choose to have a regular or on-call pick up for recycling from their premises. The Resource Recovery Centre charge for this service, landfill is disposed at a higher cost at the Centre.

### Action

- Continue to provide Commercial recycling service.
- Work with Commercial properties to identify the best option for specific waste types
- Arrange for a Waste Assessments for Commercial properties.

## 8. Other initiatives

### 1. Paint drop off

Kaikoura's Resource Recovery Centre is a designated paint drop off facility. A mobile Paintwise truck will visit the site approximately every 6 weeks to process the paint returns. Good quality waterborne paint is made available free of charge from the Paintwise site, metal cans and plastic packaging will be recycled, solvent borne paint is sent to solvent recovery centres by Paintwise to extract all solvents for reuse by other companies, other waterborne paint will be supplied for community uses such as council/community anti-graffiti work..

Given the small amounts of paint collected in Kaikoura the disposal charge is currently free.

Paints accepted on site include:

- Any brand of waterborne paint and paint packaging.
- Any brand of solvent borne paint and paint packaging.
- Any brand of empty paint cans/pails/lids.

### 2. Agricultural Chemical Container Collection

Through the product stewardship programme Agrecovery, the Resource Recovery Centre shall be a deposit point for the sustainable recovery of triple rinsed agriculture and forestry sector plastic containers (1 to 60 litres). Farmers and producers will be encouraged to deposit such containers, silage wrap etc, free of charge at the Resource Recovery Centre instead of storing them or disposing of them on the property. The containers shall be stored in a locked shed until a mobile shredding unit visits the RRC on a as needs basis, shredding, pressing and removing all waste containers.

Approximate capital cost: Resource Recovery Centre staff time

Time Frame: Ongoing

### **3. Hazardous Waste Collection**

Supported by the Regional Council - Environment Canterbury, a domestic hazardous waste drop off facility shall be developed at the Resource Recovery Centre. Materials such as paint thinners, solvents, agricultural chemicals, aerosols and pool chlorine can be dropped at the 'hazardous waste store'. A proportion of hazardous material is expected to be removed from the landfill each year through this program.

Approximate cost: Resource Recovery Centre staff time

Time Frame: Ongoing

### **4. Whiteware, Electrical & E-Waste Collection**

A priority will be given to understanding sources and quantities of whiteware, electronic and e-waste wastes and to promote awareness and use of commercial electronic & metal waste recycling services.

The disposal of appliance, electrical and electronic products is currently available at Kaikoura's Resource Recovery Centre. These products can be left at the Resource Recovery Centre for a small charge and the products are reused where appropriate, or dismantled or stockpiled to be disposed from a targeted service.

While the service is currently available, the reuse and recycling of this material is rapidly advancing. Priority will be given to advancing the re-use and recycling of these products.

### **5. Publicity & Education**

- School curriculum – encourage the inclusion of the 5 r's generally in appropriate education streams in schools (eg, environmental sciences, horticulture and biology).
- Publicity – encourage Kaikoura's Resource Recovery Centre to continue with information to facilitate public education.
- Other – encourage specialized publicity to address particular waste streams. Publicity sources will include newspaper, rates mail outs, mailbox drops, printed material (eg, magnets, re-usable shopping bags).
- Advocacy and Lobbying – Lobby target industry sectors (eg, manufacturing and retail sectors) and government agencies to establish mechanisms that will facilitate the diversion of waste to landfill.

### **6. Encourage people to**

- Buy products with recycled content.
- Reuse and buy second hand goods.
- Buy products with reduced packaging.

- Use their buying power to support the local economy.
- Choose quality products that can be repaired instead of cheap one designed for obsolescence.
- Get things repaired rather than throw them away.
- Reduce their demand for non recyclable goods.
- Reduce junk mail.

## 9. Event Management

Any event held in the Kaikoura District shall take all steps to encourage Waste Minimisation. Kaikoura District Council will police this through resource consent, district licensing and other permitting processes as appropriate.

### Action

- Continue to make recycling drums available for events.
- Continue to work with event organisers to separate and minimise waste.

## 10. Other Initiatives available to the Kaikoura District Council

While the Kaikoura District Council is currently advocating voluntary support of waste practices, there are also a number of mechanisms available by law to give the Council power to enforce certain waste practices. While currently the development and enforcement of these mechanisms is not supported, the following tools could be adopted should the need arise:

- Bylaws – Section 542 of the Local Government Act covers this by giving powers to councils to pass a bylaw to require all person (or businesses) involved in the collection and transportation of waste, or specified types of waste, to be licensed. The Act also gives powers to require license holders to provide the council with a return of “the quantities and types of waste collected under the license.” In other words, the council can require all waste collectors to be licensed and require paperwork noting the volumes and types of material moved.
- Council have very wide powers to make and levy rates and charges. One option could be an increase of charges to establish incentives and disincentives that promote any or all of the vision of Zero Waste to landfill. This may include a bylaw to outlaw the disposal of recyclables to landfill.
- Develop a policy for waste guidelines and standards for industry sectors, eg, building demolition standards, construction standards, recycling plans for business, etc.

# Appendix 1

## Legislative requirements

According to the Local Government Act 2002, Section 286, requires every local authority to have in force a current Waste Management Plan.

In addition to the requirements to have a Waste Management Plan, every territorial authority *shall promote effective and efficient waste management* within its district and shall have regard to the environmental and economic costs and benefits for the district and ensure that the management of waste does not cause a nuisance or be injurious to health.

Other local and national policies and documents that have been considered in the preparation of this proposed plan include:

- Health Act 1956
- Resource Management Act 1991
- Ngai Tahu Claims Settlement Act 1998
- Hazardous Substances and New Organism Act 1996
- Energy Efficiency and Conservation Act 2000
- New Zealand Waste Strategy 2002
- Building Act 1991
- Te Poha O Tohu Raumati – Iwi Environmental Management Plan
- Long Term Council Community Plan 2006
- Litter Act 1979

## Interpretation

Section 537 of the Local Government Act, outlines that:

**Disposal** means final deposit of waste on land set apart for the purpose:

**Recovery** means extraction of materials or energy from waste for further use or processing; and includes, but is not limited to, making materials into compost:

**Recycling** means the reprocessing of waste materials to produce new products:

**Reduction** means lessening waste generation:

**Reuse** means the further using of products in their existing form for their original purpose or a similar purpose:

**Treatment** means, in relation to waste, subjecting the waste to any physical, biological, or chemical process to change the volume or character of that waste so that it may be disposed of with no or reduced significant adverse effect on the environment:

**Waste management plan** means, in relation to a district, any plan for the management of waste in the district, being a plan developed after consideration, in the following order of priority, of the following methods (which methods are listed in order of their importance):

- (a) Reduction:
- (b) Reuse:

- (c) Recycling:
- (d) Recovery:
- (e) Treatment:
- (f) Disposal.

Other terms:

**Solid Waste Stream** means the waste components and the process through which they move from point of generation to disposal.

**Waste Minimisation** means any technique, process or activity which either avoids, eliminates or reduces the production of waste, or allows diversion materials away from the waste stream.