

refuse minimisation and disposal

Nature and Scope

Specific activities are carried out under a Solid and Hazardous Waste Management Plan which includes the following services:

- Reduction including commercial and in-house waste minimisation initiatives.
- Reuse including co-operation with the Recovered Materials Foundation (RMF) in the operation of recycling drop off centres at Parkhouse, Metro and Styx Refuse Stations, and sale of goods at the "SuperShed" off Pages Road and "RetroShed" at 120 Montreal St.
- Recycling including domestic kerbside recycling collection, partnering with RMF for reuse of collected materials, provision of information and publicity, and research. Facilitation of commercial inner city recycling services.
- Resource Recovery including compost production at the Metro Place Garden City Compost Facility. Acceptance of garden waste for composting at Parkhouse, Metro and Styx Mill Refuse Stations. Promotion of home composting.
- Residue disposal including residential kerbside and inner-city refuse collection, operation of three transfer stations and one landfill.
- Co-ordination of hazardous waste treatment and disposal.
- Aftercare of various closed landfills.
- \$6.5 million has been included in the capital budget over two years (starting in 2005/06) for the construction of an enclosed compost plant. This plan will process putrescible waste from commercial sources.
- Administration of the Council's new cleanfill bylaw designed to encourage resource recovery and reuse of construction and demolition materials.



An onyx truck collecting recyclable material from the household recycling crates

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Waste Minimisation

The Council seeks to minimise the amount of solid waste going to landfill. It does this by collecting recyclables from the kerbside, working with businesses to help them reduce their waste, composting green waste, general recycling, and by supporting the Recovered Materials Foundation, who operate the re-cycling centres and the Super Shed.

Performance Measures

Service	Performance Measure
Economic	
The resources recovered from the waste stream are used to benefit the local economy.	Full time jobs created from reusing, recycling and composting the resources recovered from waste received by the Council. (target 200)
Environmental	
To minimise the amount of solid waste going to landfill.	Recyclables correctly presented at the kerbside are collected 52 weeks of the year.
	Residents' satisfaction with the green crate recycling collection service provided. (target 90%)
	The proportion of waste that is received by the Council which is diverted from landfill by re-use, recycling and composting. (target 30%)
	Annual tonnage of recyclables collected at the kerbside. (target 18,000 tonnes)

	From 1994 to 2020 the waste per person per year going to landfill is reduced by at least 65%. (targets: no more than 640 kg/person in 2004/05; no more than 620 kg/person in 2005/06)
Businesses receive advice and support for improving their environmental performance.	Businesses actively engaged in the Council's waste minimisation programmes. (target 100)

Contribution to Outcomes

Outcome	How Waste Minimisation Contributes to this Outcome
A Sustainable City	Minimising the amount of waste that has to be finally disposed of reduces the area needed for landfills, and eases pressure on the environment
A Safe City	The waste minimisation programme includes reducing the amount of hazardous waste that needs to be disposed of into landfills

Negative Effects

Negative effects arising from this activity may be identified as follows:

- Kerbside recycling collection can impact on traffic flows, noise, roadside litter, neighbourhood appearance and the use of footpaths.
- Composting operations can periodically create dust and odour.

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Refuse Transfer and Disposal

This activity includes operating the transfer stations where residents and businesses can drop off solid waste, transferring the refuse to and managing the landfill, managing hazardous waste, and managing landfills that are no longer in use.

Performance Measures

Service	Performance Measure
Environmental	
Refuse stations are open at convenient times.	Excluding public holidays, refuse stations are open 8.5 hours a day, 7 days per week.
Waste generated by the community is disposed of safely.	Number of infringement notices served by Environment Canterbury for air, water or soil pollution. (target: Nil)

Contribution to Outcomes

Outcome	How Refuse Transfer and Disposal Contributes to this Outcome
Healthy and Active People	Waste that could be harmful to human health is disposed of safely
A Sustainable City	Waste that could be unsightly or damaging to the environment is disposed of safely

Negative Effects

Negative effects arising from this activity may be identified as follows:

- Potential pollution of the air, soil, and ground water from landfills.
- Odour and greenhouse gas emissions from landfills.
- Increasing landfill charges may lead to an increase in inappropriate disposal of rubbish.
- Transporting refuse from collection sites to landfills creates additional heavy traffic movements and associated noise and risks to other road users.

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Black Bag Collection and Disposal

Solid waste placed in “official” black bags is collected from households and business premises on a weekly basis.

Performance Measures

Service	Performance Measure
Economic	
At \$1.00 per bag the rubbish bag collection service delivers value for money.	Customers satisfied the service delivers value for money. (target 80%)
Environmental	
Official Council rubbish bags placed at the kerbside are collected each week.	The collection is completed 52 weeks of the year.

Contribution to Outcomes

Outcome	How Black Bag Collection and Disposal Contributes to this Outcome
Healthy and Active People	Waste is remove from residences and businesses before it becomes a health hazard
A Sustainable City	Waste is remove from residences and businesses before it becomes a hazard to the environment

Negative Effects

Negative effects arising from this activity may be identified as follows:

- Black bag collection requires the use of heavy vehicles in residential and commercial neighbourhoods.

Asset Description

The purpose of the Council’s solid waste management assets is to safely collect and dispose of waste generated by the Christchurch community and to maximise the recovery of resources from the waste stream. The assets employed to achieve this are listed below:

Asset	Scale	Book value at 30 June 03
Refuse transfer stations operated by City Care Limited at:		
Parkhouse Road	91,000 t/year	5.00
Metro Place	65,000 t/year	2.20
Styx Mill Road	40,000 t/year	1.60
Compost manufacturing plant located at Metro Place operated by City Care Limited	34,000 t/year	1.20
Recycling centres located at each of the refuse transfer stations operated by the Recovered Materials Foundation	7,000 t/year	0.51
Household hazardous waste drop off points located at each of the Recycling Centres	40 t/year	0.01
Green Kerbside Recycling Crates	150,000 crates	1.20
Land and buildings at Parkhouse and Pages Road that the Recovered Materials Foundation use to process recyclable materials collected at the kerbside and sell reusable items collected at the recycling centres	18,000 t/year	2.10
Shares in a new regional landfill at Kate Valley that will be operated by Transwaste Canterbury and has a proposed 35 year resource consent	270,000 t/year	6.80
Burwood Landfill due to close when Kate Valley opens in 2004/05, will be landscaped for future use as a park and managed thereafter (Liability for on-going mitigation and restoration costs)	260,000 t/year	- 11.00

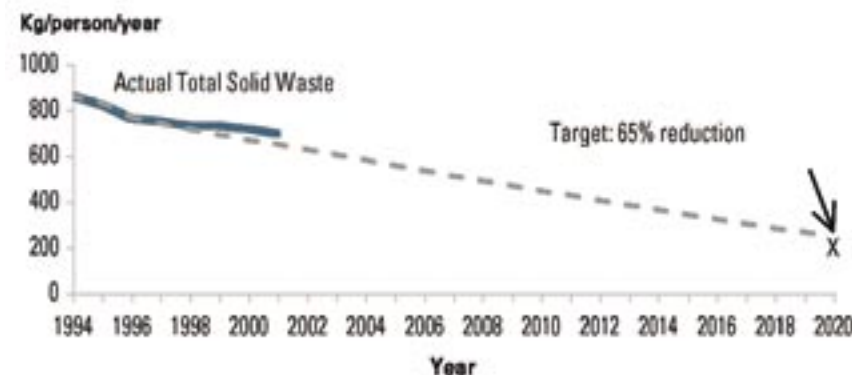
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Closed landfills owned and managed by the Council (Liabilities for on-going mitigation and restoration costs)	50 sites	- 6.00
Total Assets		20.62
Total Liabilities		17.00

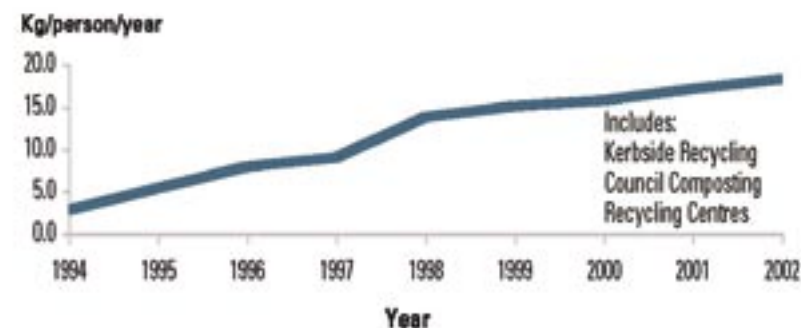
Solid Waste Trends

Since 1994 the waste in Christchurch has fallen (from 850 kg to 650 kg per person per year) in alignment with the Councils target of a 65% reduction in waste from the 1994 level by 2020. Much of this reduction can be attributed to the community responding to increased refuse disposal costs and is complemented by an 18 kg per person reduction due to increased services (e.g. kerbside recycling, greenwaste composting and the operation of recycling centres). A reduction in waste and an increase in the amount recycled and composted is expected to continue as opportunities to reduce waste increase.

Total Solid Waste



Total Recycled and Composted



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Service Levels

The services employed by the Council to safely dispose of waste and recover resources from the waste stream have been established through Part 1 and 2 of the Solid and Hazardous Waste Management Planning processes, which included public consultation and customer research. The following service levels have been established and are monitored through contractual arrangements with service providers.

Characteristic	Target Service Level
Kerbside Collection	80% of customers are satisfied with the rubbish bag collection service
	90% of customers are satisfied with the green crate kerbside recycling service
Refuse disposal	Refuse transfer stations are open at least 7 hours per day, 7 days a week except for five statutory holidays

Meeting the demands of growth and improving services

All solid waste operations (such as kerbside collection and refuse transfer station operations) are managed under contracts that provide for set levels of service (see above) and for growth. However, some new initiatives will need to be established to reduce waste and improve services further. A full list of these initiatives is contained in Part 2 of the Solid and Hazardous Waste Management Plan 2004. Initiatives that require new assets are summarised below.

Capital Asset	Capital Cost
Develop an enclosed composting facility for processing commercial putrescible waste (e.g. food scraps)	6,545,000
Additional green kerbside recycling crates provided to households	65,000
Refuse transfer station alterations needed for the disposal of waste to Kate Valley	4,700,000
Resurface operating areas of the greenwaste compost plant	330,000

In addition to the above items Council is considering a reconfiguration of the refuse transfer stations into resource recovery parks and to forming joint ventures with the major waste management companies in Christchurch for the operation of these sites (See Part 2 of the Solid and Hazardous Waste Management Plan for more details). These changes are intended to reduce the waste being sent to landfill and to promote innovation and efficiencies for the operation of the sites. A consultative process will be undertaken in mid 2004 prior to any decision being made.

Maintenance and renewals

The operators of sites have contractual obligations to maintain the sites they are operating on a day to day basis and a 5 year rolling major maintenance programme is in place. Maintenance and renewals are financed through user charges imposed at the weighbridge (e.g. refuse tipping fees and the waste minimisation levy as appropriate).

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Cost of Proposed Services

Budget 2003/04 \$000's		Plan 2004/05 \$000's	Forecast 2005/06 \$000's	Forecast 2006/07 \$000's	Projection 2007/08 \$000's	Projection 2008/09 \$000's	Projection 2009/10 \$000's	Projection 2010/11 \$000's	Projection 2011/12 \$000's	Projection 2012/13 \$000's	Projection 2013/14 \$000's
19,031	Expenditure (After Internal Recoveries)	22,832	29,066	29,858	30,880	31,347	31,750	31,913	32,086	32,306	32,555
(18,782)	Revenue	(21,790)	(20,764)	(20,563)	(20,352)	(20,118)	(19,878)	(19,637)	(19,393)	(19,147)	(18,899)
249	Net Cost of Service	1,042	8,302	9,295	10,528	11,229	11,872	12,276	12,693	13,159	13,656

The Net Cost of Service is funded from rates and other revenue. See the Funding Impact Statement in volume 3 for details.

Consisting of the following Activities

3,675	Waste Minimisation	5,977	6,226	6,732	7,474	7,645	7,817	7,837	7,866	7,914	7,960
(8,976)	Refuse Transfer and Disposal	(8,846)	(1,880)	(1,428)	(1,052)	(661)	(294)	11	320	651	1,004
5,550	Black Bag Collection and Disposal	3,911	3,956	3,991	4,107	4,245	4,349	4,428	4,506	4,594	4,692
249	Net Cost of Service	1,042	8,302	9,295	10,528	11,229	11,872	12,276	12,693	13,159	13,656

Capital Expenditure

2003/04 \$000's		2004/05 \$000's	2005/06 \$000's	2006/07 \$000's	2007/08 \$000's	2008/09 \$000's	2009/10 \$000's	2010/11 \$000's	2011/12 \$000's	2012/13 \$000's	2013/14 \$000's
426	Renewals and Replacements	1,510	697	522	563	563	563	563	563	563	563
4,873	Improved Service Levels	4,389	4,144	4,175	234	52	52	52	52	52	52
14	Increased Demand	65	50	30	20	20	20	20	20	20	20
5,313	Total Capital Expenditure	5,964	4,891	4,727	817	635	635	635	635	635	635

Notes

Capital Expenditure is corporately funded from asset sales, rates (depreciation and surplus), capital revenues, special funds, and loans. See Capital Funding Summary in volume 1, and the Funding Impact Statement in volume 3 for details. For details of capital projects, see the 5 year Capital Works Programme pages in volume 1.