

# Refuse Minimisation and Disposal



*“We use a compost bin and recycle just about everything possible. It’s important for the future to help the environment. Recycling helps us be more self-sustainable and use our resources more wisely, rather than waste them.”*



**Courtney  
Gurney Meehan**  
Beckenham

## What activities are included in refuse minimisation and disposal?

### Recyclable materials collection and processing

- Domestic kerbside collection service for recyclable materials

### Organic material collection and composting

- Domestic kerbside collection for organic material (food and garden waste)
- Organics processing, including operation of the composting plant
- Residual waste collection and disposal
- Domestic collection service for residual waste (refuse) for households and businesses (domestic quantities only)
- Refuse transfer stations receipt and processing of residual waste
- Processing, reuse and residual disposal of construction and demolition through the Burwood Resource Recovery Park
- Residual waste transportation to landfill
- Operation and care of closed landfills
- Landfill gas capture, treatment, reticulation and destruction from the closed Burwood landfill site

### Commercial and industrial waste minimisation

- Programmes, tools, events and services that assist businesses with their efficient use of resources, including Target Sustainability Services.

## Why is the Council involved in refuse minimisation and disposal?

- To utilise valuable resources that would otherwise go to waste.
- To meet our obligations in the Solid Waste Management Plan 2006 and Sustainability Policy as approved by Council.
- To educate the community in waste minimisation and to reduce waste to landfill.
- The Council provides organic collection and green waste drop-off services to maximise the beneficial use of this resource and to minimise waste
- To meet our obligations in the Solid Waste Management Plan 2006, Sustainability Policy as approved by Council, and Waste Minimisation Bylaw
- To provide an economically sensible way to reuse organic material rather than disposal to landfill
- The Council provides for the safe collection and disposal of residual solid waste to minimise harm to people and the environment
- To meet our obligations in the Solid Waste Management Plan 2006
- To meet our obligations under the legislation requirements
- The Council provides services that assist businesses to reduce waste and to be energy and water efficient, to improve the resource efficiency, resilience and competitiveness of the Christchurch economy, and reduce waste to landfill. These services relate to the requirements in the Council Sustainability Policy and Council Waste Management Plan.

## How does refuse minimisation and disposal contribute to our community outcomes?

### There is a reduction in waste

- Providing convenient and reliable services for receiving, collecting, processing and marketing of recycled materials and maximising the beneficial use of collected materials, encouraging greater recycling of materials and less waste going to landfill.
- Providing convenient, reliable and safe organic waste management services and facilities reduces the amount of waste material going to landfill, and maximises the beneficial use of collected organic material.
- Target Sustainability services advise and assist businesses to reduce their waste and support a reduction in waste materials going to landfill.

### Injuries and risks to public health are minimised

Providing convenient, reliable and safe residual waste management services and facilities minimises the health and environmental risks of residual waste.

### Earthquake demolition waste is safely disposed of with minimal adverse effects

### Energy is used more efficiently

Advice and assistance from Target Sustainability Services help businesses to be more energy efficient.

### Water is used efficiently and sustainably

Advice and assistance from Target Sustainability Services help businesses to be more water efficient.

Council Activities and Services

## Refuse Minimisation and Disposal

---

### What changes are planned for refuse minimisation and disposal?

It is planned to compost more organic material, and reduce the amount of residual waste disposed to Kate Valley.

### What negative effects or risks can occur in relation to refuse minimisation and disposal?

Negative Effects	Mitigation Options
Pollution and noise generated by refuse collection, and transportation.	Alternative methods of collection and transportation. Waste minimisation programmes
Too much waste is sent to landfill, and the amount is increasing.	Increased recycling, composting, education and support for businesses to reduce waste.
Effects of land filling including the occupation of land, methane and leachate generation.	Waste minimisation programmes. Alternative treatment and disposal of waste.
Moving to direct charging for refuse disposal may reduce the affordability of the service.	Waste minimisation programmes. Encourage the separation of material for reuse or recycling as a way to avoid refuse disposal charges.



Council Activities and Services

## Refuse Minimisation and Disposal

Activity	What is the Council trying to achieve?	What services will the Council offer to make this happen?	How would we know these services were successful?	Target
<b>Recyclable materials collection and processing</b>	There is a reduction in waste	Domestic kerbside collection service for recyclable materials	Measure Recyclable materials collected by Council services and received for processing at the Materials Recovery Facility (MRF)	Kilogrammes of recyclable materials / person / year collected and received by Council services
			Kerbside wheelie bins for recyclables emptied by Council services	Collection achieved when items correctly presented for collection
			Customer satisfaction with kerbside collection service for recyclable materials	Customers are satisfied with Council's kerbside collection service for recyclable materials each year
			Proportion of incoming recyclable materials that are contaminated and sent to landfill	Less than percentage (by weight) contamination of incoming recyclable materials
<b>Organic material collection and composting</b>	There is a reduction in waste	Domestic kerbside collection for organic material (food and garden waste)	Amount of organic material collected at Council facilities and diverted for composting.	Greater than specified kilogrammes of organic material collected at Council facilities and diverted for composting facility / person / year
			Kerbside wheelie bins for organic material emptied by Council	Percent of kerbside wheelie bins for organic material, emptied when correctly placed at the kerbside each week
			Customer satisfaction with kerbside collection service for organic material	Customers are satisfied with Council's kerbside collection service for organic material each year

## Council Activities and Services

## Refuse Minimisation and Disposal

Current Performance	Planned performance		
	2013/14	2014/15	2015/16
2009/10: 121.88 kg / person / year (45,366 tonnes in total) 2010/11: 114.97 kg/person/ year (43,402 tonnes in total) 2011/12: 12 months to 30/4/2012 119.13 kg/ person/ year (43,813 tonnes in total)	120 kg +40%/-10% recyclable materials / person / year collected and received by Council services	120 kg +40%/-10% recyclable materials / person / year collected and received by Council services	
2009/10: 99.84% 2010/11: 99.8% 2011/12: 99.75%	At least 99.5% collection achieved when items correctly presented for collection	At least 99.5% collection achieved when items correctly presented for collection	
2009/10: 95% satisfied 2010/11: not surveyed 2011/12: 97% satisfied	At least 90% customers satisfied with Council's kerbside collection service for recyclable materials each year	At least 90% customers satisfied with Council's kerbside collection service for recyclable materials each year	
2010/11: 7.40% 2011/12: 12 months to 30/4/2012 the contamination was 8.43% (increase in contamination from 2010/11 is due to contamination in glass whereas in 2010/11 glass was stockpiled)	Less than 10% (by weight) contamination of incoming recyclable materials	Less than 10% (by weight) contamination of incoming recyclable materials	
2009/10: 187 kg / person / year (69,606 tonnes) 2010/11: 151 kg / person / year (56,902 tonnes) * EQ affected tonnage 2011/12: 180 kg / person / year (67,320 tonnes) + 12 months rolling tonnage to 30/4/12	Greater than 175 kg +30%/- 10% organic material collected at Council facilities and diverted for composting facility / person / year	Greater than 175 kg +30%/- 10% organic material collected at Council facilities and diverted for composting facility / person / year	
2009/10: 99.89% 2010/11: 99.76% 2011/12: 99.75%	At least 99.5% kerbside wheelie bins for organic material, emptied when correctly placed at the kerbside each week	At least 99.5% kerbside wheelie bins for organic material, emptied when correctly placed at the kerbside each week	
2009/10: 77% satisfied 2010/11: not surveyed 2011/12: 82% satisfied	At least 80% of customers satisfied with Council's kerbside collection service for organic material each year	At least 80% of customers satisfied with Council's kerbside collection service for organic material each year	

Council Activities and Services

## Refuse Minimisation and Disposal

Activity	What is the Council trying to achieve?	What services will the Council offer to make this happen?	How would we know these services were successful?	Target
Organic material collection and composting (continued)		Organics processing, including operation of the composting plant	Measure Proportion of incoming organic material that is contaminated and sent to landfill	Less than specified percentage (by weight) contamination of incoming organic material
	Injuries and risks to public health are minimised Earthquake demolition waste is safely disposed of with minimal adverse effects	Domestic collection service for residual waste (refuse) for households and businesses (domestic quantities only)	Tonnage of residual waste collected by Council services	No more than specified kg / person / year from collection services disposed to Kate Valley
Residual waste collection and disposal			Kerbside residual waste collection – emptied by Council services	At least 99.5% collection achieved when items correctly presented for collection
			Customer satisfaction with kerbside collection service for residual waste	Customers are satisfied with Council’s kerbside collection service for residual waste each year
		Refuse transfer stations receipt and processing of residual waste	Consent compliance for Council refuse transfer stations	Resource consents are obtained and kept current for refuse transfer stations
				Major or persistent breaches of consents for transfer stations per year, as reported by Environment Canterbury or Christchurch City Council
		Processing, reuse and residual disposal of construction and demolition through the Burwood Resource Recovery Park	Consent compliance for operations at Burwood Resource Recovery Park	Major or persistent breaches of consents associated with Burwood Resource Recovery Park per year as reported by Environment Canterbury or Christchurch City Council

## Council Activities and Services

## Refuse Minimisation and Disposal

Current Performance	Planned performance		
	2013/14	2014/15	2015/16
12 months rolling 2009/10: Contamination was 0.71% 2010/11: Contamination was 0.12% 2011/12: Contamination was 0.07% Note there has been a change from decontamination at the front-end of process to end-of-process decontamination. This has meant waste recirculation onsite which has resulted in less waste to landfill.	Less than 2.5% (by weight) contamination of incoming organic material	Less than 2.5% (by weight) contamination of incoming organic material	
2009/10: 101.11 kg / person / year 2010/11: 126.02 kg / person / year Note: impact of earthquake waste 2011/12*: 119.13kg / person / year *12 months to 30/4/2012	No more than 120 kg / person / year from collection services disposed to Kate Valley (reflects impact of earthquakes in short term – target to be revised for LTP 2015)	No more than 120 kg / person / year from collection services disposed to Kate Valley (reflects impact of earthquakes in short term – target to be revised for LTP 2015)	
2011/12: 99.8% collection rate	At least 99.5% collection achieved when items correctly presented for collection	At least 99.5% collection achieved when items correctly presented for collection	
2009/10: 92% 2010/11: Not measured 2011/12: 95%	At least 90% customers satisfied with Council's kerbside collection service for residual waste each year	At least 90% customers satisfied with Council's kerbside collection service for residual waste each year	
2011/12: No major breaches reported. 2010/11: Zero breaches. 2009/10: Zero breaches.	Resource consents are obtained and kept current for refuse transfer stations	Maintain	Maintain
Zero significant breaches of resource consents by Council owned transfer stations	No major or persistent breaches of consents for transfer stations per year, as reported by Environment Canterbury or Christchurch City Council	Maintain	Maintain
Not measured historically	No major or persistent breaches of consents associated with BRRP per year as reported by Environment Canterbury or Christchurch City Council	Maintain	Maintain



Council Activities and Services

Refuse Minimisation and Disposal

Activity	What is the Council trying to achieve?	What services will the Council offer to make this happen?	How would we know these services were successful?	Target
Residual waste collection and disposal (continued)		Residual waste transportation to landfill	Measure	Reduction of refuse disposed of to Kate Valley Landfill measured in kg / person / year
			Tonnage of residual waste sent to Kate Valley from Christchurch	Operative Waste Management & Minimisation Plan target by 2020
		Operation and care of closed landfills	Consent compliance for closed Council landfills	Major or persistent breaches of consents for closed Council landfills per year, as reported by Environment Canterbury and Christchurch City Council
Commercial and industrial waste minimisation	There is a reduction in waste Energy is used more efficiently Water is used efficiently and sustainably	Programmes, tools, events and services that assist businesses with their efficient use of resources, including Target Sustainability Services	Businesses actively taking part in Target Sustainability	Businesses actively taking part in Target Sustainability each year
			Proportion of businesses actively taking part in Target Sustainability satisfied with the advice and support received	Customer satisfaction each year

## Council Activities and Services

## Refuse Minimisation and Disposal

Current Performance	Planned performance		
	2013/14	2014/15	2015/16
2009/10: 481.46kg / person / year 2010/11: 617.64kg / person / year Note: impact of earthquake waste 2011/2012*: 580kg / person / year *12 months to 30/4/2012	Reduction of refuse disposed of to Kate Valley Landfill measured in kg / person / year: 560 kg/ person	Reduction of refuse disposed of to Kate Valley Landfill measured in kg / person / year: 540 kg/ person	
New	Operative Waste Management & Minimisation Plan target 320 kg / person / year by 2020	Operative Waste Management & Minimisation Plan target 320 kg / person / year by 2020	
No major or persistent breaches of consents for closed Council landfills per year, as reported by Environment Canterbury or Christchurch City Council	No major or persistent breaches of consents for closed Council landfills per year, as reported by Environment Canterbury and Christchurch City Council	Maintain	Maintain
2010/11: 100 businesses 2011/12: Affected by earthquakes and over 50 businesses achieved	At least 60 businesses actively taking part in Target Sustainability each year	At least 75 businesses actively taking part in Target Sustainability each year	At least 100 businesses actively taking part in Target Sustainability each year
2011/12: 89% satisfaction	At least 85% customer satisfaction each year	At least 85% customer satisfaction each year	

## Council Activities and Services

## Refuse Minimisation and Disposal

Annual Plan 2012/13		Three Year Plan 2013 - 2016		
		2013/14	2014/15	2015/16
		\$000		
	<b>Cost of proposed services</b>			
8,036	Recyclable Materials Collection and Processing	7,808	7,990	8,351
16,884	Residual Waste Collection and Disposal	16,879	17,256	18,008
18,148	Organic Material Collection and Composting	18,512	18,803	19,498
492	Commercial and Industrial Waste Minimisation	559	567	587
<b>43,560</b>		<b>43,758</b>	<b>44,616</b>	<b>46,444</b>
	<b>Operating revenue from proposed services</b>			
1,161	Recyclable Materials Collection and Processing	1,354	1,392	1,431
3,234	Residual Waste Collection and Disposal	4,022	4,132	4,251
4,674	Organic Material Collection and Composting	4,344	4,462	4,592
-	Commercial and Industrial Waste Minimisation	-	-	-
<b>9,069</b>		<b>9,720</b>	<b>9,986</b>	<b>10,274</b>
-	Capital Revenues	1,667	223	229
-	Vested assets	-	-	-
<b>34,491</b>	<b>Net cost of services</b>	<b>32,371</b>	<b>34,407</b>	<b>35,941</b>

*Rationale for activity funding (see also the Revenue and Financing Policy)*

User charges are collected for services considered reasonable by the Council to fulfil the objectives of the service and within the constraints of the market.

The net cost of Recyclable Materials Collection and Processing and Organic Material Collection and Processing is funded by a uniform targeted rate on serviced properties.

The balance of the net operating cost is funded by general rates, as the whole community benefits from these activities.

Capital expenditure is funded corporately in accordance with the Revenue and Financing Policy.

## Council Activities and Services

## Refuse Minimisation and Disposal Funding Impact Statement

Annual Plan 2012/13		Three Year Plan 2013 - 2016		
		2013/14	2014/15	2015/16
		\$000		
	<b>Sources of operating funding</b>			
13,223	General rates, uniform annual general charges, rates penalties	12,498	12,844	13,077
20,347	Targeted rates	21,182	21,506	22,414
1,000	Subsidies and grants for operating purposes	1,030	1,058	1,089
7,334	Fees and charges	7,154	7,350	7,561
-	Internal charges and overheads recovered	-	-	-
-	Earthquake recoveries	-	-	-
-	Local authorities fuel tax, fines, infringement fees, and other receipts	800	822	846
<b>41,904</b>	<b>Total operating funding</b>	<b>42,664</b>	<b>43,580</b>	<b>44,987</b>
	<b>Applications of operating funding</b>			
39,057	Payments to staff and suppliers	39,045	39,716	41,197
304	Finance costs	202	297	433
2,167	Internal charges and overheads applied	2,506	2,456	2,524
-	Other operating funding applications	-	-	-
<b>41,528</b>	<b>Total applications of operating funding</b>	<b>41,753</b>	<b>42,469</b>	<b>44,154</b>
<b>376</b>	<b>Surplus (deficit) of operating funding</b>	<b>911</b>	<b>1,111</b>	<b>833</b>
	<b>Sources of capital funding</b>			
-	Subsidies and grants for capital expenditure	-	-	-
-	Development and financial contributions	-	-	-
-	Earthquake recoveries	1,667	223	229
625	Increase (decrease) in debt	2,060	(197)	(202)
-	Gross proceeds from sale of assets	-	-	-
-	Lump sum contributions	-	-	-
<b>625</b>	<b>Total sources of capital funding</b>	<b>3,727</b>	<b>26</b>	<b>27</b>

Annual Plan 2012/13		Three Year Plan 2013 - 2016		
		2013/14	2014/15	2015/16
		\$000		
	<b>Applications of capital funding</b>			
	Capital expenditure			
376	- to replace existing assets	840	1,040	762
1,300	- earthquake rebuild	3,702	-	-
625	- to improve the level of service	25	26	27
-	- to meet additional demand	-	-	-
(1,300)	Increase (decrease) in reserves	71	71	71
-	Increase (decrease) of investments	-	-	-
<b>1,001</b>	<b>Total applications of capital funding</b>	<b>4,638</b>	<b>1,137</b>	<b>860</b>
<b>(376)</b>	<b>Surplus (deficit) of capital funding</b>	<b>(911)</b>	<b>(1,111)</b>	<b>(833)</b>
	<b>Funding balance</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Reconciliation to net cost of services</b>			
376	Surplus (deficit) of operating funding from funding impact statement	911	1,111	833
(33,570)	Remove rates funding	(33,680)	(34,350)	(35,491)
(2,033)	Deduct depreciation expense	(2,005)	(2,147)	(2,290)
-	Add capital revenues	1,667	223	229
736	Add vested assets / non cash revenue	736	756	778
<b>(34,492)</b>	<b>Net cost of services per activity statement surplus/(deficit)</b>	<b>(32,371)</b>	<b>(34,407)</b>	<b>(35,941)</b>