

SOUTH WAIRARAPA DISTRICT COUNCIL

20 FEBRUARY 2013

AGENDA ITEM C8

KERBSIDE REFUSE SURVEY WAIRARAPA

Purpose of Report

To report the conclusions of the November 2012 kerb-side refuse survey undertaken jointly by the three Wairarapa Councils.

Recommendations

Officers recommend that the Council:

1. *Receive the information.*

1. Executive Summary

In line with the Waste Minimisation Act (2008) and the joint WWMP adopted by the Councils in the Wellington Region and the Regional Action Plan, the three Councils as part of the need to improve waste composition data arranged for a kerb side survey to be undertaken across the three Districts.

The survey was conducted by Waste Not Consulting, an Auckland based firm specialising in the delivery of a wide range of waste audit and reduction programmes across New Zealand.

This firm conducted a waste for South Wairarapa in January 2011 prior to the introduction of the comprehensive kerbside recycling service in June 2011.

The November 2011 survey sought to identify what take-up of the service had occurred since the new service was introduced. In addition the survey identifies what opportunities exist for additional diversion from the general waste-stream.

The officer report seeks only to offer up generalised post survey commentary. The attached advisory report (Appendix 1) contains a high level of detail around kerbside bag and domestic wheelie bin (MGB) weights and waste composition.

The report indicates that there remains potential for further diversion of recyclable items using existing systems and services. These areas will be reviewed and strategies put in place over the next 6 months with any budget implications highlighted in the next annual plan.

2. Background

2.1 Kerbside Bagged Refuse Primary Composition

As per the chart the November 2011 audit primary composition of kerbside domestic refuse bags is as depicted. Note that the Martinborough has not been included in either survey (2011 and 2012) as it was considered it was best to get a larger sample from two towns than three smaller samples.

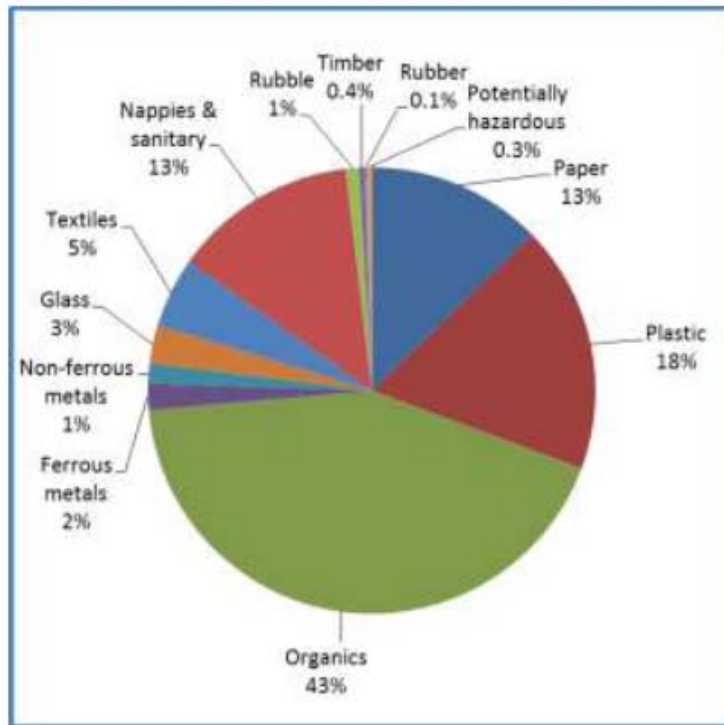


Figure 5.1 – Primary composition of South Wairarapa domestic kerbside refuse bags

Organic matter at 43% of the weight was comprised mostly of “kitchen waste” at 88% of the organic material. Paper and plastic were the other main components of the surveyed domestic refuse bag.

2.2 Private Domestic Wheelie Bins Primary Composition

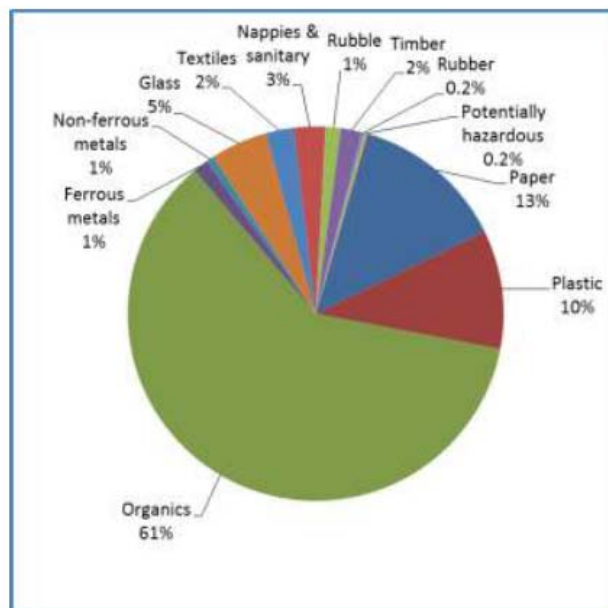


Figure 5.5 – Primary composition of South Wairarapa private domestic MGBs

Organic material not surprisingly was the largest single component of the domestic MGB shared by kitchen waste (43%) and green waste (51%) with some 6% of other miscellaneous organic waste.

2.3 Composition Comparison 2011 /2012

For South Wairarapa domestic bagged refuse component pre and post the introduction of the comprehensive kerb side service are as follows.

Note: whilst there are some increases in some of the secondary categories these do not negatively influence what is shown as an overall reduction in mean weight per household.

Table 6.3 – Comparison of composition of South Wairarapa domestic bagged refuse, 2010 to 2012

South Wairarapa District Council kerbside bagged refuse		2011		2012		% change 2010- 2012
		%	Mean wt. per HH	%	Mean wt. per HH	
Paper	Recyclable paper	13.6%	1.00 kg	9.6%	0.63 kg	-37%
	Cardboard	0.2%	0.02 kg	0.7%	0.05 kg	150%
	Multimaterial/other	4.0%	0.30 kg	2.4%	0.16 kg	-47%
	Subtotal	17.8%	1.31 kg	12.7%	0.84 kg	-36%
Plastics	# 1 to 7 containers	2.0%	0.15 kg	3.1%	0.20 kg	33%
	All other plastics	12.4%	0.91 kg	14.9%	0.98 kg	8%
	Subtotal	14.4%	1.06 kg	18.0%	1.19 kg	12%
Organics	Kitchen waste	38.3%	2.82 kg	37.9%	2.50 kg	-11%
	Greenwaste	3.4%	0.25 kg	2.4%	0.16 kg	-36%
	Multimaterial/other	3.2%	0.24 kg	2.6%	0.17 kg	-29%
	Subtotal	44.8%	3.31 kg	42.9%	2.83 kg	-15%
Ferrous metals	Steel cans	1.7%	0.12 kg	1.3%	0.09 kg	-25%
	Multimaterial/other	0.6%	0.04 kg	0.6%	0.04 kg	0%
	Subtotal	2.3%	0.17 kg	1.9%	0.13 kg	-24%
Non ferrous metals	Aluminium cans	0.3%	0.02 kg	0.3%	0.02 kg	0%
	Multimaterial/other	0.7%	0.05 kg	1.2%	0.08 kg	60%
	Subtotal	1.0%	0.07 kg	1.5%	0.10 kg	43%
Glass	Bottles/jars	4.8%	0.36 kg	2.1%	0.14 kg	-61%
	Multimaterial/other	0.5%	0.04 kg	0.7%	0.04 kg	0%
	Subtotal	5.3%	0.39 kg	2.8%	0.18 kg	-54%
Textiles		4.0%	0.29 kg	5.0%	0.33 kg	14%
Nappies and sanitary		6.2%	0.46 kg	13.4%	0.88 kg	91%
Rubble		1.7%	0.12 kg	1.0%	0.06 kg	-50%
Timber		0.8%	0.06 kg	0.4%	0.03 kg	-50%
Rubber		0.2%	0.01 kg	0.1%	0.01 kg	0%
Potentially hazardous		1.5%	0.11 kg	0.3%	0.02 kg	-82%
TOTAL		100.0%	7.38 kg	100.0%	6.60 kg	-11%

3. Discussion

Survey Accuracy

MFe's Solid waste Analysis Protocol 2002 (SWAP) Precision of Results defines a margin of $\pm 20\%$ as being a reasonable level of accuracy.

Precision levels for paper, plastics and organics in domestic bags fall within the definition but in the MGB audit none of the primary categories had

precision levels less than the margin. This is due in part to the relatively small sample size and the high variability of materials within MGBs.

Diversion Potential of South Wairarapa Domestic Refuse

As extracted from the report and the survey data, the potential for additional diversion from the existing collection for both bags and MGBs is clear with the balance potentially able to be captured with the introduction of a composting service.

Further audits

Council is currently discussing the possibility of carrying out further audits through the use of Local College students as part of a local initiative. This is in preliminary discussions at present and been positively received by Kuranui School Principal Geoff Shepard and Earthcare Environmental.

Further discussions will take place once the school year has commenced with a view to start during the first term.

Table 5.4 – Diversion potential of South Wairarapa domestic refuse

Kerbside recyclable materials	Refuse bags - per household set out	MGBs - per MGB
Recyclable materials		
Paper - Recyclable	0.63 kg	1.57 kg
Cardboard	0.05 kg	0.31 kg
Plastics - #1 to 7	0.20 kg	0.38 kg
Ferrous metals - Steel cans	0.09 kg	0.17 kg
Non-ferrous metals - aluminium cans	0.02 kg	0.04 kg
Glass - Bottles/jars	0.14 kg	0.69 kg
Reusable textiles	0.23 kg	0.20 kg
Subtotal	1.36 kg	3.37 kg
Compostable materials		
Organics - Kitchen waste	2.50 kg	4.12 kg
Organics - Greenwaste	0.16 kg	4.89 kg
Subtotal	2.66 kg	9.01 kg
Total divertible		
Weight of divertible materials	4.02 kg	12.38 kg
Divertible materials as % of total	60.9%	78.8%

Twenty-one per cent of the materials in both the refuse bags and the MGBs could have been recycled through the existing kerbside recycling collection. A further 40% of the waste in the refuse bags could have been composted and 57% of the MGB waste. In total, about 61% of council's kerbside bagged refuse collection could be diverted from landfill disposal through recycling and composting and 79% of the private MGB collection could be diverted. The weight of divertible material per MGB is more than three times the quantity of divertible material in each household set out of refuse bags.

District Comparisons

The report analyses the differences in divertible materials in refuse bags across the three Councils from survey to survey (Page 51 of the report) plus changes that have occurred between audits.

In addition there is a comparison of domestic bag composition, house hold set out and domestic MGB weights with other districts outside of the Wairarapa (Page 52 and 54).

South Wairarapa results indicate an outcome somewhere near midpoint in all cases.

4. Appendices

Appendix 1 – Waste Not Consulting “Survey of Kerbside Refuse December 2012”

Contact Officer: Bill Sloan, Asset Manager

Reviewed By: Mark Allingham, Group Manager Infrastructure Services

**Appendix 1 – Waste Not
Consulting “Survey of
Kerbside Refuse December
2012**