

WASTE COMPOSITIONAL ANALYSIS

Direct and Trading Advisory Committee - 28 June 2016

Report of Chief Officer, Environmental and Operational Services

Status: For consideration

Key Decision: No

Executive Summary: This report summarises the results of the Waste Compositional Analysis carried out in March 2016 and gives proposals for consideration to increase participation and capture rates and reduce contamination levels, to maximise recycling and composting and recycle quality, from existing collection services.

This report supports the Key Aim of a green and healthy environment.

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Recommendation to Direct & Trading Services Advisory Committee

That Members consider the results of the Waste Compositional Analysis and suggest actions the Council could take to increase participation and capture rates and reduce contamination levels to maximise recycling and composting rates and recycle quality, from existing collection services.

Introduction and Background

- 1 Members may recall a report to the Local Planning and Environment Advisory Committee on 23 October 2014, and Cabinet on 13 November 2014 regarding the requirements of the England and Wales Waste Regulations 2011 (as amended 2012), promoting high quality recycling.
- 2 One of the agreed recommendations supporting the decision that the Council does not need to collect paper, card or plastics separately, was to undertake a further waste compositional analysis (waste audit) to provide up to date information about the composition of waste, following the last waste audit carried out in December 2008.
- 3 All Kent Authorities have therefore undertaken a waste compositional analysis, funded by the Kent Resource Partnership (KRP) during 2015/16.

- 4 A Company was commissioned to undertake this work with a sampling regime from 300 properties (houses and flats) representing the main socio - demographic categories.
- 5 This was carried out in March 2016, for black and clear sack collections.

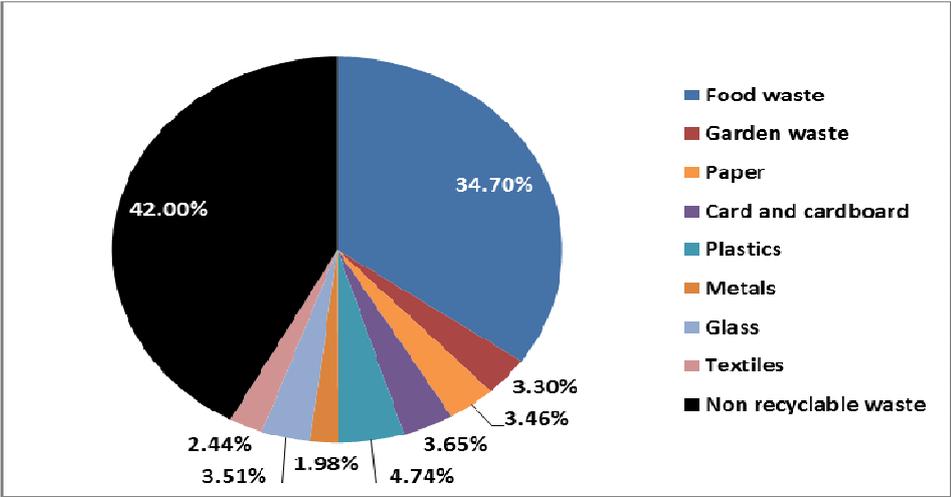
Objectives

- 6 Specific aims of the work were to:
 - Understand, using socio-demographic profiling, which sectors of the community are producing which types of waste and which are using the recycling provision most effectively
 - Detect capture rates for individual materials which are already collected separately for recycling
 - Determine the amount of overall waste diverted by each recycling collection overall
 - Evaluate the amount of specific materials collected in the residual waste (black sacks) that could potentially be collected separately for recycling
 - Evaluate the use of the receptacles used for collecting waste and recycling
 - Detect the amount of recyclable packaging and biodegradable material present
 - Assess the amount of contamination and wrong materials in sacks meant for recycling material

Headline Results

- 7 The Contents of Residual Waste Sacks (Black sacks) collected from kerbside, including the Potential to be Recycled:

Figure 1. Percentages of all materials (100%)

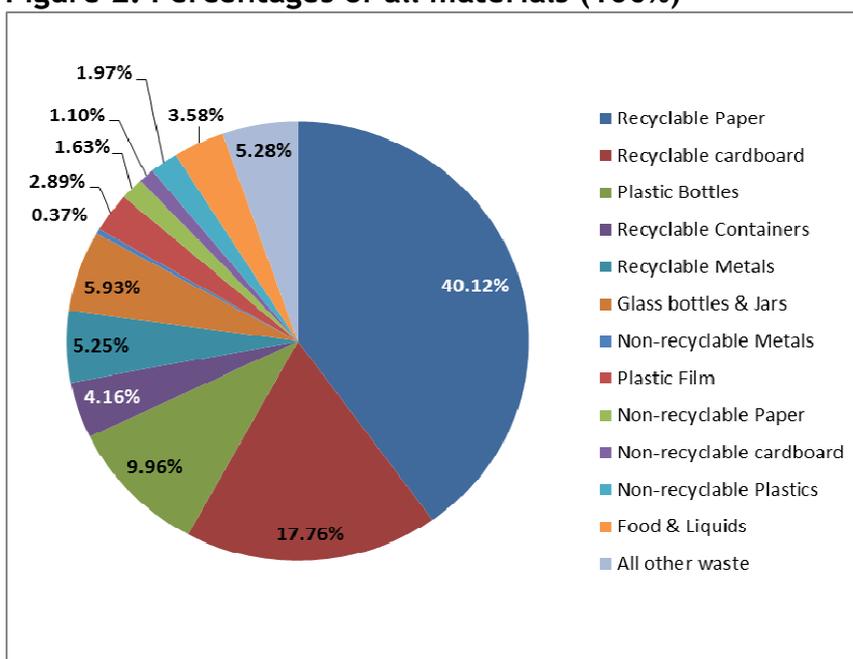


Material	Weight of total (%)
Food waste	34.70%
Garden waste	3.30%
Paper	3.46%
Card and cardboard	3.65%
Plastics	4.74%
Metals	1.98%
Glass	3.51%
Textiles	2.44%
Non recyclable waste	42.00%
Total Black Sack Waste	100%

- Of the 34.7% of food waste found in residual waste sacks, 18% was disposed of in its packaging.
- 13.83% of collected residual waste could have been placed into clear recycling sacks.
- 23.08% of collected residual waste could have been recycled by existing kerbside and bring-site services.
- 3.3% of collected residual waste could have been collected as garden waste, or home composted.

8 The Contents of Recycling Sacks (Clear sacks) & Flattened Cardboard collected from kerbside, including Contamination (Wrong Materials):

Figure 2. Percentages of all materials (100%)



- **13.56% of the contents of recycling sack samples consisted of non recyclable material.**

Material	Weight of total (%)	
Recyclable Paper	40.12%	} 77.25%
Recyclable cardboard	17.76%	
Plastic Bottles	9.96%	
Recyclable Containers	4.16%	
Recyclable Metals	5.25%	
Glass bottles & Jars	5.93%	} 9.19%
Non-recyclable Metals	0.37%	
Plastic Film	2.89%	
Non-recyclable Paper	1.63%	} 13.56%
Non-recyclable cardboard	1.10%	
Non-recyclable Plastics	1.97%	
Food & Liquids	3.58%	
All other waste	5.28%	
Total Clear Sack Waste	100%	

Key:	
What we want in recycling sacks=	
Not wanted but recycled anyway=	
Not wanted; contamination=	

- Although 22.75% of clear sack content is unwanted, glass, metals, and plastic films can be recovered for recycling at the recycling centre (MRF)
- The average set-out rate for recycling sacks (the percentage of the 150 households we sampled that put recycling out on the day) was 81%; a high of 90% and a low of 78%.
- 86.44% of the contents of recycling sack samples from houses were recyclable, as compared to 63.73% of the contents from flats.
- Although 22.75% of clear sack content is unwanted, glass, metals, and plastic films can actually be recycled at the recycling centre (MRF)
- 5.93%, the glass bottles and jars, could have been recycled at our bring-sites to realise greater income.

Summary of Findings

- 9 The Council's household recycling/composting rate for 2015/16 was 34.8% (22.76% dry recycling and 12.04% composting). The National target for recycling/composting is 50% by 2020 (45% by 2015). This is also the target agreed in the Kent Joint Household Waste Strategy. The current average for collection Authorities in Kent is 40.6%
- 10 It is clear from the results that 13.83% of collected residual waste (in black sacks) could have been placed in the clear sacks for recycling and a further 9.25% of residual waste could have been recycled at the bring sites or through the garden waste collection scheme.
- 11 Although garden waste comprised of only 3.3% of residual waste, this could be composted either at home, in the household waste recycling centres, or through the Council's garden waste collection scheme.
- 12 34.7% of residual waste comprised of food waste, a significant percentage of which could be composted.
- 13 The Council's overall recycling rate could be increased significantly if residents placed all the material that can be recycled either into the clear sacks for kerb side collection, or through the bring sites (mainly glass and textiles) instead of black sacks.

Recycling Promotional Campaigns

- 14 A summary of the communications campaigns undertaken by SDC and as part of the KRP over the last two years.
 - As has been the practice since 2004, all households receive refuse and recycling sacks every 20 weeks. Each sack is screen-printed with detailed information on their correct use, and each roll of recycling sacks has a further reminder in the form of an A4 gatefold recycling guide.
 - Since December 2014, we have had the benefit of communications campaign funding from the Kent Resource Partnership (£31,200) to regularly inform District residents of our services with the goal of improving the capture of good quality recycling and minimising wrong practices, i.e., putting wrong items in recycling sacks or refuse sacks.
 - That campaign began with publications in In Shape (Dec. 2014), a mail-shot to all District households (February 2015), and adverts and advertorials in local newspapers (March & April 2015), and pull-up banners in public places to promote the service.
 - The KRP funding was magnified in late 2015 and early 2016 with funding from WRAP, the UK's Waste and Resources Action Programme, Marks & Spencer and Alupro (the Association of Aluminium Processors) with County-wide mailshots in January and February 2016 to promote the correct recycling of household plastics and metals respectively.
 - The most recent In Shape magazine featured our popular garden waste collection service and 'Don't let it go to waste,' our updated summary of

what happens to the household waste that we collect weekly from District households.

- Publications and mailings are complemented by public speaking engagements at District schools, resident's association and town and parish AGMs, Women's Institute meetings, Rotary Clubs and the like to directly engage the public.

15 In addition to the communication campaigns outlined above, we continue to take operational and other deliverable actions to improve the capture of recyclable materials. To date they have been:

- The provision of 5 additional recycling sacks to the roll of sacks delivered every 20 weeks - now 30 sacks on a roll.
- The gradual transition from 70/30 split body refuse collection vehicles (70% black sacks / 30% clear sacks) to 50/50 split body vehicles. This transition, as vehicles reach replacement age, addresses the increase of very large cardboard boxes placed out for collection (which do not fit in the 30% side of the split vehicle) and the recent addition of plastic food containers and drinks cartons to the recycle stream.
- Deployment of additional bottle bank sites to encourage glass bottle and jar recycling rather than disposal in black sacks or as wrong items in clear sacks.
- The introduction of a smaller garden waste bin for members of the public who were not taking advantage of the service, because the larger bin was greater than their needs or they do not like using our garden waste sacks.
- Expansion of the number of locations from which District residents can get extra refuse and recycling sacks should they run short and garden waste collection sacks if required; there are now 43 such locations.
- A briefing of all refuse and recycling crews by the manager of materials recovery facility (MRF) where our kerbside recycling is sorted for recovery. The focus of that meeting was on the importance of capturing high-quality materials and minimising contamination of that material.
- Inspections of refuse and recycling loads being delivered to the Dunbrik Transfer station to determine if good quality recycle is being lost due to vehicle capacity issues or crew error.
- Vehicle tracking devices are being installed in all collection vehicles. One of the many benefits of such devices is that the interactive software will help us to route vehicles in such a way as to optimise the collection of the maximum volume of recycle.

Possible Measures to Decrease Residual Waste and Increase Capture of Recyclable Materials from Households within the Current Collection Arrangements

16 Currently The Council places no restriction on the amount of household waste it will collect each week provided it is presented in black (residual) or clear (recycling) sacks. Furthermore as the service is weekly rather than alternate weekly, as provided by many neighbouring Councils, Sevenoaks District Council residents have twenty-six more opportunities to present additional waste for

collection each year. More measures may need to be considered to change certain residents' behaviour to encourage presenting waste correctly for collection and recycling.

There are a number of measures that Members might want to consider for implementation:

- Place a limit on the maximum number of black residual waste sacks collected each week.
- Continue to place no limit on the number of clear recycling sacks collected each week.
- Consider a policy of not returning to collect sacks of residual waste or recyclable materials presented at kerbside but identified at time of collection as containing the wrong materials.
- Further promote responsible recycling through targeted communication with groups of households or residential areas identified as not presenting their waste correctly.
- Employ officers to follow up with individual residents, where waste rejected, to inform and help those residents change their behaviour.
- Where there is no change in resident's behaviour and waste is repeatedly incorrectly presented at kerbside to deploy officers to issue fixed penalty fines for littering or fly-tipping if appropriate.
- Incentivise households, or groups of households, to produce consistently high quality recyclable materials by developing a programme of reward and or community recognition.
- Door stepping campaign (resource intensive).
- Increased use of Media Campaign, including Social Media.
- Improved website information

Key Implications

Financial

The cost of the analysis was met from the Kent Resource Partnership. In the 2016/17 KRP budget a sum of £40,000 has been set aside to support Kent Authorities Campaign to increase recycling rates following the waste audit. This budget is shared by all 13 Authorities in the KRP and additional campaign resources may be required to support this Council's campaign. Further actions as detailed above, would require additional resources.

Legal Implications and Risk Assessment Statement.

The Council has a duty to collect household waste, but powers exist to ensure residents present waste correctly for collection and recycling. Taking no action, following the outcome of the waste audit, will result in not capturing the maximum amount of recycle from existing collection schemes, and will not reduce contamination levels.

Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

Conclusions

There is a significant amount of waste in the residual waste stream (black sacks) that could be recycled through the existing kerbside clear sack scheme, use of bring sites and increased take up of the garden waste collection scheme.

Members should consider, following the result of the waste audit, which actions should be taken forward to increase participation and capture rates and reduce contamination levels to maximise recycling and composting from existing collection services.

Background Papers: Sevenoaks Kerbside Waste Compositional Analysis
- March 2016

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Richard Wilson
Chief Officer Environmental and Operational Services