

## Jersey : Waste Composition

### Professor Chris Coggins

A copy of *Waste Composition Analysis : Guidance For Local Authorities*, published by Defra in mid-2004 is the standard guidance for England. A copy was sent via email to Mick Robbins on 17<sup>th</sup> May 2006.

The author/consultant is mentioned in the attendance list for the Focus Group in January 2004, and he commented on the Draft Report.

In addition :-

He co-ordinated 50% of the waste surveys referred to in Box 2

He was an adviser on the Wales Assembly Government-funded survey referred to in Box 25

He has worked closely with MEL Research Limited for 20 years, one of the leading consultancies undertaking waste composition surveys

The following comments may help in reading and using this Defra-funded guidance. References to Box numbers, Figure numbers, Section numbers and Table numbers are those in the Report mentioned in the first paragraph above.

There is on-going debate in the UK about Household and Municipal waste definitions :-

Household waste is defined as waste primarily arising from households (see Annex 1)

Municipal waste in England is waste collected by, or on behalf, of Local Authorities

Household waste is c. 90% of municipal waste as so defined in England

In Europe, municipal waste is defined by the Landfill Directive, which many regard as the most important EU waste Directive

Article 2 (b) of the Council Directive (99/31/EC) on the landfill of waste :-

'municipal waste' mean waste from households, as well as other waste which, because of its nature or composition, is similar to waste from households

This means that any comparison of recycling rates between EU Member States has to be treated with caution, depending on which definition is used. Recycling rates of commercial waste tends to be higher than for household waste.

Commercial waste for recycling tends to be available in larger quantities per site, more homogeneous and potentially less contaminated than household recyclables

**Jersey will need to decide which definition of household or municipal waste it wishes to use in order to set and monitor targets, and seek markets for recyclates.**

Article 5 (2) of the Council Directive (99/31/EC) on the landfill of waste sets targets for the diversion of biodegradable municipal wastes (BMW) from landfill. For the UK, with a four-year derogation due to its reliance on landfill, the targets from Article 5 are :-

By 2010 biodegradable municipal waste going to landfills must be reduced to 75% of the total amount (by weight) of biodegradable waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available

By 2013 biodegradable municipal waste going to landfills must be reduced to 50% of the total amount (by weight) of biodegradable waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available

By 2020 biodegradable municipal waste going to landfills must be reduced to 35% of the total amount (by weight) of biodegradable waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available

Article 2 (m) of the Council Directive (99/31/EC) on the landfill of waste :-

'biodegradable waste' means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard. The examples given are 'indicative' and are not exclusive.

The UK Government published a Consultation Paper *Limiting Landfill* in October 1999 defining 'Biodegradable Household Waste' and its Biodegradable content. More recent data, based on Defra *Municipal Waste Management Survey 2001/02* by Parfitt for the Strategy Unit was published in 2002.

#### Biodegradable Household Waste

Category	1999		2001/02	
	Percent of waste (Percent biodegradable)		Percent of waste (Percent biodegradable)	
Paper and card	32	(32)	19	(19)
Textiles	2	(1)	2	(1)
Misc. combustibles	8	(4)	8	(4)

Misc. non-combustibles	2	(1)	4	(0)
Putrescibles	21	(21)	42	(42)
Fines (< 10 mm)	7	(3.5)	3	(2)
Others	28	(0)	22	(0)
Total	100	(62.5)	100	(68)

The overall figure of 68% has been used in the *Landfill Allowance Trading Scheme Consultation* for England. Note that in the above table, 1999 data refers to England and Wales and 2001/02 data refers to England. Scotland proposes to use a figure of 63% and Wales a figure of 61% or 65% - depending on final decisions concerning what to include under municipal waste.

At the Defra LATS Roadshows in July 2004, an additional category was introduced as biodegradable, partly replacing the figure for textiles :-

Footwear, furniture, textiles 50% biodegradable

With reference to Box 2, there can be a considerable range in waste composition values based on a variety of causal variables. See Annex 2.

With reference to Figure 2.1, an interesting research area being developed in the UK is the analysis of 'residual waste' over time in order to monitor participation rates and capture rates of recyclables, in conjunction with consumption patterns and recycling activities.

Box 6 refers to participation, and this should be linked with set-out – which are not the same

Set-out = the number of recycling containers set out each collecting period (e.g. some households may only put the container when it is full, and not every collecting period)

Participation = the number of household participating in a recycling in a designated period

Section 2.6 I gather there are no ACORN profiles (based on socio-demographic data) data for Jersey. Evidence in the UK is that a simple distinction can be made between 'more affluent' and 'less affluent'. Other variables are covered in Box 14.

Section 3.2 I can provide a leaflet explaining the sampling involved with 'cone and quartering' if required, prepared by MEL Research for the Energy from Waste Association.

The NHWAP waste survey mentioned in the report undertaken in 1997 : at Luton we aimed to hand-sort c.100 bags per day with a team of 6 trained staff.

The importance of Table 4.1 is that it must be seen as 'hierarchical' – use as many categories as you wish as long as they can be 'fitted' together for policy purposes.

I find Section 5.2 particularly weak, and you will need more guidance on risk assessment, staff training, and use of PPE. I can provide this. In addition, guidance on scales, containers to weigh materials and calibrating procedures

Section 6.1 is of fundamental importance :-

Research linked with policy objectives

The need for waste data to underpin public education and publicity

E&OE

Last updated 31<sup>st</sup> May 2006.

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## **Annex 1            The Controlled Waste Regulations 1992**

### Schedule 1 : Waste to be Treated as Household Waste

1. waste arising from a hereditament or premises exempted from local non-domestic rating by virtue of being a place of religious worship
2. waste from premises occupied by charity and wholly or mainly used for charitable purposes
3. waste from any land belonging to or used in connection with domestic property, a caravan or a residential home
4. waste from a private garage which either has a floor area of 25 square metres or less or is wholly or mainly used for the accommodation of a private motor vehicle
5. waste from private storage premises used wholly or mainly for the storage of articles of domestic use
6. waste from a moored vessel used wholly for the purposes of living accommodation
7. waste from a camp site
8. waste from a prison or other penal institution
9. waste from a hall or other premises used wholly or mainly for public meetings
10. waste from a royal palace
11. waste arising from the discharge by a local authority of its duty under section 89(20) of the Environmental Protection Act 1990

### Schedule 2 : Types of Household waste For Which a Charge For Collection May be Made

1. any article which exceeds 25 kilograms in weight
2. any article which does not fit, or cannot be fitted into :-
  - (a) a receptacle for household waste provided in accordance with section 46
  - or
  - b) where no such receptacle is provided, a cylindrical container 750 millimetres in diameter and 1 metre in length
3. garden waste
4. clinical waste from a domestic property, a caravan or from a moored vessel used wholly for the purposes of living accommodation
5. waste from a residential hostel, a residential home or from premises forming part of a university, school or other educational establishment, or forming part of a hospital or nursing home
6. waste from a domestic property or a caravan used in the course of a business for the purpose of self-catering holiday accommodation
7. dead domestic pets
8. any substances or articles which, by virtue of a notice served by a collection authority under section 46, the occupier of the premises may not put into a receptacle for household waste in accordance with that section
9. litter and refuse collected under section 89(1)(f)
10. waste in England and Wales from composite hereditaments, e.g. commercial premises on the ground floor with domestic property above
11. any mineral or synthetic oil or grease
12. asbestos
13. waste from a caravan which in accordance with any licence or planning permission regulating the use of the caravan site on which the caravan is stationed, is not allowed to be used for human habitation throughout the year
14. waste from a camp site, other than from any domestic property on that site
15. waste from premises occupied by charity and wholly or mainly used for charitable purposes, unless it is waste falling within Paragraph 1 of Schedule 1
16. waste from a prison or other penal institution
17. waste from a hall or other premises used wholly or mainly for public meetings
18. waste from a royal palace

## Annex 2 Household Waste Composition Related to Recycling Potential

Category	minimum	maximum	typical	weight	sub-category	recyclable	non-recyclable
Paper & card	21.6	54.1	33.2	11.4	newspapers	16.0	
			4.6	magazines			
			9.5	other paper			
			0.6	liquid containers			
			3.8	card packaging			
			3.1	other card			17.3
Plastic film	3.4	8.1	5.3	1.2	refuse sacks		
			4.1	other		5.3	
Dense plastic	2.7	10.1	5.9	0.6	clear beverage bottles		
			0.1	coloured beverage bottles			
			1.1	other bottles	1.9		
			1.9	food packaging			
			2.1	other plastic	4.0		
Textile	1.1	3.4	2.1	2.1	textiles		2.1
Miscellaneous combustibles	1.4	13.6	8.1	4.2	disposable nappies		
			3.9	miscellaneous comb		8.1	
Miscellaneous Non-combustibles	0.4	4.2	1.8	1.8	miscellaneous non-combustibles		1.8
Glass	2.7	16.9	9.3	1.3	brown		
			2.4	green			
			5.4	clear	9.1		
			0.2	other		0.2	
Putrescibles	13.9	27.8	20.2	3.4	garden		
			16.8	other	20.2		
Ferrous	2.8	10.8	5.7	0.5	beverage cans		
			3.7	food cans	4.3		
			0.1	batteries			
			0.4	other cans			
			1.0	other	1.3		
Non-ferrous	0.3	3.9	1.6	0.4	beverage cans		0.4
			0.5	foil			
			1.0	other	1.2		
Fines	3.5	12.4	6.8	6.8	- 10 mm		6.8
<b>Totals</b>				<b>100</b>	<b>100</b>	<b>51.9</b>	<b>48.1</b>

Source : Warren Spring Laboratory, early/mid 1990s

Although unintentional, the overall figure of 51.9% recyclable fitted with the declared aim in 1990 (*This Common Inheritance*) to '...recycle half of the recyclable fraction of household waste, that is 25% of total household waste'.

### 2.4.1.1

With other policy-related pressures, variations have been developed. An example was Project Integra in Hampshire in 1999, where a total of 192 third-level sub-categories were hand sorted. This enabled a wide range of tables to be derived in order to present base line data in connection with developing a range of waste management policies – usually in response to EU directives. These range from the 1994 Packaging Directive to the 1999 Landfill Directive, and potential amendments to other Directives (e.g. hazardous waste) to include specific categories in the household waste stream. Consistent decisions can only be based on suitable training and guided by experience.

Two further categories have been added to the basic eleven categories : Waste electrical and electronic equipment and Potentially hazardous.