



Stansted Airport waste composition study, August 2003

Conducted on behalf of the British Airports Authority

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Introduction

This report presents the results of a waste analysis conducted by Network Recycling for the British Airports Authority (BAA) in August 2003. The aim was to determine the quantity and composition of waste produced from retail and catering concessionaires located in the Terminal Building at Stansted Airport. This was the second phase of this study and required the collection of all waste from retail and catering concessionaires over a one-day period and analysis on waste from selected outlets. The first phase was an identical study conducted in March 2003.

Methodology

Sample selection

Six concessionaires, those assumed to be the largest producers of waste, were selected for sampling. These were:

- Garfunkels (catering outlet)
- Pontis (catering outlet)
- Costa Coffee (coffee shop)
- WH Smith (retailer, stationer)
- Boots (retailer, chemist)
- *Butlers (bar and catering outlet – no longer located at Stansted Airport)*

Sample collection

A team of Network Recycling staff were stationed by the two waste compactors from 6am-10pm. All waste from retail and catering concessionaires was identified as to its source and weighed. Waste from the concessionaires listed above was bagged, weighed, labelled and transported to the waste analysis site for sorting.

Sorting the refuse

The waste collected from the five selected outlets was hand sorted into the agreed categories by a team of Network Recycling on 'The Reclamator', Network Recycling's mobile conveyor system. The refuse was analysed on the day following collection in order to minimise the absorption of the liquid content of the waste stream by porous materials such as paper. Weights were obtained for each category of material using digitally calibrated scales. Due to the volume of the waste, sub-samples were selected in order to obtain a representative composition of the waste stream.

Results

The results are presented on the following pages in Tables 1-8. Table 1 lists the waste arisings from all retail and catering concessionaires located in the Terminal Building at Stansted Airport, collected between 6am-10pm on Tuesday 05 August. Table 2 then details the waste arisings collected from the selected concessionaires over this period of time. Tables 3-7 show the audit results for each of the selected outlets. As mentioned above, due to the quantities of the waste collected, sub-samples were selected from each of the samples. The tables detail the actual weight of waste sorted and the percentage composition. Projections of the weights of materials that would appear in each category if the complete sample had been sorted are also shown. Table 8 shows the same information across all audited samples.

Table 1. Waste arisings from retail and catering concessionaires, 6am-10pm Tuesday 05 August, Stansted Airport

Source of waste	Weight of waste (kg)	Weight of cardboard (kg)	Weight (& type) of recyclables (kg)	Total material (kg)
Café Alba	97.65	31.93		129.58
Accessorise		3.37		3.37
Duty Free	37.40	91.47		128.87
Costa Coffee	132.16	2.90	11.29 glass	146.35
Pontis	908.72	65.83	56.36 glass	1030.91
French Connection	5.21	26.97		32.18
WH Smith	66.78	216.37	4.30 glass	287.45
Knickerbox		1.93		1.93
Sock Shop	2.49	4.43		6.92
Pret-a-manger	343.79	72.81	2.20 glass	418.80
Impulse	8.20	4.03		12.23
Rolling Luggage	3.33	27.25		30.58
Starbucks	219.04	43.09		262.13
Nike	5.68	6.81		12.49
Boots	25.96	35.26		61.22
Hacketts	2.24	8.92		11.16
Pen Shop		3.01		3.01
Gifts 4 All		4.93		4.93
Dixons	4.50	11.58		16.08
Sunglasses Shop		14.92		14.92
The Caviar Shop	10.10		12.76 unspecified	22.86
Tie Rack	9.27	0.41		9.68
The Body Shop	5.88			5.88
Claire's Accessories	2.22	1.78		4.00
Salisbury	0.56			0.56
K Box	1.89	1.33		3.22
Monsoon	2.81	1.58		4.39
Metro		1.86		1.86
Jumper	0.36			0.36
Garfunkels	457.41	66.47		523.88
The Book Shop		5.93		5.93
Glorious Britain	4.47	9.10		13.57
Case	3.11			3.11
Hamleys	1.95			1.95
Staff restaurant	191.38	10.66	7.88 vegetable oil	209.92
Wetherspoons	232.20	37.02	72.82 glass	342.04
STA	128.47	2.20		130.67
Hargreaves Sports	4.42			4.42
TOTAL	2919.65	816.15	167.61	3903.41

**Table 2. Waste arisings from selected retail and catering concessionaires, 6am-10pm
Tuesday 05 August, Stansted Airport**

Source of waste	Weight of waste (kg)	Weight of cardboard (kg)	Weight (& type) of recyclables (kg)	Total material (kg)
Costa Coffee	132.16	2.90	11.29 glass	146.35
Pontis	908.72	65.83	56.36 glass	1030.91
WH Smith	66.78	216.37	4.30 glass	287.45
Boots	25.96	35.26		61.22
Garfunkels	457.41	66.47		523.88
TOTAL	1591.03	386.83	71.95	2049.81

Table 3. Costa Coffee waste composition

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	12.27	25.83	17.65
Other packaging eg shoe boxes	0.88	1.85	1.27
Non packaging			
Subtotal cardboard	13.15	27.68	18.92
Paper			
High grade office	0.05	0.11	0.07
Mixed low grade office			
News and mags	1.71	3.60	2.46
Other recyclable	2.83	5.96	4.07
Non recyclable compostable	2.62	5.52	3.77
Paper food service disposables (FSDs)	2.85	6.00	4.10
Non recyclable, non compostable	0.03	0.06	0.04
Subtotal paper	10.09	21.24	14.51
Glass			
Non colour seperated	2.32	4.88	3.34
Subtotal glass	2.32	4.88	3.34
Metal			
Aluminium cans	0.21	0.44	0.30
Aluminium foil	0.01	0.02	0.01
Steel cans	0.07	0.15	0.10
Subtotal metal	0.29	0.61	0.42
Plastic			
Dense	11.37	23.94	16.36
Film	2.82	5.94	4.06
Subtotal plastic	14.19	29.87	20.41
Food waste			
No segregation, including all food	27.52	57.93	39.59
Subtotal food waste	27.52	57.93	39.59
All other waste			
All other waste	1.96	4.13	2.82
Subtotal all other waste	1.96	4.13	2.82
TOTAL	69.52	146.35	100.00

Table 4. Pontis waste composition

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	32.79	86.53	8.39
Other packaging eg shoe boxes	1.30	3.43	0.33
Non packaging			
Subtotal cardboard	34.09	89.96	8.73
Paper			
High grade office			
Mixed low grade office	0.38	1.00	0.10
News and mags	2.25	5.94	0.58
Other recyclable	1.92	5.07	0.49
Non recyclable compostable	12.11	31.96	3.10
Paper food service disposables (FSDs)	32.24	85.08	8.25
Non recyclable, non compostable			
Subtotal paper	48.90	129.04	12.52
Glass			
Non colour seperated	17.25	45.52	4.42
Subtotal glass	17.25	45.52	4.42
Metal			
Aluminium cans	0.01	0.03	0.00
Aluminium foil	0.08	0.21	0.02
Steel cans	10.17	26.84	2.60
Subtotal metal	10.26	27.07	2.63
Plastic			
Dense	74.91	197.67	19.17
Film	9.59	25.31	2.45
Subtotal plastic	84.50	222.98	21.63
Food waste			
No segregation, including all food	189.00	498.74	48.38
Subtotal food waste	189.00	498.74	48.38
All other waste			
All other waste	6.67	17.60	1.71
Subtotal all other waste	6.67	17.60	1.71
TOTAL	390.67	1030.91	100.00

Table 5. WH Smith waste composition

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	108.45	204.57	71.17
Other packaging eg shoe boxes	1.16	2.19	0.76
Non packaging			
Subtotal cardboard	109.61	206.76	71.93
Paper			
High grade office	2.65	5.00	1.74
Mixed low grade office	2.20	4.15	1.44
News and mags	11.44	21.58	7.51
Other recyclable	2.24	4.23	1.47
Non recyclable compostable	0.34	0.64	0.22
Paper food service disposables (FSDs)	0.21	0.40	0.14
Non recyclable, non compostable	0.72	1.36	0.47
Subtotal paper	19.80	37.35	12.99
Glass			
Non colour seperated			
Subtotal glass	0.00	0.00	0.00
Metal			
Aluminium cans	0.29	0.55	0.19
Aluminium foil	0.28	0.53	0.18
Steel cans			
Subtotal metal	0.57	1.08	0.37
Plastic			
Dense	6.25	11.79	4.10
Film	13.64	25.73	8.95
Subtotal plastic	19.89	37.52	13.05
Food waste			
No segregation, including all food	1.28	2.41	0.84
Subtotal food waste	1.28	2.41	0.84
All other waste			
All other waste	1.24	2.34	0.81
Subtotal all other waste	1.24	2.34	0.81
TOTAL	152.39	287.45	100.00

Table 6. Boots waste composition

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	36.70	38.58	63.03
Other packaging eg shoe boxes	1.25	1.31	2.15
Non packaging	0.69	0.73	1.18
Subtotal cardboard	38.64	40.62	66.36
Paper			
High grade office	0.69	0.73	1.18
Mixed low grade office			
News and mags	0.10	0.11	0.17
Other recyclable	0.42	0.44	0.72
Non recyclable compostable	0.04	0.04	0.07
Paper food service disposables (FSDs)			
Non recyclable, non compostable			
Subtotal paper	1.25	1.31	2.15
Glass			
Non colour seperated			
Subtotal glass	0.00	0.00	0.00
Metal			
Aluminium cans			
Aluminium foil			
Steel cans			
Subtotal metal	0.00	0.00	0.00
Plastic			
Dense	2.90	3.05	4.98
Film	4.12	4.33	7.08
Subtotal plastic	7.02	7.38	12.06
Food waste			
No segregation, including all food	11.22	11.80	19.27
Subtotal food waste	11.22	11.80	19.27
All other waste			
All other waste	0.10	0.11	0.17
Subtotal all other waste	0.10	0.11	0.17
TOTAL	58.23	61.22	100.00

Table 7. Garfunkels waste composition

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	38.35	70.32	13.42
Other packaging eg shoe boxes	2.08	3.81	0.73
Non packaging			
Subtotal card	40.43	74.13	14.15
Paper			
High grade office			
Mixed low grade office			0.00
News and mags	1.84	3.37	0.64
Other recyclable	4.22	7.74	1.48
Non recyclable compostable	21.21	38.89	7.42
Paper food service disposables (FSDs)	6.36	11.66	2.23
Non recyclable, non compostable			
Subtotal paper	33.63	61.66	11.77
Glass			
Non colour seperated	55.76	102.24	19.52
Subtotal glass	55.76	102.24	19.52
Metal			
Aluminium cans			0.00
Aluminium foil	0.10	0.18	0.04
Steel cans	3.18	5.83	1.11
Subtotal metal	3.28	6.01	1.15
Plastic			
Dense	16.39	30.05	5.74
Film	11.76	21.56	4.12
Subtotal plastic	28.15	51.62	9.85
Food waste			
No segregation, including all food	105.18	192.86	36.81
Subtotal food waste	105.18	192.86	36.81
All other waste			
All other waste	19.28	35.35	6.75
Subtotal all other waste	19.28	35.35	6.75
TOTAL	285.71	523.88	100.00

Table 8. Waste composition across all selected samples

Material	Weight in audited sample (kg)	Weight in total sample (kg)	Percentage composition
Cardboard			
Corrugated	228.56	489.80	23.89
Other packaging eg shoe boxes	6.67	14.29	0.70
Non packaging	0.69		
Subtotal card	235.92	505.57	24.66
Paper			
High grade office	3.39		
Mixed low grade office	2.58		0.27
News and mags	17.34	37.16	1.81
Other recyclable	11.63	24.92	1.22
Non recyclable compostable	36.32	77.83	3.80
Paper food service disposables (FSDs)	41.66	89.28	4.36
Non recyclable, non compostable	0.75		
Subtotal paper	113.67	243.59	11.88
Glass			
Non colour seperated	75.33	161.43	7.88
Subtotal glass	75.33	161.43	7.88
Metal			
Aluminium cans	0.51		0.05
Aluminium foil	0.47	1.01	0.05
Steel cans	13.42	28.76	1.40
Subtotal metal	14.40	30.86	1.51
Plastic			
Dense	111.82	239.63	11.69
Film	41.93	89.86	4.38
Subtotal plastic	153.75	329.48	16.07
Food waste			
No segregation, including all food	334.20	716.19	34.94
Subtotal food waste	334.20	716.19	34.94
All other waste			
All other waste	29.25	62.68	3.06
Subtotal all other waste	29.25	62.68	3.06
TOTAL	956.52	2049.81	100.00