

Note: This report forms part of the operational baseline information (Section 8.2).

Composting Report

Client BAA Plc
 Site Stansted Airport
 Activity Date Composting Year 2005 (April to March)



Composted Material	Grass/Shrub Cuttings		
Volume in (m3)	2271.5		
Mass (t)	908		
System Throughput	Start	Finish	Reduction
Volume Processed (m3)	2271	1033	45%
Mass (t)	908	671	74%

Statistics	
Number of windrows	10
Average time to compost (weeks)	12.1
Average Number of turns per windrow	4
Average Number of turns per week	0.33
Average time to Turn Windrows (mins)	165
Highest Temperature (degrees C)	69.5 Windrow I
Lowest Temperature (degrees C)	45.5 Windrow A
Average Temperature (degrees C)	53.4

Water used	
Potable (litres)	0.0
Reclaimed from Site (litres)	308,550

Greenhouse Gas Emissions (1-6)	
Activity	Carbon Dioxide Units (tonnes)
Cutting, Collection and Deposit	65.37
Compost Process	135.67
Spread	0.00
Management	1.04
Total (t)	202.07

GHG Comparison	CO2 (t)	Carbon (t)
Total Emissions (t)	202.07	55.17
Estimated Emissions if sent to Landfill*	4227.77	1154.18
Estimated Balance	-4025.70	-1099.02
Therefore there is a nett saving on GHG Emissions**		

These values are derived from data from:

1. US EPA – Greenhouse Gas Emissions from Management of Selected Material in Municipal Solid Waste.
2. European Commission Stage I, II, III A and B Standards - Directive 97/68EC
3. US Bureau of Transportation Statistics – http://www.bts.gov/publications/national_transportation_statistics/2002/html/table_04_37.html
4. DETR – Vehicle Emissions Standards
5. Vehicle Certification Agency – Emissions Database

* landfill 48km away, using 80m3 bulker lorries

** exclude GHG savings in substitution of Artificial Fertilisers

Aardvark EM Limited
 Higher Ford
 Wiveslicombe
 Taunton, Somerset, TA4 2RL
 Tel: 01984 624989
 Email: environment@aardvarkem.co.uk
 Web: www.aardvarkem.co.uk

Composting Report

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 Site Stansted Airport
 Activity Date Composting Year 2005 (April to March)



Composted Material Grass/Shrub Cuttings

Volume in (m3) 2271.5
 Mass (t) 908

System Throughput

	Start	Finish	Reduction
Volume Processed (m3)	2271	1033	45%
Mass (t)	908	671	74%

Nutrient Assessment - based on Dry Matter Analysis

Element	Value	Reported as	Convert to kg/m3 SAR	Applied Products	Kg of applied product at Maximum Application Rate	PTE PAS 100 Specification mg/kg	
Nitrogen	2.66	%w/w	11.571	N	210.00		
Phosphorus	3813	mg/kg	1.658655	P2O5	68.94		
Potassium	12598	mg/kg	5.48013	K2O	119.35		
Magnesium	2856	mg/kg	1.24236	MgO	37.43		
Conductivity	1760	uS/cm					
Copper	51.1	mg/kg	0.0222285	Cu	0.40	200	Pass
Zinc	110	mg/kg	0.04785	Zn	0.87	400	Pass
Cadmium	0.601	mg/kg	0.000261435	Cd	0.00	1.5	Pass
Mercury	0.06	mg/kg	0.0000261	Hg	0.00	1	Pass
Lead	22.2	mg/kg	0.009657	Pb	0.18	200	Pass
Arsenic	0.022	mg/kg	0.00000957	As	0.00		
Chromium	13.6	mg/kg	0.005916	Cr	0.11	100	Pass
Manganese	420	mg/kg	0.1827	Mn	3.32		
Nickel	12.9	mg/kg	0.0056115	Ni	0.10	50	Pass
Nitrate N	667	mg/kg	0.290145	NO3	5.27		
Ammonium N	112	mg/kg	0.04872	NH4	0.88		
					1.11		
Calcium	42716	mg/kg	42.716	Ca	775.25		
Iron	13524	mg/kg	13.524	N	341.17		

Nutrient Valuation	Mass (kg)	Value £***
Nitrogen	11953	3944
Phosphorous	1713	480
Potassium	5661	1104
TOTAL		5528

*** based on all nutrient becoming available prices based on figures quoted in J Nix Farm Management Pocket Handbook

Area (ha) Required for Spreading at Maximum Application Rates 56.92

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