



Waste Report

2016-2017

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Background

The University is committed to reducing its impact on the environment by monitoring waste streams produced as a by-product of its activity and seeking ways to move waste up the waste hierarchy in accordance with local, national and EU targets and its statutory Duty of Care.

This report will provide data on non-hazardous and hazardous waste produced at the University and how the waste was disposed of. Data was gathered from waste contractors servicing the University as part of their Duty of Care to record and report waste transfers. Carbon data is included in the report with conversion factors taken from the appropriate DEFRA data set.

Non-Hazardous Waste

The majority of waste at the University is non-hazardous. This includes municipal waste, food, paper and cardboard produced as part of the normal operation of the University and larger items such as wood and metal from furniture that has reached the end of its useful life. There is scope within these waste streams to both minimise waste produced and move waste up the waste hierarchy.

The University complies with the requirement to source segregate waste by segregating paper, dry mixed recyclates and residual waste. The Scottish Government have already announced that a ban on all biodegradable material from landfill will require all organisations to source segregate food waste by 2020.

During 2016-17 the University changed its main non-hazardous waste service provider and consolidated a number of waste streams into one contracted service. The contract was negotiated in partnership with Robert Gordon University and brought a number of benefits including reduced costs and administration, consolidated waste transfer notes, simplified reporting and contract management, and reduced carbon emissions. The transition has resulted in a gap in waste data as the outgoing contractor failed to submit their final quarterly report. The total waste figure should therefore be viewed as low by approx. 214 tonnes although the proportions of waste recycled and disposed of remain reasonably reliable.

Contractors & Waste Streams

Waste Stream	Contractor (Sub-Contractor)	Primary Disposal Method
Food	Keenans / EIS (Keenans)	Recycled
Metal	Panda Rosa / EIS	Recycled
Paper	Datashred	Recycled
Cardboard	TWMA / EIS	Recycled
Dry Mixed Recyclates	TWMA / EIS	Recycled
Green	Keenans / EIS (Keenans)	Recycled
Residual (General) Waste	TWMA / EIS	Energy from Waste
Wood	TWMA / EIS	Recycled

	Food	Metal	Paper	Recyclates & Residual							
	Recycle	Recycle	Recycle	Wood/Other Recycle	Plastic/Glass Recycle	Glass/Metal Recycle	Cans/Wood Recycle	Paper/Green Recycle	Green/Food Recycle	Matresses/DMR Recycle	General Waste Disposal
August	3.524	1.580	24.130	2.243	0.504	0.110	0.141	11.866	17.140	0.000	33.685
September	4.370	0.000	10.249	0.000	0.555	0.008	0.057	13.174	12.680	0.000	38.786
October	3.849	1.580	13.020	2.300	0.562	0.000	0.053	12.262	24.060	0.000	37.535
November	3.714	0.000	6.777	0.000	0.360	0.034	0.046	13.321	11.860	0.000	50.757
December	2.933	0.000	6.376	0.000	0.600	0.000	0.037	13.786	14.880	0.000	31.437
January	2.841	0.900	9.892	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
February	4.304	2.240	9.514	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
March	4.883	1.060	37.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
April	0.000	2.040	24.169	0.000	0.320	0.420	0.000	17.720	3.866	11.509	21.647
May	0.000	0.000	26.810	0.360	0.858	0.640	0.000	11.840	4.783	18.868	35.020
June	0.000	0.000	28.637	0.000	0.669	2.860	8.760	32.060	3.024	17.940	46.503
July	0.000	0.000	24.545	4.020	1.578	2.660	2.520	15.980	2.536	16.398	24.652
Annual Total	30.417	9.400	221.164	8.923	6.006	6.732	11.614	142.009	94.829	64.715	320.022

Non-Hazardous Waste (Tonnes)¹

¹ As the 'Recyclates & Residual' waste contractor was changed during the year there is a gap in data from January to March. The new contractor supplies data slightly differently hence a change in headings part way through the year. As contracts were consolidated 'Food' and 'Metal' data was combined with 'Recyclates & Residual' from April onwards.

Hazardous Waste

The University produces a significant amount of hazardous waste. This includes IT and electrical items as part of the normal operation of the University and more specialised clinical and chemical waste from labs. There is limited scope within these waste streams to minimise waste produced or move waste up the waste hierarchy due to the nature of the waste, the environment it is produced in and health and safety requirements in the production, handling and disposal of the waste.

Contractors & Waste Streams

Waste Stream	Contractor	Primary Disposal Method
Chemicals	Veolia	Recycled
IT & WEEE ²	TES-AMM	Recycled
Clinical OA	Healthcare Environmental	Incineration
Clinical FH	NHS Grampian	Incineration

² Waste Electrical and Electronic Equipment

	Clinical (OA)	Clinical (FH)	Chemical		IT & WEEE			
	Disposal	Disposal	Disposal	EfW/Treated	Reuse (Ext)	Recycle	EfW	Disposal
August	0.990	11.556	6.315	2.030	2.273	1.748	0.000	0.000
September	0.945	10.791	0.000	0.000	0.000	0.000	0.000	0.000
October	1.463	9.011	0.000	0.000	3.128	2.158	0.000	0.000
November	1.607	10.200	0.000	0.000	2.956	0.000	0.000	0.000
December	0.900	7.594	0.000	0.000	1.208	2.376	0.000	0.000
January	1.147	8.201	0.000	0.000	0.000	0.000	0.000	0.000
February	0.900	6.564	0.000	0.000	5.702	0.544	0.000	0.000
March	1.276	11.653	45.100	10.240	4.554	4.657	0.000	0.000
April	1.147	8.114	0.000	0.000	1.137	1.222	0.000	0.000
May	1.611	10.475	0.000	0.000	2.659	0.878	0.000	0.000
June	1.305	8.782	0.000	0.000	2.426	1.672	0.000	0.000
July	1.218	0.000	0.000	0.000	0.000	0.528	0.000	0.000
Annual Total	14.509	102.941	51.415	12.270	26.043	15.783	0.000	0.000

Hazardous Waste (Tonnes)

Waste Totals

The total annual waste produced at the University decreased slightly from last year. However, as mentioned previously, some data was missing due to the transition between non-hazardous waste contractors. When this is taken into account the total annual waste produced at the University was stable. There has been significant progress in the proportion of waste recycled. This is likely due to improve bin labelling. Also of note is a move away from waste being sent to landfill and instead being incinerated to produce energy. This will improve further next year as almost all waste is diverted from landfill.

It should be noted that the disposal and energy from waste figures represents what the University sent and does not include sorting and processing of the waste off-site which can recover recyclables from the waste stream. Typically 93% of waste sent via this route is recycled off-site with the residual 7% sent to landfill or to an energy from waste facility.

	Tonnes	Percentage
Reuse (Internal)	0.000	0.00%
Reuse (External)	27.543	2.42%
Recycle	611.591	53.63%
EfW	140.092	12.29%
Disposal	361.065	31.66%
Total	1140.291	100.00%

Waste Totals by Disposal Method

Carbon Emissions

Using the waste data supplied by contractors, together with their disposal routes and DEFRA carbon conversion factors, the carbon emissions arising from waste was calculated to be 130.04 tonnes CO₂e, a significant decrease from 2015-16. While carbon emissions are a useful indicator of progress they should be viewed in the context of wider sustainability issues such as resource efficiency. For example; putting waste metal into landfill results in lower carbon emissions than recycling it but would result in the loss of a resource.

Historic Waste Data

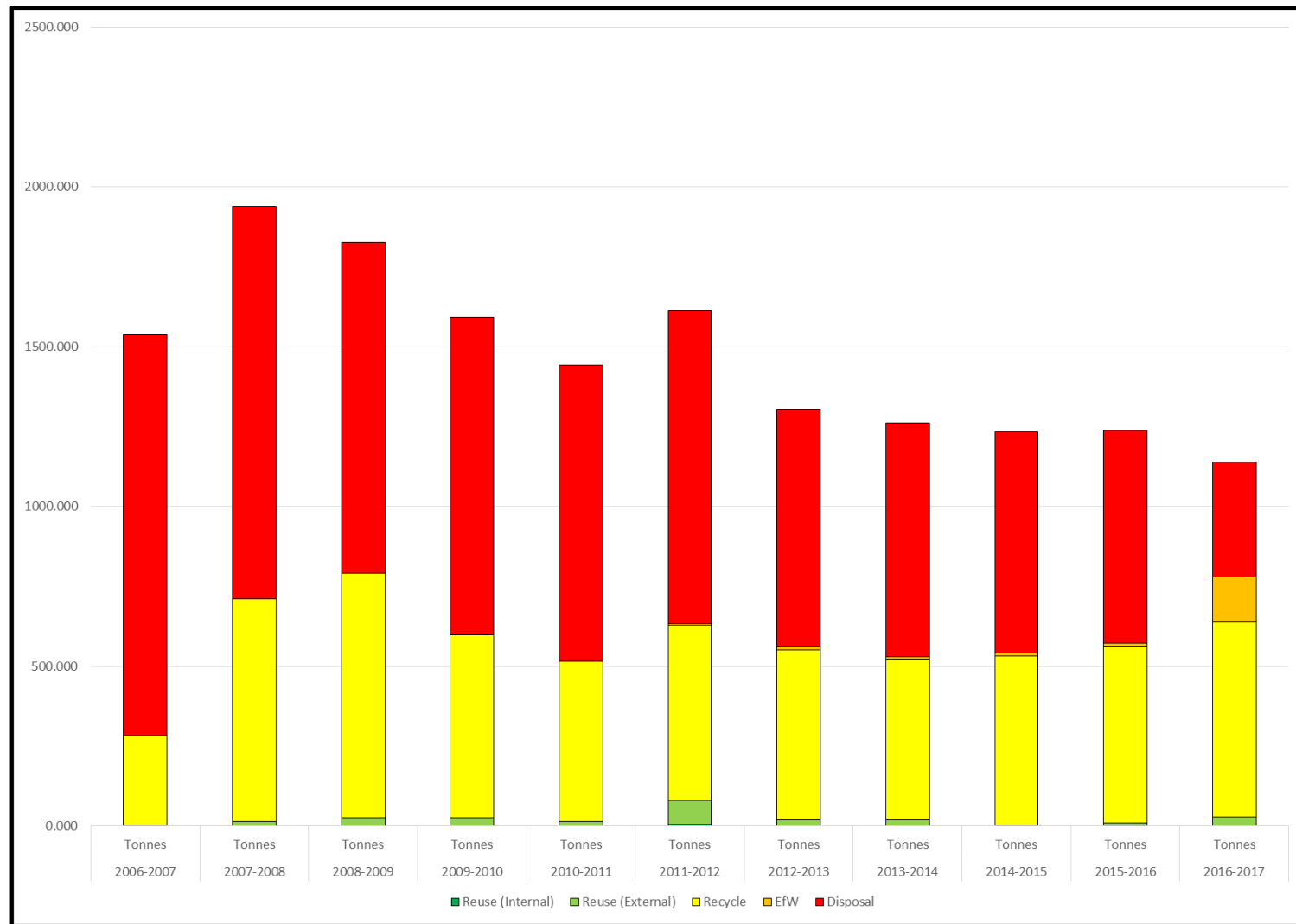
The University has seen a general reduction in total waste produced (1939 tonnes in 2007-2008, 1140 tonnes in 2016-2017) and a general increase in the proportion of waste that is recycled (36% in 2007-2008, 54% in 2016-2017).

	2006-2007		2007-2008		2008-2009		2009-2010		2010-2011	
	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage
Reuse (Internal)	0.000	0.00%	0.000	0.00%	0.000	0.00%	0.000	0.00%	0.000	0.00%
Reuse (External)	1.990	0.13%	15.540	0.80%	25.350	1.39%	25.140	1.58%	13.520	0.94%
Recycle	280.700	18.23%	694.690	35.83%	766.580	41.95%	572.850	35.99%	501.180	34.76%
EfW	0.000	0.00%	0.000	0.00%	0.000	0.00%	0.000	0.00%	0.000	0.00%
Disposal	1256.910	81.64%	1228.800	63.37%	1035.220	56.66%	993.560	62.43%	927.240	64.31%
Total	1539.600	100.00%	1939.030	100.00%	1827.150	100.00%	1591.550	100.00%	1441.940	100.00%

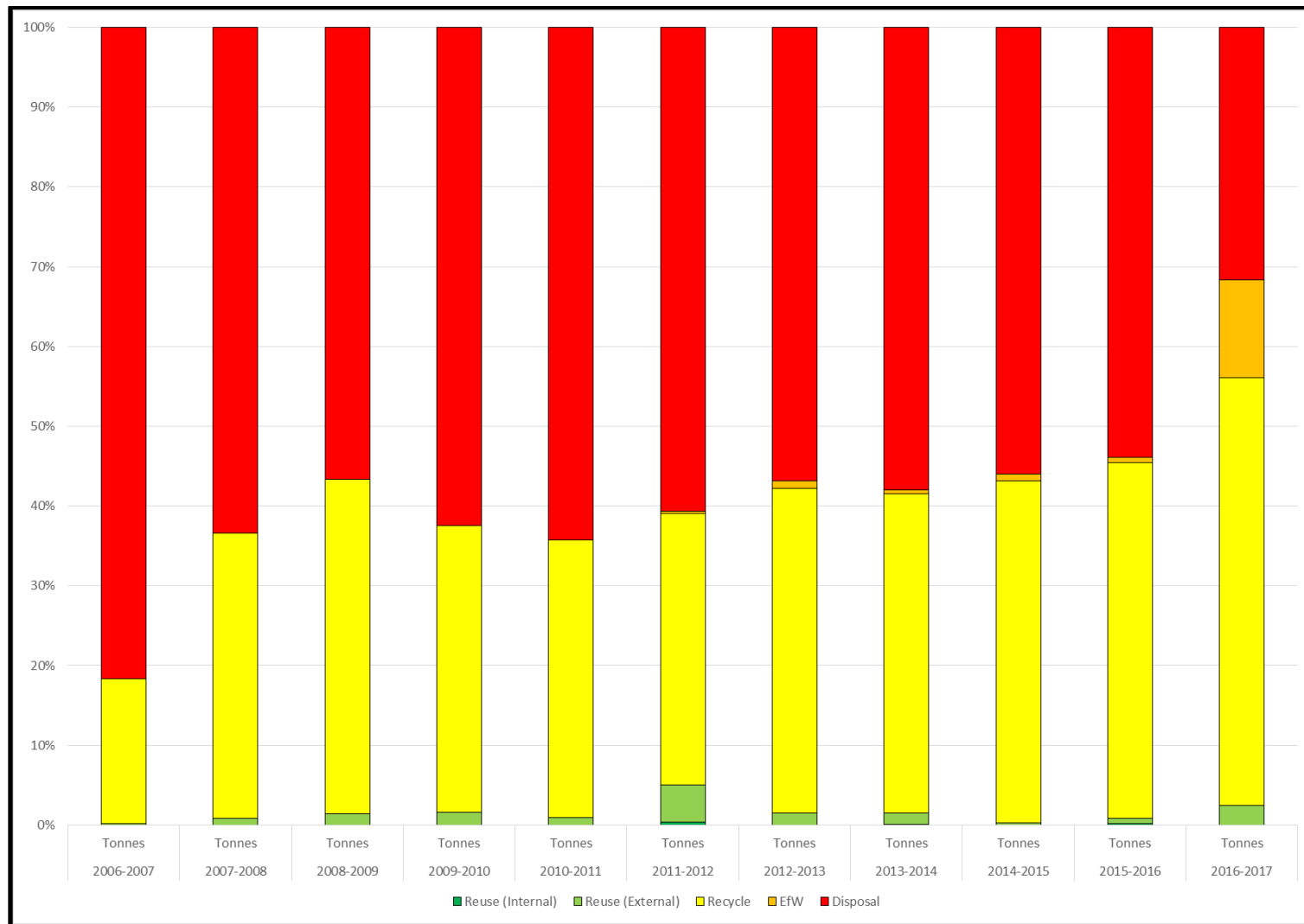
	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage	Tonnes	Percentage
Reuse (Internal)	5.344	0.33%	0.120	0.01%	0.824	0.07%	0.011	0.00%	1.601	0.13%
Reuse (External)	75.400	4.68%	19.163	1.47%	17.902	1.42%	3.466	0.28%	8.386	0.68%
Recycle	548.314	34.02%	531.499	40.72%	505.044	40.05%	528.288	42.83%	553.126	44.64%
EfW	4.290	0.27%	11.953	0.92%	6.154	0.49%	10.591	0.86%	8.422	0.68%
Disposal	978.210	60.70%	742.426	56.88%	730.993	57.97%	691.220	56.03%	667.525	53.87%
Total	1611.558	100.00%	1305.161	100.00%	1260.917	100.00%	1233.576	100.00%	1239.060	100.00%

	2016-2017	
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Reuse (Internal)	0.000	0.00%
Reuse (External)	27.543	2.42%
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Historic Waste Totals by Disposal Method 2006-2017



Historic Waste Totals by Disposal Method 2006-2017 (Tonnes)



Historic Waste Totals by Disposal Method 2006-2017 (Percentage)