

WASTE MANAGEMENT REPORT
PERIOD AUGUST 2008 TO JULY 2009
University of Aberdeen

Contents

1.	Background	4
2.	Policy and targets	4
3.	Highlights	4
4.	Waste streams	5
5.	General waste	7
5.1	Waste reused	7
5.2	Waste recycled	7
5.3	Waste disposal (landfill predominantly)	8
6.	Special and clinical waste	8
7.	Waste costs	8
8.	Comparisons and Future plans	9
8.1	Future plans – plastics recycling	9
8.2	Future plans - Sustainable procurement	10
9.	Further information	10
Appendix One		11
Waste arisings data per location		11
Appendix Two		13
Comparative Data		13

Table of Figures

Figure 1	Pie chart illustrating recyclate composition	3
Figure 2	Waste budget profile since 2003	8
Figure 3	Comparison of paper recycled during August 2008 to July 2009 to the baseline year	14
Figure 4	Comparison of textiles recycled during August 2008 and July 2009 to the baseline year	15
Figure 5	Comparison of computer waste arising during August 2008 and July 2009 to the baseline year	16
Figure 6	Comparison of chemical and WEEE waste produced during August 2008 and July 2009 to the baseline year	17
Figure 7	Comparison of waste reuse (donations) during August 2008 and July 2009 to the baseline year	18
Figure 8	Comparison of general waste disposed of by the main waste contractor during August 2008 to July 2009 compared to the baseline year	19
Figure 9	Comparison of waste recycled by the main waste contractor during August 2008 to July 2009 compared to the baseline year	20

Table of Tables

Table 1	Waste composition for the period August 2008 to July 2009	3
Table 2	Waste streams produced at the University	5
Table 3	Waste recycled during August 2008 to July 2009	7
Table 4	Waste disposed of during August 2008 to July 2009	8
Table 5	Target performance review	9
Table 6	Comparative recycling figures	9
Table 7	General waste arisings data (in tonnes) for buildings during period August 2008 to July 2009	12

Report considerations

The following considerations should be taken into account when reviewing this report:

- It does not include waste arisings data from the Rowett Institute
- It does not include the majority of wastes produced through University construction projects; most of these wastes are dealt with by appointed project waste contractors
- It does not include data for glass recycled by Campus Services through the local authority recycling points, this material is unquantifiable as the material is bulked up with other glass collections uplifted by the local authority
- It does not include waste associated with outlying facilities such as Cromarty and Bettyhill that are not covered by the main waste contractors
- It doesn't cover food wastes, which are currently macerated and disposed of to sewer
- Due to unreliability of clinical waste arisings data this waste stream has not been included within this report, in line with reporting requirements of the quarterly MMRs.
- Costs should be considered in relation to the reduced VAT during this financial period
- Budgeted costs for this financial year were hard to calculate as we moved from no charge to hire agreements for containers, so budgets erred on the side of caution
- New buildings not previously budgeted for have been brought into the waste budget remit
- Increased costs for double handling of containment in some locations due to restricted access e.g. MRF, Meston etc

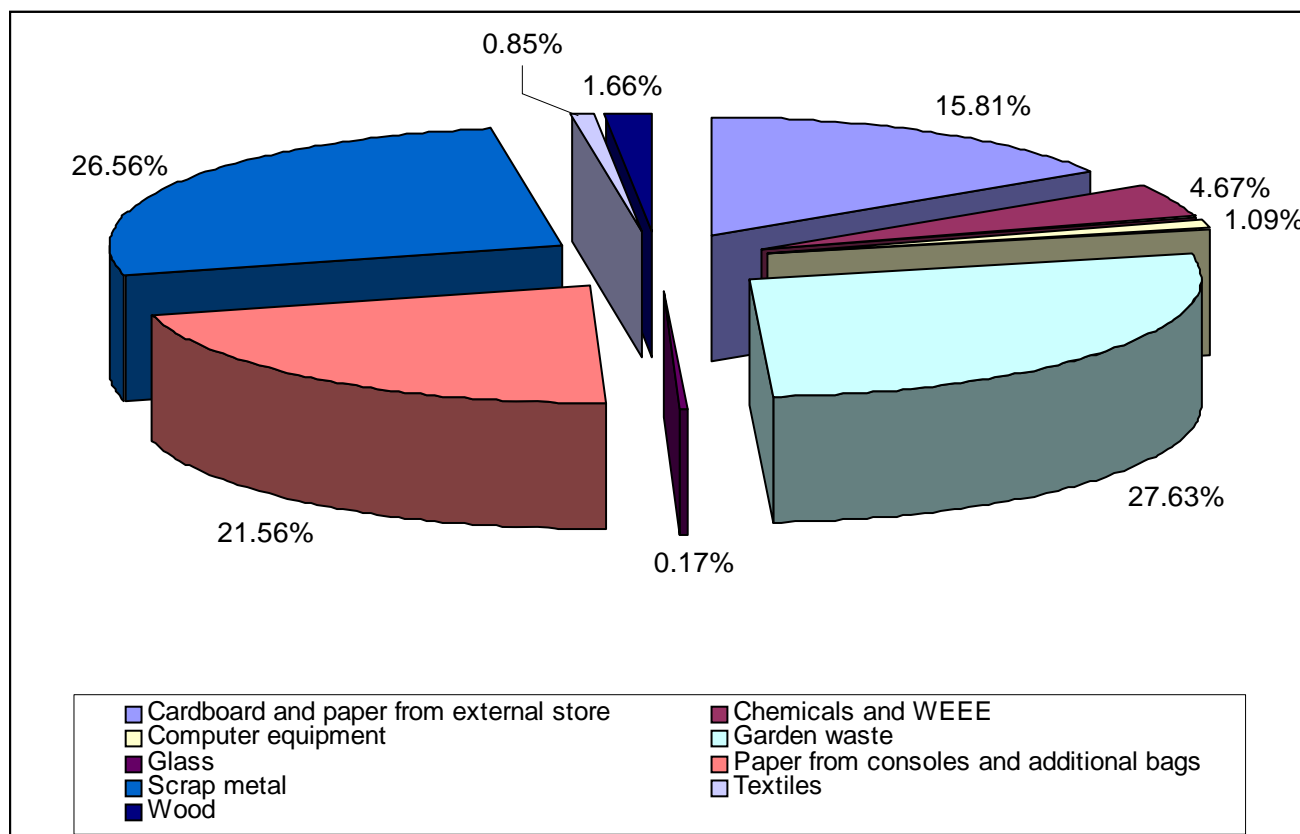
Executive Summary

Over the last financial year (period August 2008 to the end of July 2009) the University produced 1827.15 tonnes of waste. The table below illustrates how this figure is compiled. Of this overall figure, **1.39%** of waste was **reused** predominantly through charitable donation, **41.95%** was **recycled** and the remaining **56.66%** was **disposed** of to landfill or through heat treatment technologies. The pie chart illustrates in more detail how the recycling figure is segregated into differing waste streams.

Table 1 Waste composition for the period August 2008 to July 2009

Waste	Process	Mass in tonnes	Accuracy
Cardboard and paper from external stores	Recycled	121.202	Data provided by contractor
Charitable donations	Reused	11.483	Some estimated and some data provided by contractor
Chemicals and WEEE	Recycled	35.822	Data provided by contractor
Chemicals and WEEE	Disposed	5.855	Data provided by contractor
Computer equipment	Reused	13.870	Data provided by contractor
Computer equipment	Recycled	8.320	Data provided by contractor
Computer equipment	Disposed	0.350	Data provided by contractor
Garden waste	Recycled	211.80	Data provided by contractor
Glass	Recycled	1.320	Data provided by contractor
General waste from skips	Disposed	1029.018	Data provided by contractor
Paper from shred-it console system	Recycled	165.25	Data provided by contractor
Scrap metal	Recycled	203.59	Estimated – assumed capacities
Textiles	Recycled	6.530	Data provided by contractor
Wood	Recycled	12.740	Data provided by contractor
Total waste produced		1827.15	

Figure 1 Pie chart illustrating recycle composition



1. Background

Total Waste Management Alliance have continued to provide a professional service in collection of general waste and some recycle from across both main campuses. Collections of cardboard, wood, garden waste, scrap metal, paper, chemicals and WEEE for recycling continue through various contractors. Review of our current waste practices is continually undertaken to assess whether the service is efficient for those using the facilities here at the University as well as the contractors own schedules. Markets are monitored to see whether it is viable to incorporate new waste streams for recycling. This is determined by provision of facilities within a certain radius of the University, compliance with carbon foot-printing, and fiscal measures.

The University has seen increased provision of external storage following the success of last year's installations reducing the need to waste money on hire agreements. The University may be in a position now where its waste containment arrangement is working as well as reasonably expected.

This year has seen a number of items reused predominantly through charitable donations. Whilst this is impressive, many of the items could have been reused internally here at the University if time allocation had been allowed for finding alternative accommodation for such items.

2. Policy and targets

The Waste Policy adopted in August 2007 (reviewed October 2008) states three main targets, which are to:

- Reduce waste at source by 5% compared to 2006-2007 baseline levels by 2010,
- Reuse 2% of waste items compared to 2006-2007 baseline levels by 2010,
- Recycle or compost 20% of waste generated compared to 2006-2007 baseline levels by 2010.

This report outlines how the University performed during the period August 2008 to July 2009 compared to previous years and the baseline year.

3. Highlights

The highlight of this last financial year has been the increase in the volume of material recycled and the continued development of partnerships with local charitable organisations. This year has seen a significant number of computers and their peripherals reused or recycled through Reusing IT and Computer Recycling Technologies. Furniture, pallets, stationery and end of hall clearance items have found alternative outlets through the New Hope Trust, Instant Neighbour and the Creative Waste Exchange.



1.



2.



3.



4.

Photo key

1. Duvets in laundry at Hillhead, collected by the New Hope Trust
2. Oxfam book bank at our recycling points
3. Computers which have been processed for shipment to Africa
4. Crockery collected for reuse by the New Hope Trust

Another step towards providing our staff and students with further recycling facilities is the provision of Oxfam book banks at both the local authority operated recycling points on campus, and through ad hoc collections.

The Shred-it console system has continued to prove its success by collecting for recycling 165.25 tonnes of paper.

4. Waste streams

The table below illustrates the main waste streams produced at the University and indicates whether they are classified as general or special¹ wastes. This list is by no means exhaustive but covers the main areas, it also details the outlets for these wastes during the period in question.

Table 2 Waste streams produced at the University

Waste item	Classification		Treatment / Disposal route
	General	Special	
Aerosols	✓	✓	Classification is dependent upon content. These are source segregated where they contain hazardous substances and are collected as part of the bi-annual chemical and WEEE uplift undertaken by Veolia Environmental Services. Aerosols classed as general are collected by TWMA – this is normally through the domestic waste stream
Animal By-products		✓	Separated as clinical waste and collected via NHS Grampian or Healthcare Environment for heat treatment
Asbestos		✓	Disposed of to hazardous waste landfill by an approved Asbestos contractor e.g. Cape
Batteries	✓	✓	Segregated into different types at Bedford road and collected during bi-annual chemical and WEEE uplift by Veolia Environmental Services. Precious metals are removed and reused
Brochures	✓		Collected via paper recycling consoles by Shred-it for recycling into new paper based products
Cardboard	✓		Collected via external cardboard stores by TWMA ² for recycling into new cardboard based products
Chemicals		✓	Segregated into different types at Bedford road and collected during bi-annual chemical and WEEE uplift by Veolia Environmental Services. Some chemicals are recycled into new products whilst the residual is normally heat treated
Clinical waste		✓	Is categorised into different grades of clinical waste and then collected via NHS Grampian or Healthcare Environment for heat treatment
Computers	✓	✓	Some are separated and data removed, these are then collected by Reusing IT for reuse in developing countries. The remaining PCs collected by Estates are either reused or recycled by
Confidential paper	✓		Collected via paper recycling consoles by Shred-it for recycling into new paper based products
Construction waste	✓	✓	Depending on the material, some can be reused, aggregate for example. The remaining should be source segregated and then recycled or disposed of to landfill. This is co-ordinated through the appointed project contractors
Envelopes	✓		Reused as internal envelopes then collected via paper recycling consoles by Shred-it for recycling into new paper based products
Fluorescent tubes		✓	These are collected by the electricians and bulked up at Bedford Road. The supplier of new bulbs takes the old ones back under the requirements of the WEEE regulations
Food and drinks cans	✓		Collected through the food and drink can recycling bins, bulked up at Bedford Road and recycled through the scrap metal skip via Panda Rosa. Manufactured into new metal products
Furniture	✓		Reused internally or externally through charitable donation. Residual material is broken into constituent parts for recycling and disposal to landfill
Glass	✓		Catering waste glass is collected internally and disposed of through a working agreement with the local authority, utilising the onsite domestic waste recycling points. Other glass is collected on an ad hoc basis for recycling by TWMA
Laboratory equipment		✓	Decommissioned equipment is added to the bi-annual chemical and WEEE collection and recycled or disposed of by Veolia Environmental Services
Magazines	✓		Collected via paper recycling consoles by Shred-it for recycling into new paper based products

¹ Contains hazardous properties that are harmful to humans or the environment

² Total Waste Management Alliance, our general waste contractor

Table 2 continued

Waste item	Classification		Treatment / Disposal route
	General	Special	
Newspapers	✓		Collected via paper recycling consoles by Shred-it for recycling into new paper based products
Oily rags		✓	The oil is removed from the rags and is recycled or heat treated. The rags are reused. These are collected by Veolia Environmental Services
Packaging	✓		Plastic packaging and polystyrene cannot currently be recycled locally, therefore this is disposed of to landfill. This is collected as general black bag waste and uplifted by TWMA
Paper	✓		Collected via paper recycling consoles by Shred-it for recycling into new paper based products
Plastic	✓		Currently recycling not available, this is disposed of through the black bag waste stream and is landfilled. Collected by TWMA
Printer consumables	✓		Collected by individual departments for charitable organisations to collect, or this service is co-ordinated through the Supplies Team
Radioactive waste		✓	This is extremely hazardous material and requires specialist disposal. This is co-ordinated through the NHS Radiation Protection Adviser
Scrap metal	✓		Day to day collections are bulked up at Bedford Road and collected on request by Panda Rosa for recycling. Skips are also provided as part of project related works by the same contractor
Textiles	✓		Collected through recycling banks at the local authority recycling points on campus. Collected by Nathans Wastesavers with money going towards the New Hope Trust. Textiles are either reused or recycled into rags
WEEE ³		✓	Collected through the bi-annual chemical and WEEE uplift for recycling and disposal. Uplifted by Veolia Environmental Services
Wood	✓		Bulked up at Bedford Road, some pallets are returned to supplier whilst some are donated to charity. The residual is recycled through TWMA. Wood skips are also provided as part of project related work

³ Refers to Waste Electrical and Electronic Equipment

5. General waste

5.1 Waste reused

Throughout the period of August 2008 to July 2009 the University donated 25.35 tonnes of waste for reuse; this accounts to 1.39% of the overall waste figure. Of this 11.48 tonnes were donations to local charities, the residual comprises computer reuse through Reusing IT and Computer Recycling Technologies. The increase has been due to better notification of items becoming available for reuse allowing redistribution internally or externally, and better partnership working. Initiatives this year have included:

- End of term hall clearances with large donations of duvets and crockery going to the New Hope Trust and Instant Neighbour
- Pallet donations to the Creative Waste Exchange for use in community composting projects
- Installation of Oxfam book banks for reusing books
- Furniture and stationery reuse through various charities
- Computer reuse predominantly through Computer Recycling Technologies and a small proportion through Reusing IT

These figures do not take into account waste reused during construction projects, which is difficult to quantify at present. However it is worth noting that Oceanlab used 30% recycled content materials in its construction as a proportion of the overall build cost, 20% higher than the minimum specification required by the Waste and Resources Action Programme.

It should be reiterated again that waste reuse is very difficult to achieve and sustain at any level. It relies heavily on supply and demand, as well as forward planning. Many charities are unable to provide next day collections, normally uplifts have to be arranged a week or so in advance. In some instances charities may wish to view items prior to collection, which means the department disposing of the item needs to notify the waste and environmental manager in advance to ensure such time constraints can be factored in. In some instances this time frame has been too short; consequently items that could have been reused may have been disposed of.

5.2 Waste recycled

The table below indicates the quantity of waste recycled during the period August 2008 to July 2009, equating to 766.58 tonnes overall. A more detailed breakdown of where recyclates are produced on campus is illustrated in appendix one.

During the previous financial year the University recycled 694.69 tonnes of waste, compared to this year's figure, which amounts to 41.95% of the overall waste figure. Table 3 illustrates a breakdown of waste recycled compared to previous years. These figures should be viewed with caution, taking into consideration the points highlighted below:

- Waste arisings data is getting more accurate, however in some areas we do not receive any data at all e.g. construction, campus services glass recycling through local authority recycling points etc.
- Fly-tipping of waste contributes to our figures even though the waste isn't produced through University operations. The University does see quite a lot of fly-tipping, predominantly furniture, tyres and electrical appliances; all of which are at the higher end of waste recycling and disposal.
- Human error. In some instances data provided may be inaccurate and has been amended after the waste arisings has been reported on.
- Greater reuse of waste may result in a slight decline in recycling and vice versa.

Table 3 Waste recycled during August 2008 to July 2009

Waste stream	Tonnage recycled	Comparison to same period 2007 – 2008	Comparison to same period 2006 - 2007
Cardboard and paper (from stores and co-mingled wheeled bins)	121.202	96.10	59.19
Chemicals and WEEE	35.822	21.37	10.16
Computers	8.320	16.68	20.64
Garden Waste	211.80	63.68	No data
Glass	1.320	0.75	5.04
Paper (confidential and non-confidential through consoles)	165.250	173.59	168.86
Scrap metal (including food and drinks cans)	203.590	315	7.65
Textiles (through recycling points)	6.530	6.33	9.15
Wood	12.740	1.19	No data
Total waste recycled	766.58	694.69	280.7

5.3 Waste disposal (landfill predominantly)

The table below illustrates the quantity of waste disposed of during the period August 2008 to July 2009, equating to 1035.22 tonnes overall. A more detailed breakdown of where wastes are produced on campus is illustrated in appendix one. These figures do include some wastes produced during project construction whereby project contractors have utilised University waste contracts for removal of waste. The table illustrates a reduction in the amount of waste landfilled, directly corresponding to an increase in the amount of waste being recycled.

Table 4 Waste disposed of during August 2008 to July 2009

Waste stream	Tonnage disposed of	Comparison to same period 2007 – 2008	Comparison to same period 2006 - 2007
Chemical and WEEE waste	5.855	9.42	2.52
Clinical waste from Old Aberdeen	No data	45.71	No data
Computer waste	0.350	1.85	2.29
General waste through skips, wheeled containers and compactors	1029.018	1171.82	1252.1
Total waste disposed of	1035.22	1228.8	1256.91

6. Special and clinical waste

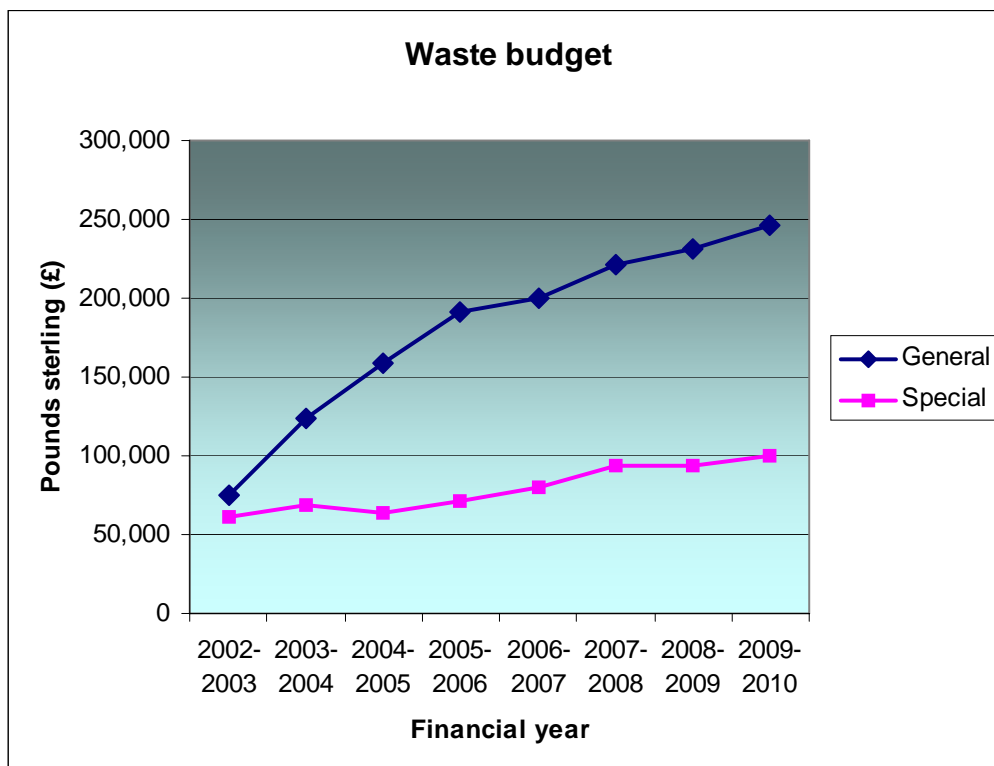
Special wastes are collected as part of a carriers round which happens bi-annually, during January and July. By bulking up such wastes there are economies of scale in terms of collection and cost. Any disposal requests outwith these collections are quoted for separately and paid for by the producing department. Chemical and WEEE waste arisings are included in the figures above.

Since accurate waste arisings data for clinical is not readily available this has not been included within the quarterly MMRs and this annual report. Clinical waste continues to be produced and collected regularly from our laboratory environments at Old Aberdeen and Foresterhill.

7. Waste costs

Figure 2 illustrates the waste budget profile since 2003. It clearly shows significant increases in cost for waste management at the University. This trend will continue in line with the Landfill Tax escalator and foreseeable rises in transport and labour costs.

Figure 2 Waste budget profile since 2003



8. Comparisons and Future plans

Compared to our baseline year how is the University performing, table 5 illustrates progress to date. To put our performance into perspective table 6 demonstrates the recycling rates of some of the top ten Green League Universities for the period 2007 – 2008, as well as other Scottish Universities and Local Authorities⁴. Not many other organisations actively report on their reuse figures, these could be incorporated into their recycling figures or reuse may not be undertaken. Hence table 6 only reflects comparative data on recycling rates.

Table 5 Target performance review

Target	Performance for August 2008 – July 2009	Performance for August 2007 to July 2008	Performance for August 2006 to July 2007 (baseline year)
Reduce waste by 5% by 2010 compared to 2006 - 2007 levels	-	-	-
Reuse 2% of waste by 2010 compared to 2006 - 2007 levels	1.39%	1%	0%
Recycle / compost 20% of waste by 2020 compared to 2006 – 2007 levels	41.95%	36%	18%
Waste disposal	56.66%	63%	82%

Appendix two illustrates in more detail how we have performed compared to the last financial year and the baseline year.

Table 6 Comparative recycling figures

Organisation	Comparable recycling rate as a percentage
Data from some of the top ten People and Planet Green League Universities	
Nottingham Trent University ⁵	45.4%
University of the West of England	32% ⁶
Other Scottish Universities	
University of Edinburgh	56% ⁷
University of St Andrews	59% ⁸
Local Authorities	
Clackmannanshire	44.3%
Moray	43.4%
East Ayrshire	42.4%
Aberdeen	22.9%
Glasgow	19.5%
Eilean Siar	17.2%
Overall Scottish Municipal recycling rate	33.5%

8.1 Future plans – plastics recycling

Investigation has taken place into the recycling of plastic waste due to demand by staff and students. Our existing waste contractor has provided a quotation of £85 per tonne for recycling; however conditions of collections being:

- The waste would have to be bulked up into a reasonable sized collection
- All differing plastic types would need to be segregated at source

These constraints mean that it is impractical for the University to collect this waste stream for recycling. We could provide a skip on site for plastic waste possibly at our Bedford Road site, however we would need to provide an internal collection mechanism for taking the plastic from University buildings to Bedford Road. This would be quite a resource issue for designated personnel.

Not only that there are a multitude of differing types of plastic. A collection container for each different type of plastic would need to be provided in each building. This is not practical given limited storage within buildings to accommodate these containers. Staff

⁴ Based on data provided by Letsrecycle at http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=5292&listitemid=52104

⁵ Based on data provided at http://www.ntu.ac.uk/ecoweb/document_uploads/80858.pdf

⁶ For 2006 – 2007, no data for this past year. Please refer to <http://www.uwe.ac.uk/environment/waste/>

⁷ Includes compost, more information at <http://www.eso.ed.ac.uk/pdfs/WasteManagementReport2008.pdf>

⁸ Information from <http://www.st-andrews.ac.uk/staff/tech/WasteandRecycling/Recycling/>

and students struggle to source segregate a couple of waste streams and do not presently walk to a one point collection system. Encouraging them to separate all different types of plastic would be incredibly time consuming and of possibly minimal gain. Any plastics which would be found to be contaminated by other plastic types or other wastes would have to be disposed of to landfill. Collection of plastic waste also contradicts the University's approach to reducing its carbon footprint. Should local markets for this material be available this would not be so much of an issue, but as distance to market increases the emissions associated with transporting light weight voluminous material such as plastics outweigh the benefit.

Further investigation is ongoing, with discussions presently taking place with the local authority as to whether recycling points can be used to recycle plastic produced through University operations, not dissimilar to an agreement already in place for glass collections.

The University should however consider reducing plastic usage in the first instance, eliminating bottles from vending machines and encouraging staff that have brought such items in from home for personal consumption, to take them back home for disposal through their own recycling facilities.

8.2 Future plans - Waste reuse / disposal policy

During a number of decommissioning projects and office clearances staff have asked whether they are allowed to take items deemed by the University as waste home for personal use. For example, wooden worktops to be reused as shelving, furniture etc. The University has not endorsed this practice due to issues over liability.

Investigation into this matter has confirmed that liability is transferred to the third party from the University subject to signature and retention of this record. Consideration is therefore being given to development of a policy whereby a system not dissimilar to freecycle is established as part of the internal University community.

8.3 Future plans - sustainable procurement

The University needs to make significant changes to operational contracts and tendering processes to ensure that efficient use of these mechanisms helps to achieve minimal packaging waste being left on site. All tenders and contracts should specify that such material is taken away when next deliveries are brought in. Packaging waste in the form of polystyrene, pallets and over packaged problems costs the University a significant amount of money for disposal and could easily be eliminated from our waste streams by effective contracts and tenders.

Following discussions at the Corporate Social Responsibility group, Finance have been tasked to progress the development of such a policy.

8.4 Future plans – partnership development and continued awareness

In order for the University to maintain existing levels of reuse and recycling will require continuous partnership development with local charities, maintenance of service level agreements with existing and future waste contractors; as well as ongoing awareness raising of the topic amongst the staff and student populous. An important aspect to awareness raising is leading by example. It is imperative that senior management are seen to take such a lead and are observed at embedding sustainable waste management into day to day practices; potentially through some of the following actions or aligning with the Environment Office Sustainability Charter.

9. Further information

Contact Amy Gray, Waste and Environmental Manager, Tel: 01224 272053, Fax: 01224 272061, amy.gray@abdn.ac.uk or Environment Office, Estates, University Office, Kings College, Aberdeen, AB24 3FX

Appendix One

Waste arisings data per location

Table 7 – General waste arising data (in tonnes) for buildings during period August 2008 to July 2009⁹

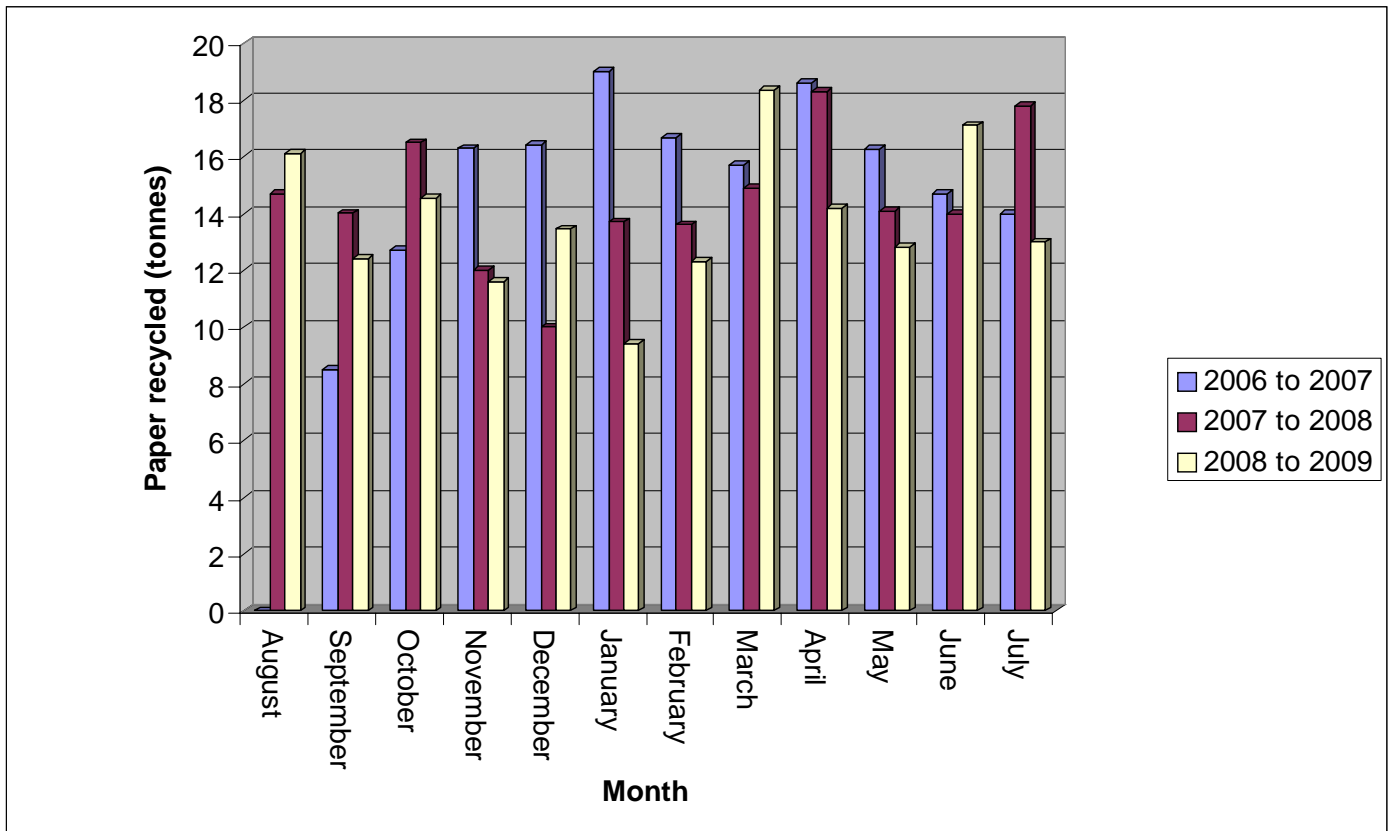
Location	Waste Stream					
	General	Cardboard	Garden waste	Glass	Scrap metal	Wood
Balgownie	7.236	0	0	0	19.88	0
Bedford Road	91.620	0.220	211.800	0	125.39	12.740
Butchart	7.852	0.010	0	0	0	0
Chaplaincy	1.404	0	0	0	0	0
College Bounds	0.734	0	0	0	0	0
Cornhill	0.879	0	0	0	0	0
Crombie	29.383	1.670	0	0	0	0
Crombie Recycling Point	1.968	0.020	0	0	0	0
Dunbar street – mail room	3.290	0.375	0	0	0	0
Elphinstone hall	14.832	0.281	0	0	0	0
Elphinstone road halls	23.713	0	0	0	0	0
Fraser Noble	24.154	0.030	0	0	32.16	0
Hillhead Centre	5.916	0	0	0	0	0
Hillhead Halls	274.460	10.940	0	0	0	0
Hub	143.420	23.600	0	0	0	0
IMS	112.340	33.500	0	0.060	0	0
Johnston	30.760	17.120	0	0	0	0
KCCC	11.299	0.550	0	0.180	0	0
MacRobert skips	18.033	10.420	0	0	0	0
MacRobert wheeled bin	2.159	0.010	0	0	0	0
Marischal	24.620	0.120	0	0.960	15.98	0
MRF	55.240	1.940	0	0	0	0
Meston	29.086	1.846	0	0	9.17	0
Newburgh	6.280	1.000	0	0	1.02	0
QML	16.680	7.980	0	0.120	0	0
St Machar	8.367	1.860	0	0	0	0
St Marys	1.884	0	0	0	0	0
Taylor	41.844	1.870	0	0	0	0
University Office	20.045	1.840	0	0	0	0
Zoology	19.880	4.000	0	0	0	0
Total tonnes produced	1029.018	121.202	211.80	1.320	203.61	12.740

⁹ This information only covers waste data from our main contractor. It does not include furniture, WEEE, paper from shred-it consoles, chemical and construction wastes produced from individual buildings etc

Appendix Two

Comparative Data

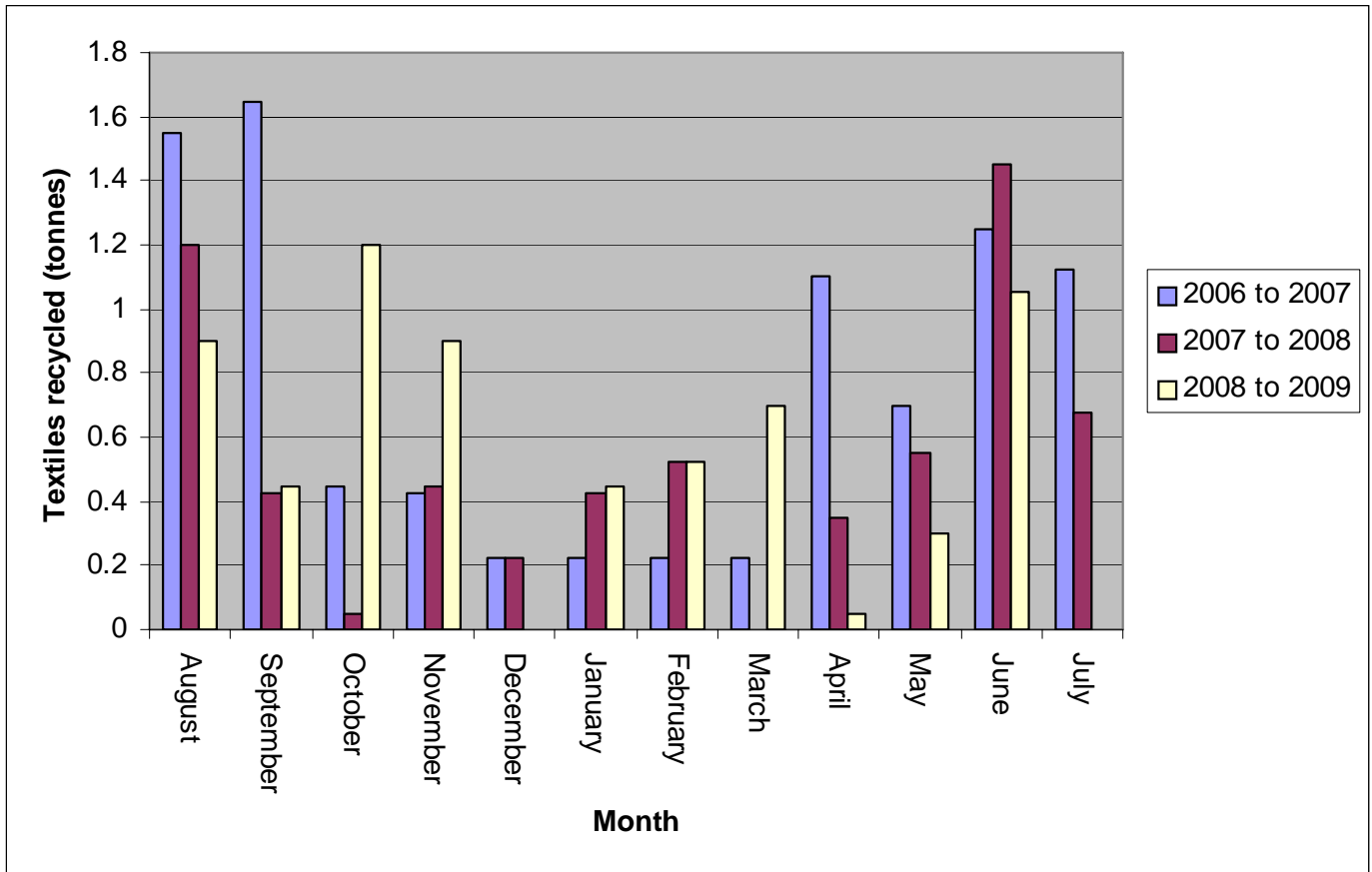
Figure 3 Comparison of paper recycled during August 2008 to July 2009 to the baseline year



Notes

- No data for August 06/07 as the paper recycling scheme only started in September of that year
- The baseline year may have seen more collections as the scheme was novel and many people undertook clearances initially
- Peak production month in 06/07 was January compare to March in 08/09
- Lowest production month in 06/07 was October (discounting August and September as set up months) compared to January in 08/09
- There is no significant correlation between the years which can identify patterns of waste production

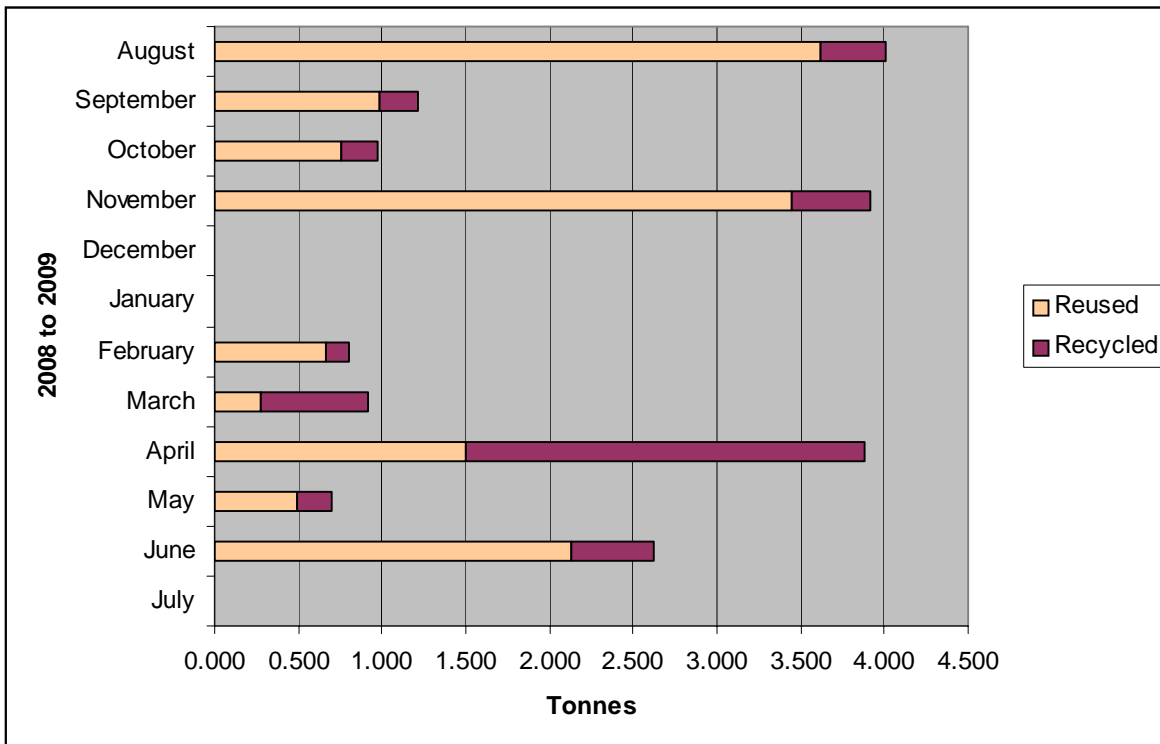
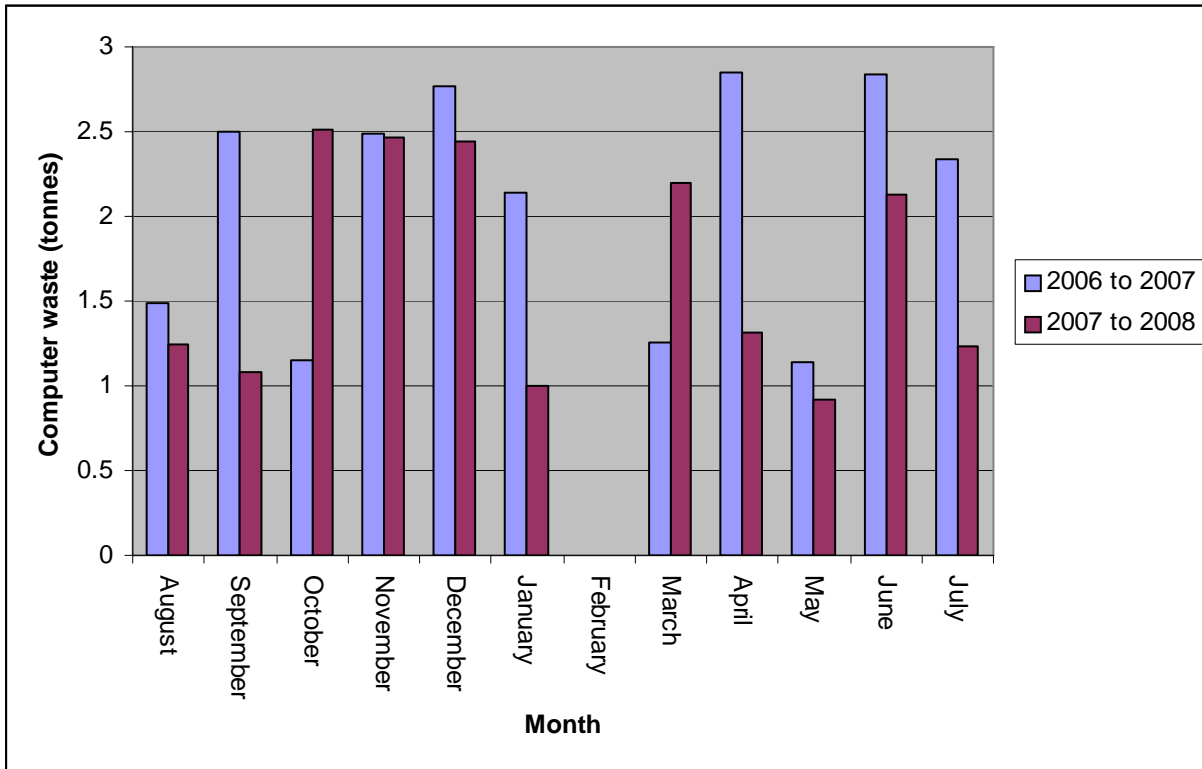
Figure 4 Comparison of textiles recycled during August 2008 and July 2009 to the baseline year



Notes

- Monthly tonnages on average lower than the baseline year
- Peak producing month in 06/07 was September compared to October in 08/09
- Lowest producing month in 06/07 was equal for the months December to March compared to just December in 08/09, when there was no collection
- This chart does show a tendency towards seasonal fluctuations, with less use of the banks during the winter months
- June is a popular month for all years as this coincides with end of term hall clearances

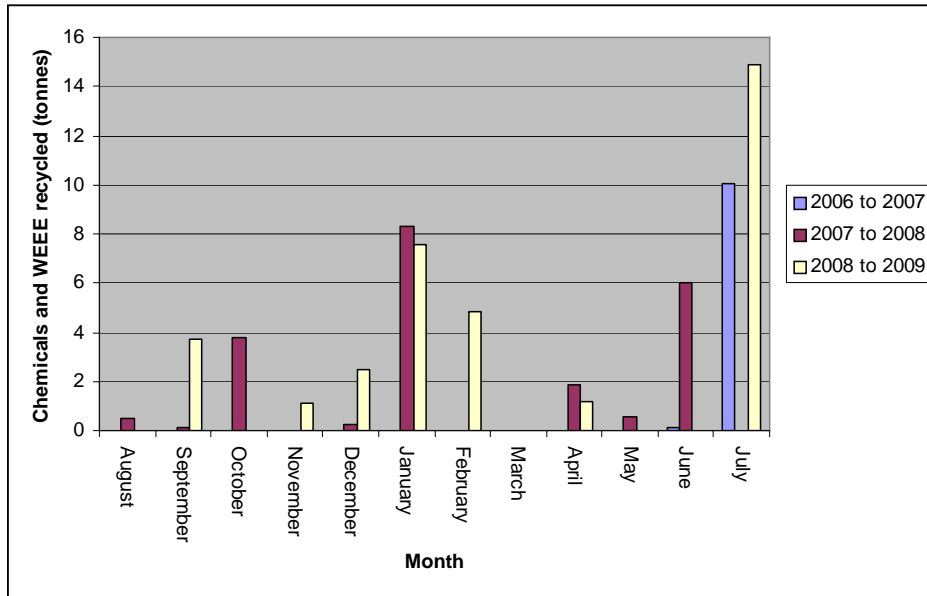
Figure 5 Comparison of computer waste arising during August 2008 and July 2009 to the baseline year



Notes

- Cannot compare 08/09 figures easily as there are no disposal routes for this year, and the majority of the waste is reused as opposed to recycled
- Peak production month in 08/09 is August
- Lowest production month in 08/09 is December, January and July where there are no uplifts

Figure 6 Comparison of chemical and WEEE waste produced during August 2008 and July 2009 to the baseline year



Notes

- There is no data for the period August 06 to May 07, making the baseline year difficult to compare
- Peak months are when the scheduled bi-annual chemical and WEEE uplifts commence
- Smaller peaks throughout the year correspond to ad hoc collections of waste associated with campus services operations or are those produced due to room decommissioning / project related
- Volume of material collected has increased compared to the last financial year

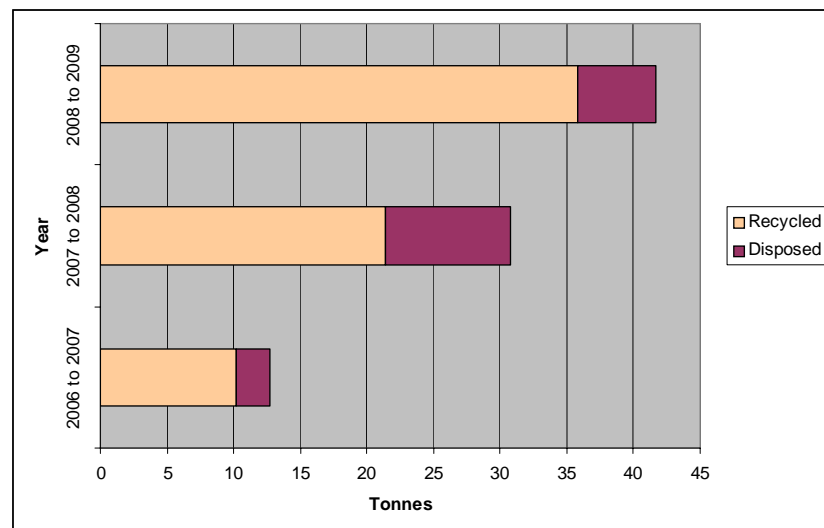
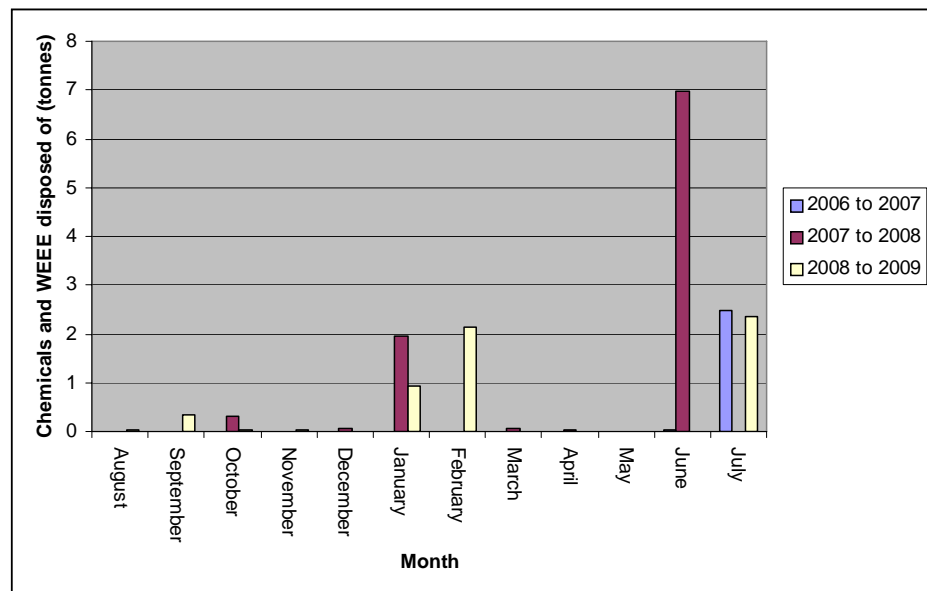
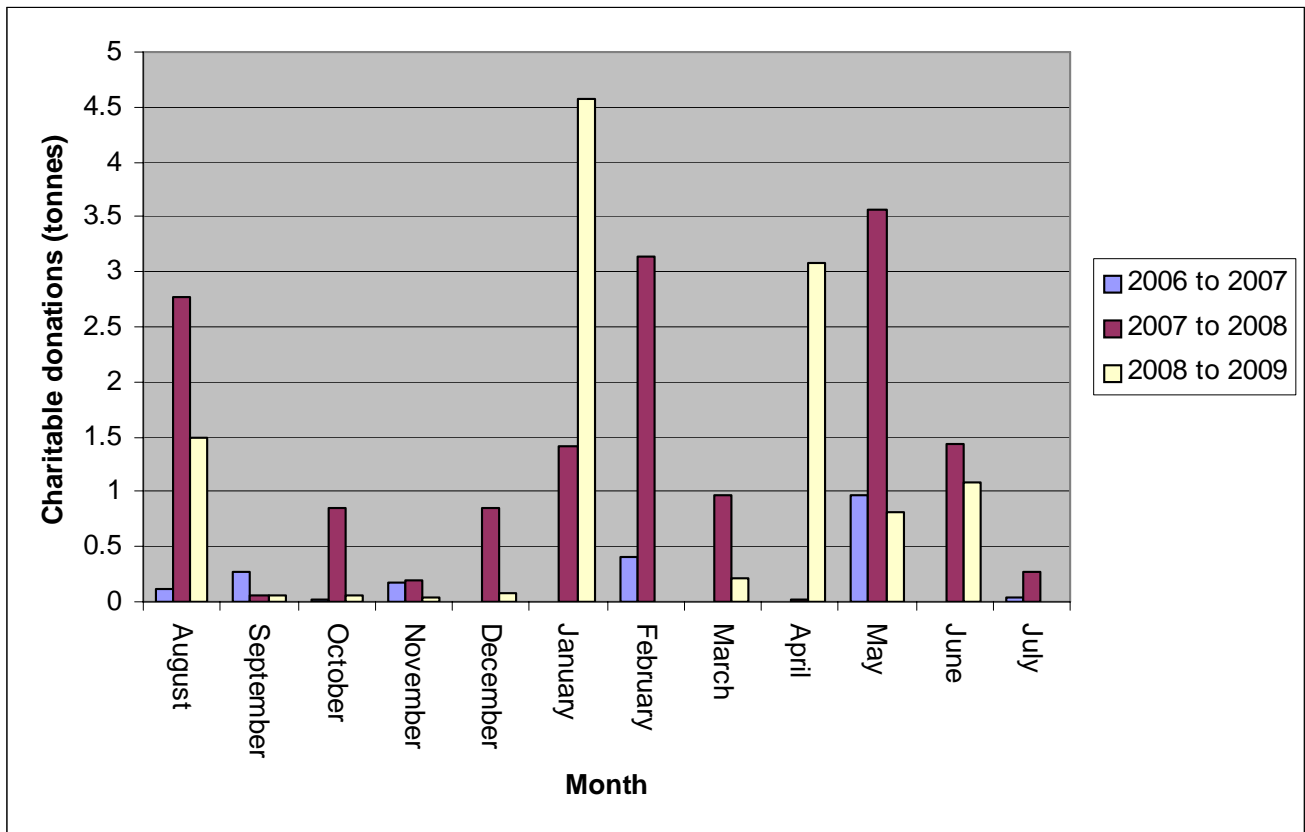


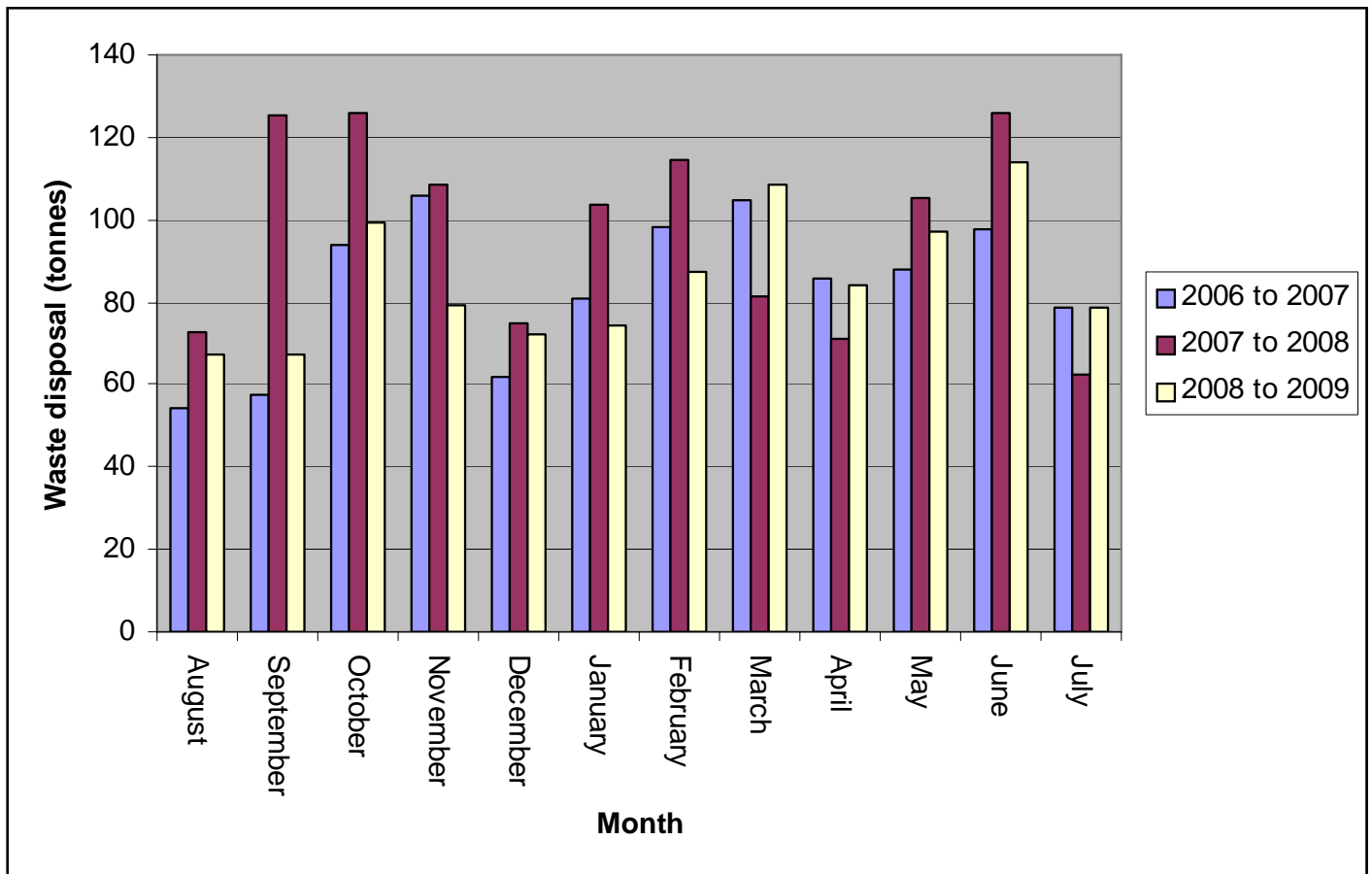
Figure 7 Comparison of waste reuse (donations) during August 2008 and July 2009 to the baseline year



Notes

- This chart does not include computer waste reused through Reusing IT and Computer Recycling Technologies
- Peak producing month during 06/07 was May compared to January in 08/09, followed by April
- The peak in January relates to pallet waste mainly, whilst the peak in April is due to donations of furniture from the Polwarth café refurbishment, crockery from Hillhead, furniture from college bounds and pallets from Bedford Road
- The lowest producing months for 06/07 were December, January, March, April and June where there were no uplifts. There were no uplifts during February and July for 08/09

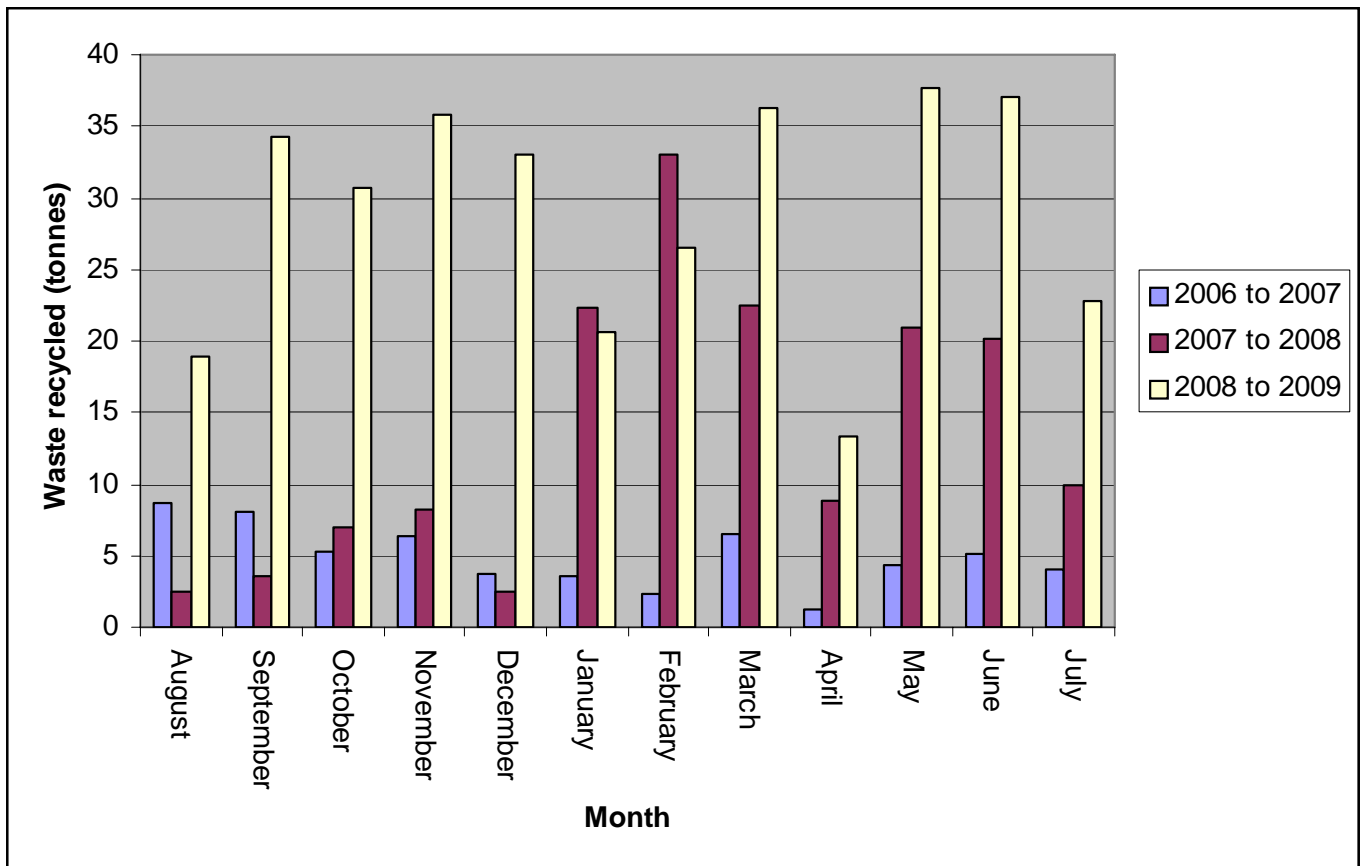
Figure 8 Comparison of general waste disposed of by the main waste contractor during August 2008 to July 2009 compared to the baseline year



Notes

- Monthly tonnages are lower than previous years
- The months from December to July follow a similar trend line
- Peak producing month in 06/07 was October compared to June in 08/09
- Lowest producing month in 06/07 was July compared to August in 08/09

Figure 9 Comparison of waste recycled by the main waste contractor during August 2008 to July 2009 compared to the baseline year



Notes

- Significant differences between waste recycled during 06/07 when compared to 08/09
- Peak producing month in 06/07 was August, compared to May in 08/09
- Lowest producing month in 06/07 was December, compared to April in 08/09
- There is no significant correlations in the data between the years