



OFFICE RECYCLING PROGRAM REPORT
2008

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1. EXECUTIVE SUMMARY

Overall, the Office Recycling Program has been a success.

In the areas studied, 46.62% of recyclable waste was being sent to landfill before implementing the program (see Table 1 on page 9). Office Recycling Program reduced this number to 21.52%, which results in 25.10% less of recyclables ending up in landfill overall.

The most successful area of the University was David Myers West Level 2, which reduced the amount of recyclables going to landfill from 80% to only 2%. There were also a number of other areas in the University such as Peribolos East, Physical Sciences 2 and Bio Sciences 2, Level 2 that also had very high levels recyclable waste reduction.

- Only eight out of thirty-seven offices recorded an increase in recyclables to landfill. None of the thirty-seven offices recorded a percentage of recyclables to landfill of above 50%
- Twenty-three offices recorded a percentage of recyclables to landfill of 20% or less and twelve offices recorded 10% or less
- The average amount of paper and cardboard in office rubbish bins in buildings audited in December 2006 was approximately 28.53% when spot audits were conducted in October 2007 on the same buildings the figure had been cut by more than half to 12.86%
- Over the same period all other categories of waste rose, most notably 'other paper products', this rise in all categories can be attributed to EnviroSMART's focus on reduction of paper and cardboard in waste bins.
- Whilst the overall volume of recyclable waste going to landfill reduced, the majority of this reduction was due to a large take up in paper and cardboard recycling. This raised the proportion of other recyclables in most general waste bins

EnviroSMART representatives maintain the Office Recycling Program as part of the Green Office initiative and have become the key to its success.

EnviroSMART representative's create positive behaviour change and personally educate the University community on the benefits of an environmentally-sustainable workplace.

More work is needed for La Trobe to further reduce its total office waste. Audit data highlighted 4 key office waste streams that remain of concern, they are;

1. Paper and cardboard in office rubbish bins
2. Non-recyclable food packaging and non-recyclable plastic
3. Other paper products-predominantly paper handtowel and tissues
4. Organic waste not being composted

Note: Audit data may contain small fluctuations, and patterns may not be consistent due to variation in staff consumption habits, the area a garbage bag was removed from, the level of activity by EnviroSMART representatives and the rate of acceptance of the program by existing staff.

2. INTRODUCTION & AIM

In 2006, as part of the Green Office Program EnviroSMART initiated a recycling pilot program to provide better office recycling facilities, engage staff in improved recycling practices and to determine the best ways to recycle at La Trobe. The program involved staff from Finance, Buildings and Grounds in David Myers Building, and Academic Services and Buildings and Grounds in Peribolos East.

The pilot program revealed that three quarters of office waste, currently going to landfill, was made up of recyclables.

Following the Pilot Program the Office Recycling Program was implemented university wide with the help of EnviroSMART representatives.

EnviroSMART representatives are responsible for the maintenance of Office Recycling Program and implementation of other EnviroSMART initiatives.

3. METHODS

3.1 IMPLEMENTATION

The steps taken to implement the Green Office Program were:

- Emailing all staff notifying them of the changes that will take place
- Replacing the waste bin under each staff desk with a small desktop bin in order to discourage waste generation
- Providing each desk with a paper recycling box
- Placing a co-mingled recycling bin in each office kitchen area to encourage the recycling of glass, plastics and aluminium
- Continuing waste audits to monitor progress of recycling program
- Dissemination of general information regarding environmentally friendly office purchasing and practice through EnviroSMART representatives

3.2 AUDIT METHODS

All audits involved physically sorting the waste into different categories. However, only the audits conducted in December 2006 by EnviroSMART and May/June 2007 by the Monash audit team involved weighing each category of waste.

Following the waste audits conducted by the Monash Audit Team EnviroSMART reduced the number of waste categories in its audit model as it was decided that the multitude of categories was overcomplicated.

The October 2007 and March 2008 audits consisted solely of physically sorting the waste into categories then making a visual assessment as to the volume of the waste as a percentage of the garbage bag.

As La Trobe University has never conducted a comprehensive office waste assessment of all offices at the same point in time the audit data received between 2006 and 2008 cannot be compared as different buildings were audited using slightly different audit methods.

3.2.1 December 2006 Audits by EnviroSMART

Waste categories:

- Office paper, newspaper
- Other paper products (tissue, handtowel)
- Cardboard
- Recyclable plastics 1-7
- Co-mingled –Aluminium, steel cans, glass bottles/jars
- Cling wrap/food packaging
- Organic waste (food scraps)
- Toner cartridges
- Electronic equipment
- General/Other Waste (list)

Weighing method:

Each category of waste was weighed in plastic bags using fish scales.

3.2.2 May 2007 Audits by Monash Audit Team

The Monash University Environment Officer was approached by La Trobe University to conduct a waste assessment at the Bundoora campus. Two assessments were conducted on consecutive days in May 2007.

The waste assessment results have been largely excluded from this report as the audit method the Monash team used was different to the EnviroSMART Audit Team and different buildings were audited by both teams, leaving gaps in any comparison made.

However, recommendations made by the Monash Audit Team correspond with EnviroSMART recommendations.

Audit method

Waste categories:

- Once-used (one sided) paper
- Recyclable paper (paper printed on both sides, manila folders, newspapers, etc)
- Non-contaminated handtowels and tissues
- Cardboard
- Co-mingled (glass and plastic bottles, cans, tins and milk cartons)
- Toner bottles and printer cartridges
- IT and electrical equipment
- Polystyrene
- Compostables including food scraps, tea bags and contaminated handtowel
- Waste to landfill (materials not able to be reused such as food packaging and non-recyclable materials that may be reused such as take away containers and plastic bags)
- Disposable cups (plastic, polystyrene and cardboard)
- Other (specified by auditors)

Determining volume:

Each category was weighed and then the volume was estimated by determining how full a 28 litre box was with a particular category of waste.

Please note that the number of bags from each office varied slightly which should be considered in the analysis of the data (see appendices for full Monash report).

3.2.3 October 2007 Spot Audits by EnviroSMART

Waste categories: Same as December 2006 Audits

3.2.4 March 2008 Spot Audits by EnviroSMART

These audits were re-audits of buildings that were audited by the EnviroSMART volunteers and the Monash Audit Team.

Garbage was taken from the kitchens of buildings and separated into exactly the same categories used by the EnviroSMART volunteers in October 2007.

4. RESULTS AND ANALYSIS

The audit results indicate that the Office Recycling Program has worked so far, but more work is needed for La Trobe to further reduce its total office waste.

Audit data highlighted 4 key office waste streams that are of concern, they are;

1. Paper and cardboard in office rubbish bins
2. Non-recyclable food packaging and non-recyclable plastic
3. Other paper products-predominantly paper handtowel and tissues
4. Organic waste not being composted

Paper and cardboard in office rubbish bins

The average amount of paper and cardboard in office rubbish bins in buildings audited in December 2006 was approximately 28.53% when spot audits were conducted in October 2007 on the same buildings the figure had been cut almost in half, to approximately 12.86%.

This significant cut of is a great start and gives a rough indication of how much the University has reduced the amount of recyclable paper and cardboard going to landfill. However as staff become aware of the program and the simplicity of paper recycling this figure should come down even further in the future.

Non-recyclable food packaging and non-recyclable plastic

Non-recyclable food packaging and other non-recyclable plastic makes up 20-30% of total office waste at La Trobe University.

When we send this plastic waste to landfill it gives off greenhouse gases such as methane. Plastic packaging and other synthetics don't break down quickly. Many are not biodegradable and sit in landfill for years, leaving the waste problem to future generations.

Other paper products-predominantly paper handtowel and tissues

'Other paper products' refers to predominantly paper handtowel and tissues. Between December 2006 and March 2008 20%-30% of waste was made up of 'other paper products' consisting predominantly of paper handtowel and tissues.

Organic waste not composted

From the buildings audited in March 2008 compostable waste to landfill is estimated at between 20% and 30%. Both Monash and EnviroSMART audit teams have recommended that a centralised compost system be introduced including compost facilities in department kitchenettes and public place compost facilities.

Problem specific solutions

- Staff and student education on the basics of recycling
- Replace handtowel liquid hand-wash
- Further publicity benefits of recycling paper
- Make it policy to purchase only 100% post-consumer recycled paper
- Give each staff member/department a paper quota for each month, encouraging a reduction in paper use.

- Default printers to double sided printing
- Signage and public place glass recycling facilities
- Education on benefits of decrease of consumption plastic food packaging
- Discouraging use of disposable coffee cups, education of students and staff.
- Banning of polystyrene food containers, non-recyclable plastic and plastic bags in campus food outlets
- Creation of centralised composting system
- General reduction in packaging of office products, eco-friendly packaging for Agora food outlets

5. CONCLUSION

In 2008 EnviroSMART plans to consolidate on the progress made in 2007 continuing the promotion and expansion of the Office Recycling Program.

EnviroSMART aims to have multiple, trained EnviroSMART representatives in every department, which will increase the success of the program.

The completion of the Environmental Management Plan and development of an Environmental Sustainability Policy and a Sustainable Purchasing Policy will assist greatly in implementing further change. In conjunction with proper financial and administrative support from the University and its community, EnviroSMART will continue to reduce university waste, simultaneously saving money and the environment.

New areas that will be targeted for improved recycling in 2008 are; The Agora, The Borchardt Library and the Student Residences and the Research and Development Park.

TABLE.1	Percentage of Recyclables going to land fill before implementation of Recycling Program (by volume)	Percentage of Recyclables going to land fill after implementation of Recycling Program (by volume)	Increase or decrease (by volume)
Area			
Peribolos East Level 1	75%	15%	60% less
Peribolos East Level 2	55%	12%	43% less
Peribolos West Level 1	55%	39%	16% less
Peribolos West Level 2	71%	22%	49% less
David Myers West Level 1	79%	8%	71% less
David Myers West Level 2	80%	2%	78% less
David Myers West Level 3	76%	16%	54% less
David Myers East Level 1	55%	20%	35% less
David Myers East Level 3	45%	31%	14% less
Humanities 2 Level 1	63%	5%	58% less
Humanities 2 Level 2	55%	35%	20% less
Humanities 3 Level 2	47%	15%	32% less
Humanities 3 Level 3	58%	20%	38% less
Education 1 Level 2	30%	10%	20% less
Physical Sciences 1 Level 1	7%	30%	23% more
Physical Sciences 1 Level 2	46%	35%	11% less
Physical Sciences 2 Level 1	41%	5%	36% less
Physical Sciences 2 Level 2	75%	10%	65% less
Physical Sciences 3 Level 1	77%	20%	57% less
Health Sciences 2	45%	50%	5% more
Beth Gleeson Level 1	50%	40%	10% less
Beth Gleeson Level 2	25%	10%	15% less
Martin Building	34%	15%	19% less
R H Reid Building Level 1	43%	35%	8%
R H Reid Building	74%	2.5%	71.5% less

Level 3			
R H Reid Building Level 4	0%	5%	5% more
Social Sciences	43%	25%	18% less
Bio Sciences 1, Level 1	9%	30%	21% more
Bio Sciences 1, Level 2	23%	35%	12% more
Bio Sciences 1, Level 3	17%	20%	3% more
Bio Sciences 1, Level 4	33%	70%	37% more
Bio Sciences 2, Level 2	44%	0%	44% less
George Singer, Level 1	29%	20%	9% less
George Singer, Level 3	78%	10%	68% less
George Singer, Level 4	32%	10%	22% less
Donald Whitehead	34%	48.75%	13.75% more
Library	22%	20%	2% less
TOTAL AVERAGE	46.62%	21.52%	25.10% less

Appendix 1 (December 2006)

Figure 2- Academic Services - Office and Kitchen & level 2

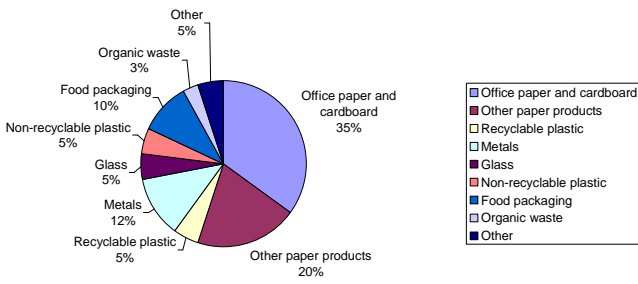


Figure 3- VC Kitchen & office

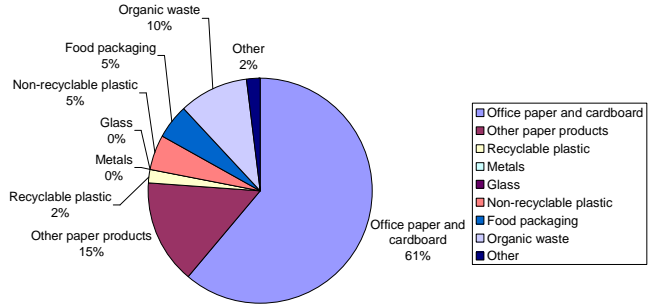


Figure 4- Insurance - level 3

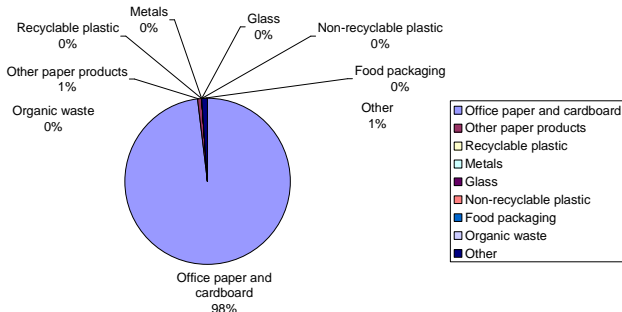


Figure 5- Public Affairs - L1

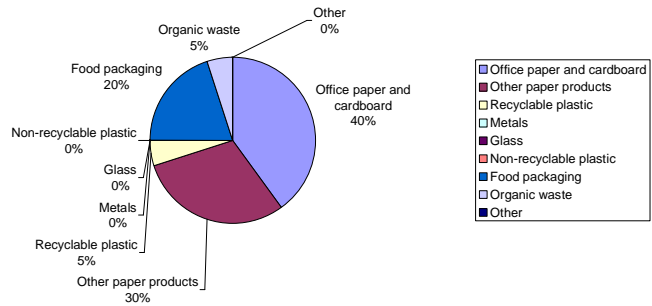


Figure 6- Alumni Events - Level 1

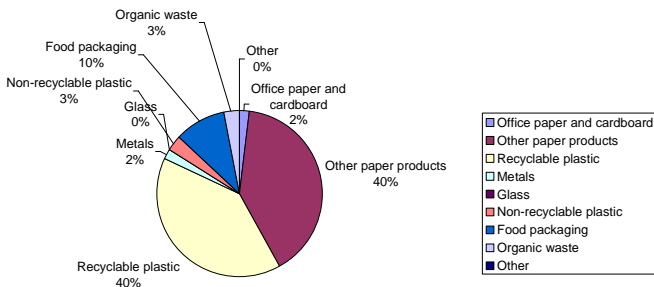


Figure 7- Records Management

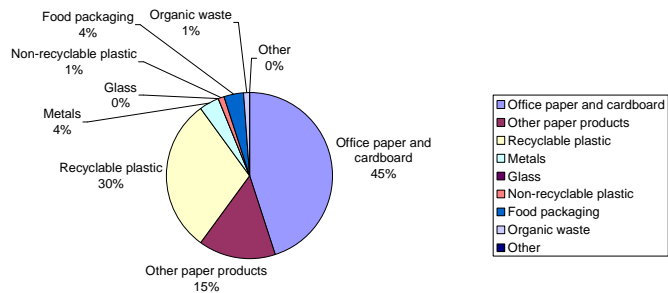


Figure 8 - Research and Graduates

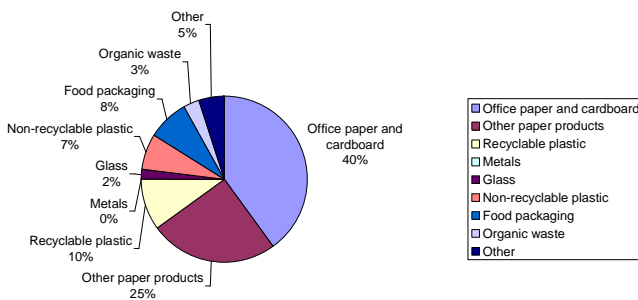


Figure 9- ITS - level 1

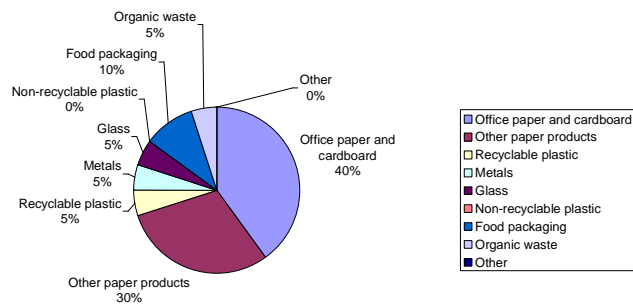


Figure 10 - Human Resources - level 2 & 3

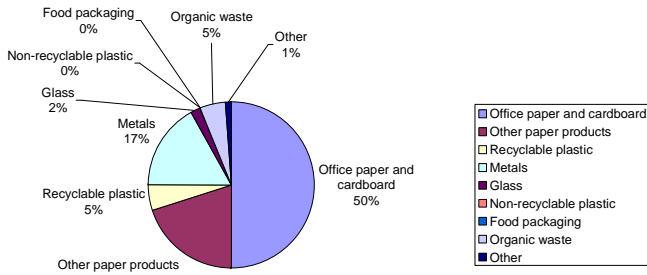


Figure 11 - Secretary - L3

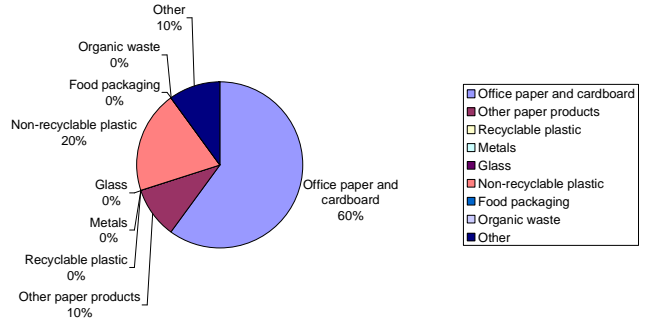


Figure 12 - Employment Relations office - L2

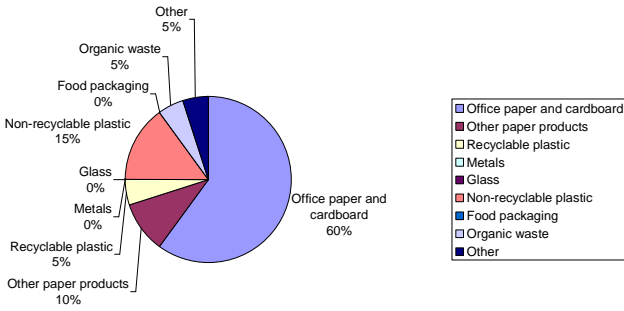


Figure 13 - OHS - L2

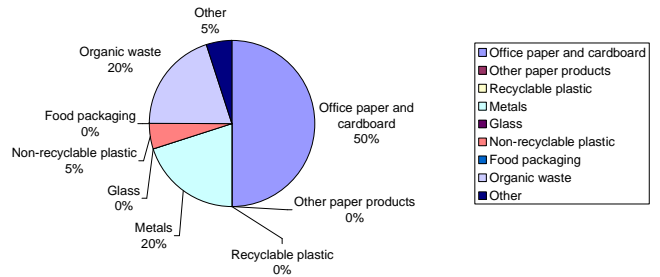


Figure 14 - MIU - L3

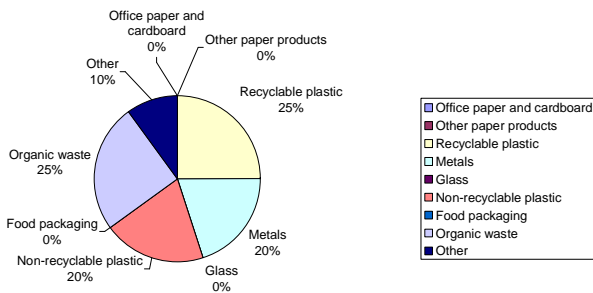


Figure 15 - Legal - L3

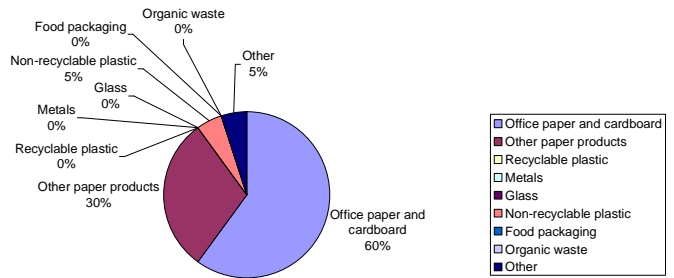


Figure 16 - Marketing - L1

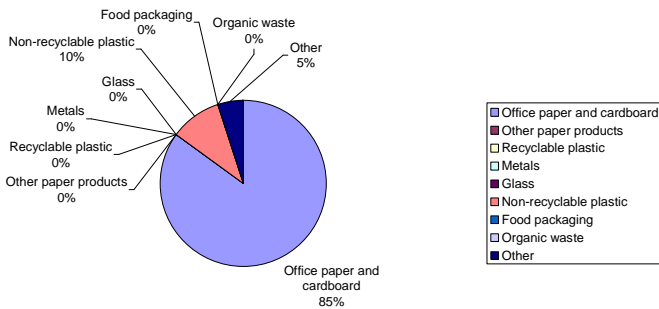


Figure 17 - BSDU - L1

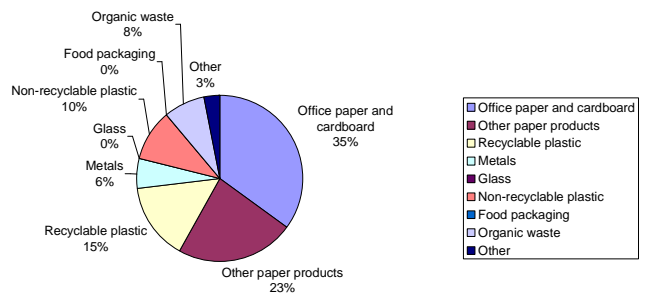


Figure 18 - David Myers East - Level 1

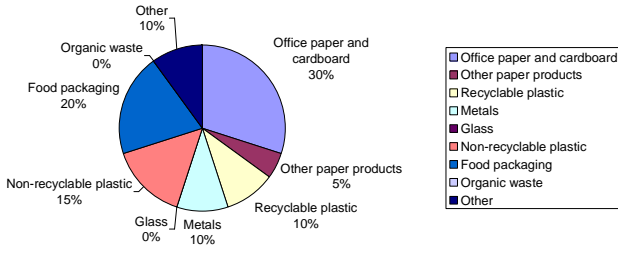


Figure 19 - David Myers East - Level 3

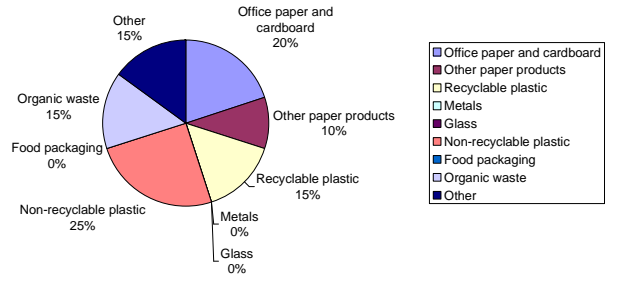


Figure 20 - ELT1

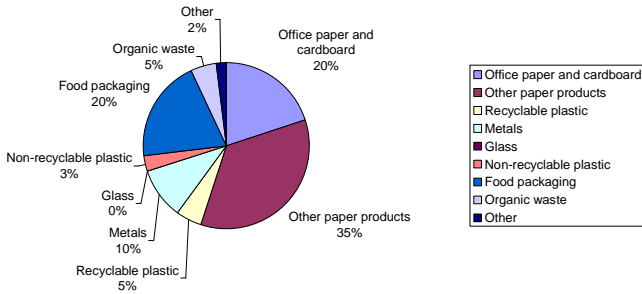


Figure 21 - ELT2

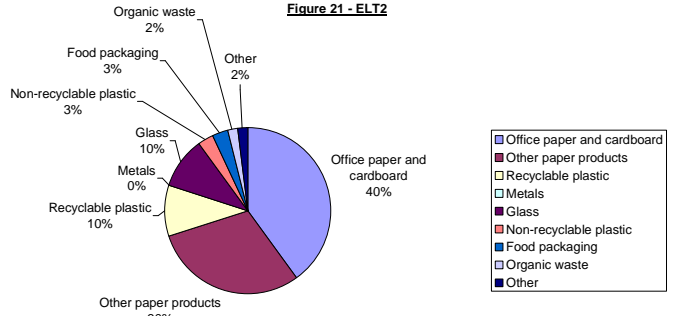


Figure 22 - ELT3

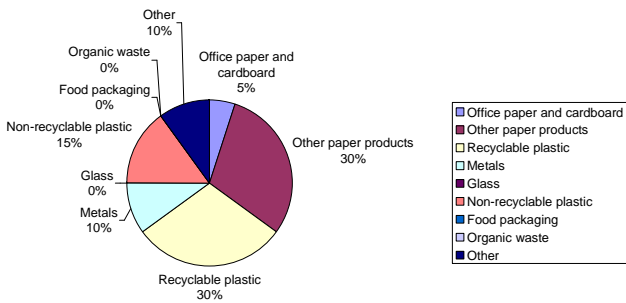


Figure 23 - ELT4

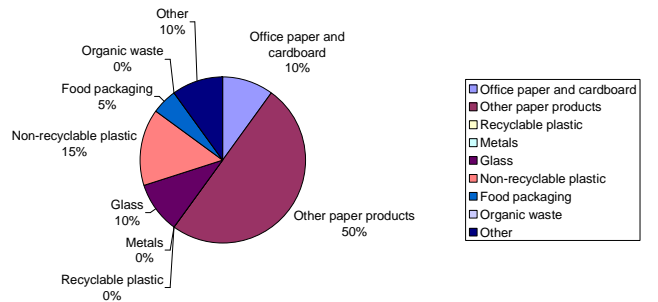


Figure 24 - ELT5

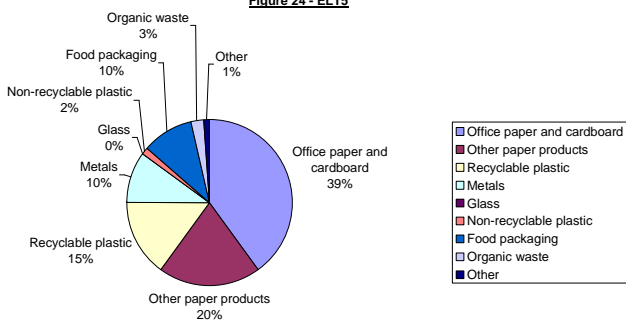


Figure 25 - ELT6

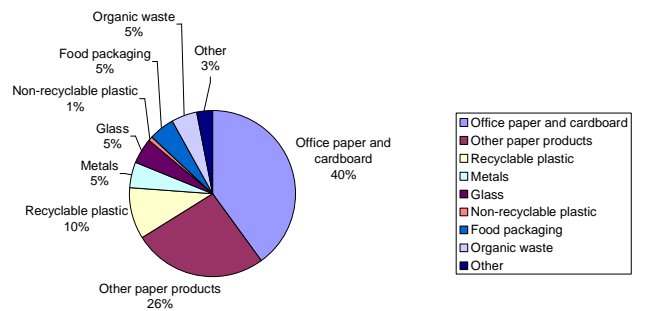


Figure 26 - Humanities 3 level 1

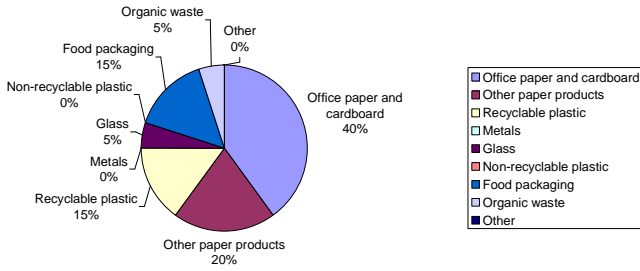


Figure 27 - Humanities 3 level 2

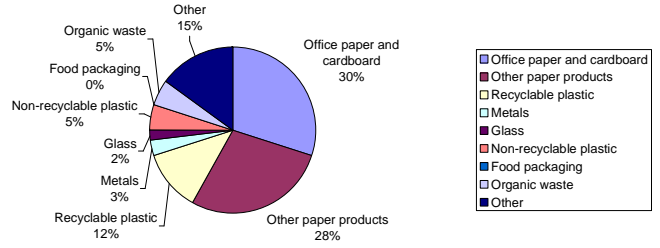


Figure 28 - Humanities 3 level 3

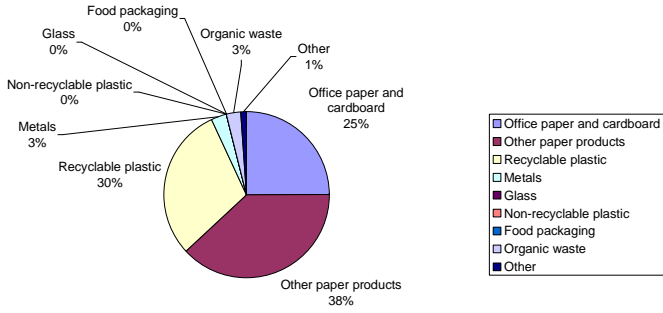


Figure 29 - Humanities 3 level 4

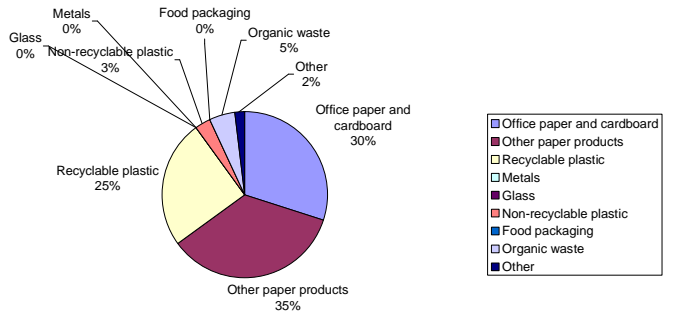


Figure 30 - Humanities 2 - level 1

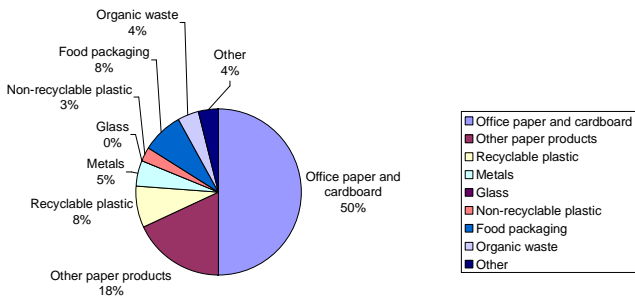


Figure 31 - Humanities 2 - level 2

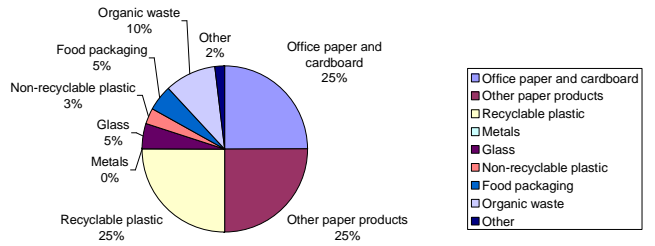


Figure 32 - Humanities 2 - level 3

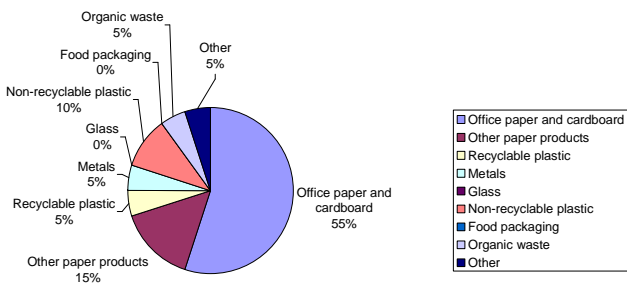


Figure 33 - Humanities 2 - level 4

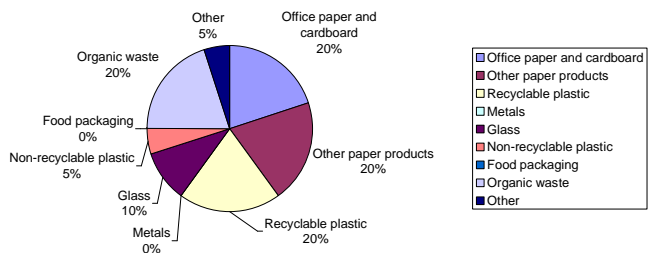


Figure 34 - Humanities 2 - level 5

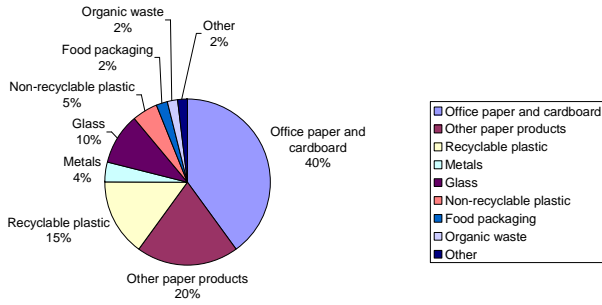


Figure 35 - Peribolos East - Level 1

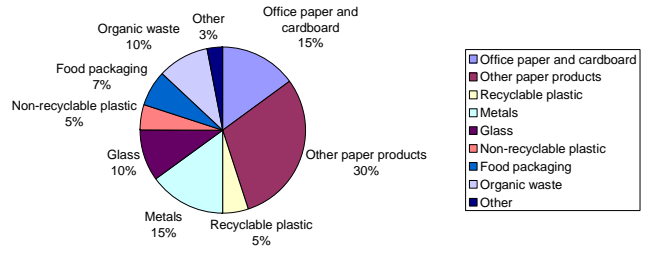


Figure 36 - Peribolos East - Level 2

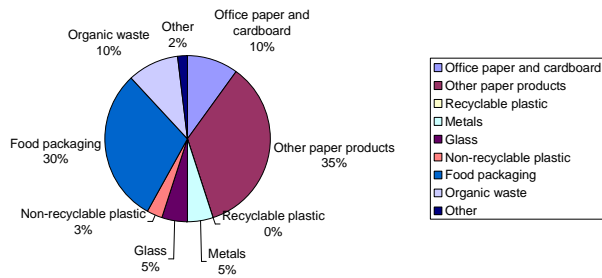


Figure 37 - Education 1 level 2

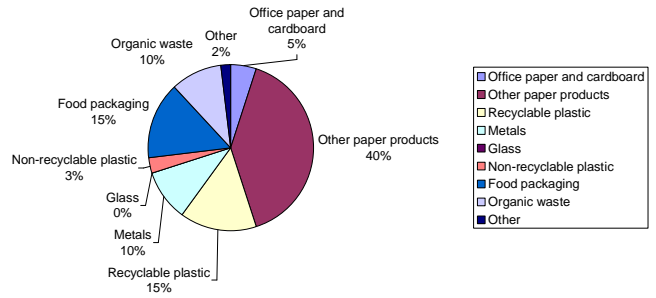


Figure 38 - Education 1 level 3

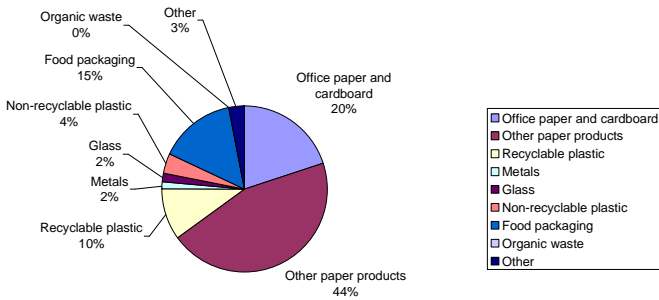


Figure 39 - Education 1 level 4

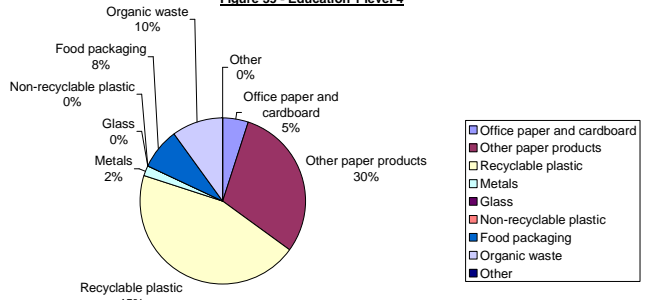


Figure 40 - Education 1 level 5

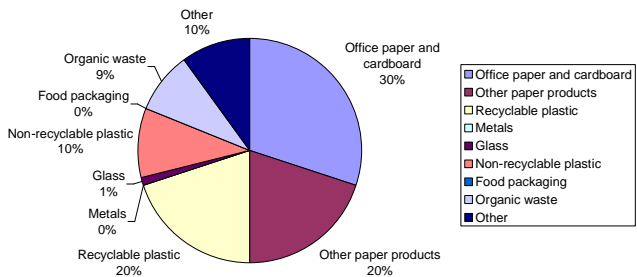


Figure 41 - Education 2 - level 1

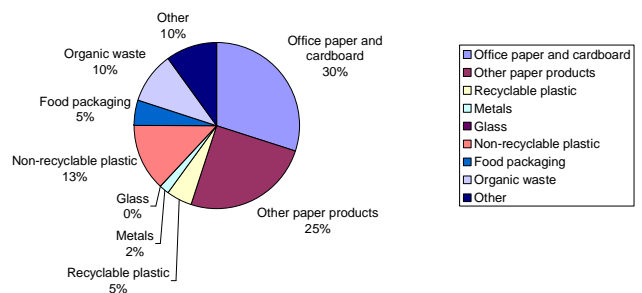


Figure 42 - Education 2 - level 1 teachings rooms

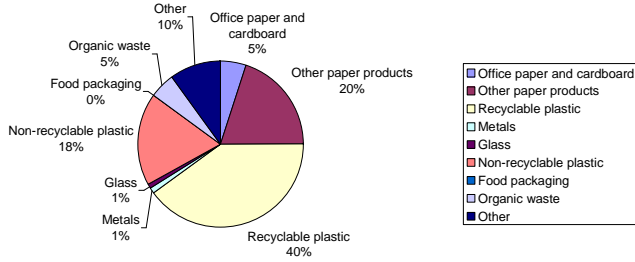


Figure 43 - Thomas Cherry Level 1

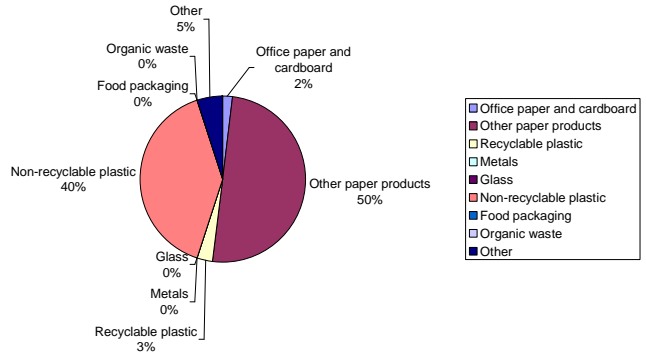


Figure 44 - Thomas Cherry Level 2

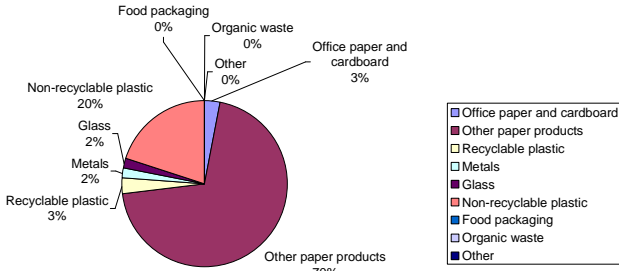


Figure 45 - Thomas Cherry Level 3

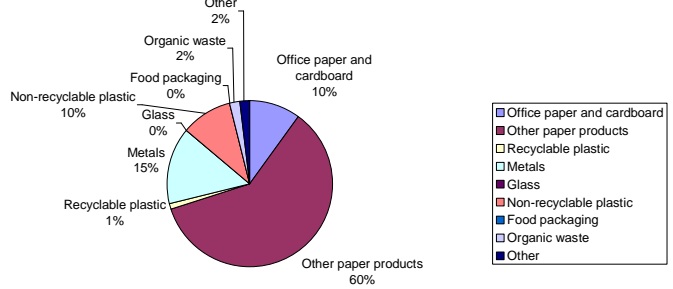


Figure 46 - Thomas Cherry Level 4

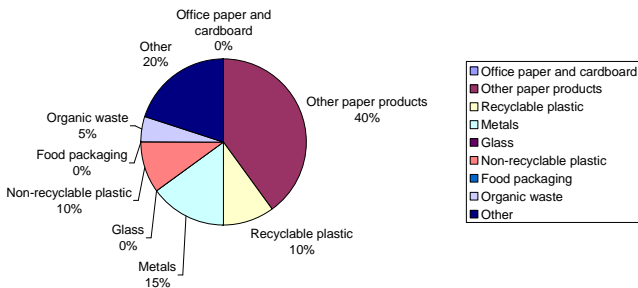


Figure 47 - Peribolis West Level 1

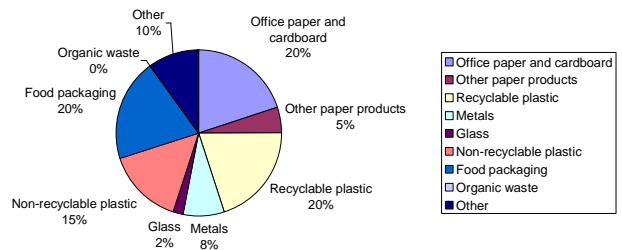


Figure 48 - Peribolis West Level 2

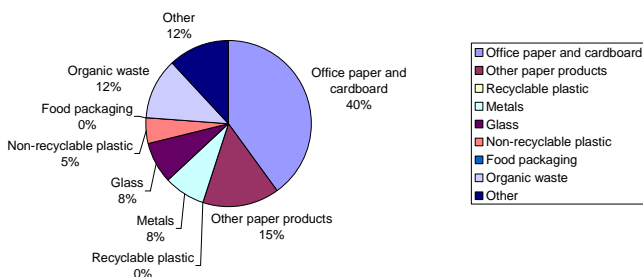


Figure 49 - Peribolis West Level 4

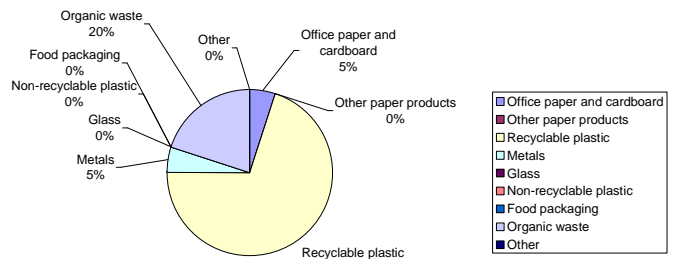


Figure 50 - Physical Sciences 1 Level 1

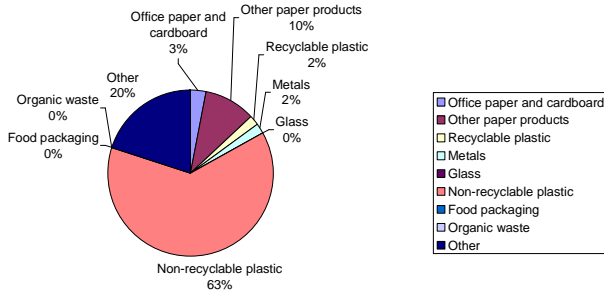


Figure 51 - Physical Sciences 1 Level 2

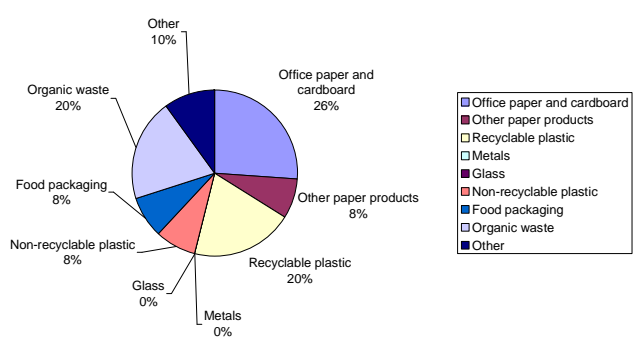


Figure 52 - Physical Sciences 1 Level 3

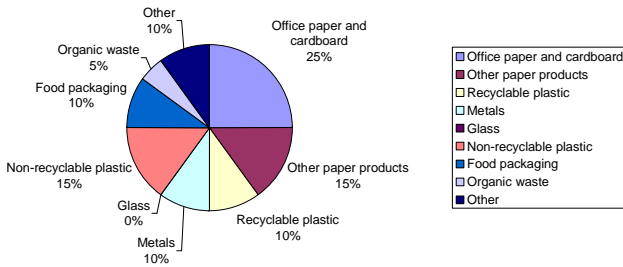


Figure 53 - Physical Sciences 1 Level 4

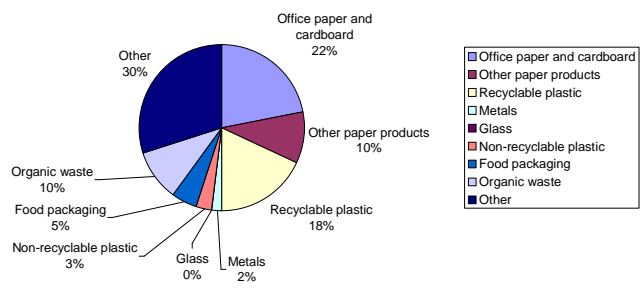


Figure 54 - Physical Sciences 2 Level 1

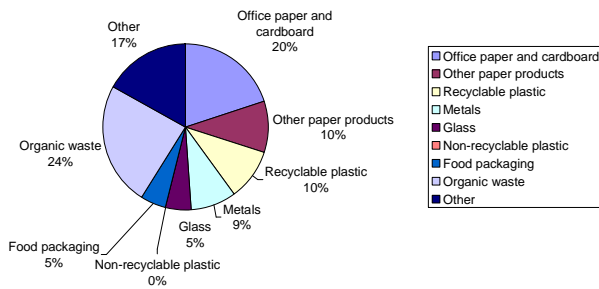


Figure 55 - Physical Sciences 2 Level 2

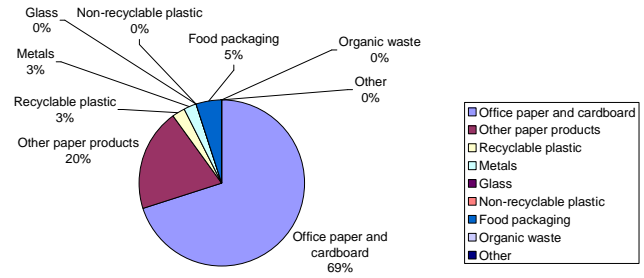


Figure 56 - Physical Sciences 2 Level 3

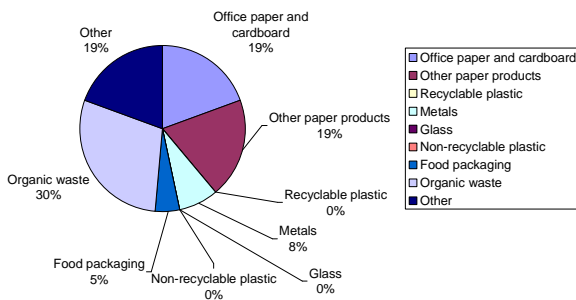


Figure 57 - Physical Sciences 2 Level 3

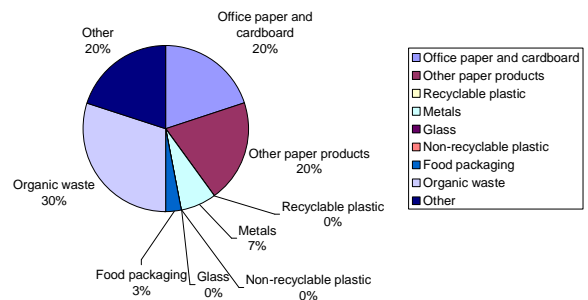


Figure 58 - Physical Sciences 3 Level 1

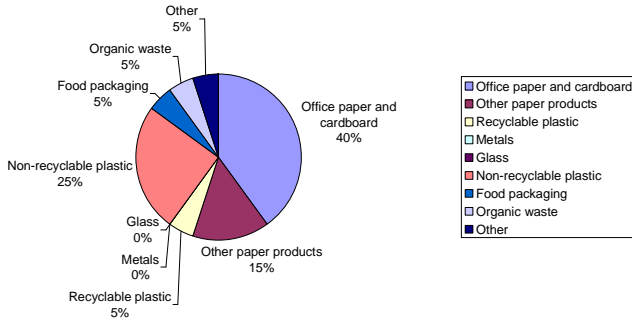


Figure 59 - Physical Sciences 3 Level 2

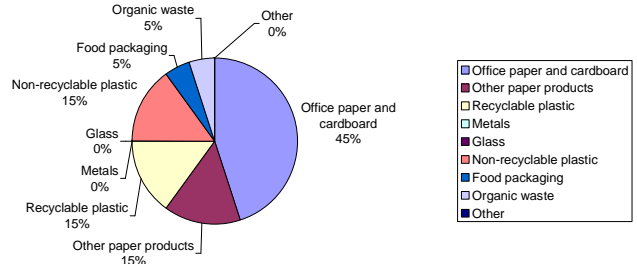


Figure 60 - Physical Sciences 3 Level 3

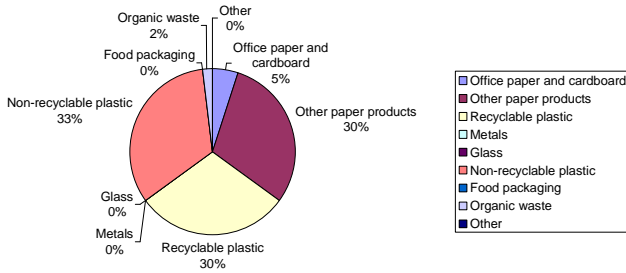


Figure 61 - Physical Sciences 3 Level 4

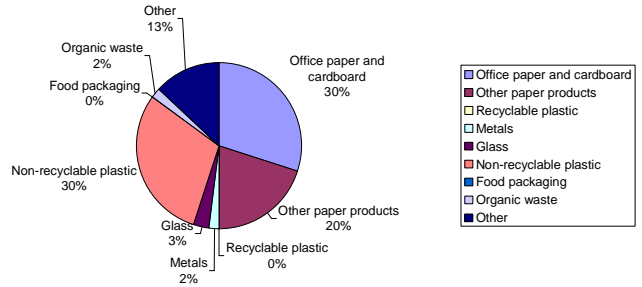


Figure 62 - Physical Sciences 3 NW1 Level 1

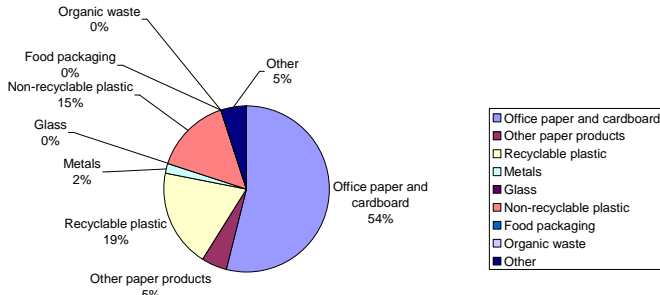


Figure 63 - Physical Sciences 3 NW1 Level 2

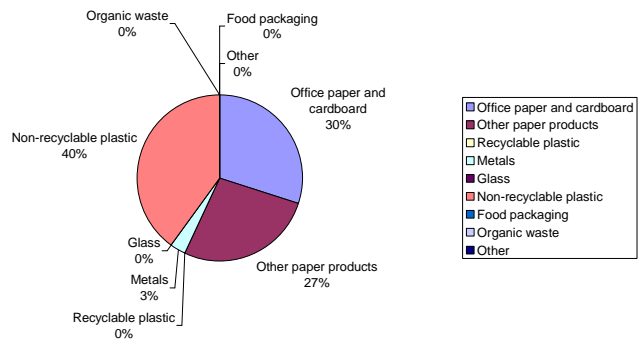


Figure 64 - Physical Sciences 3 NW4 Level 3

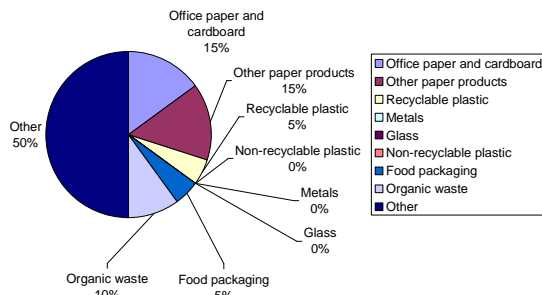


Figure 65 - Physical Sciences 4 Level 3

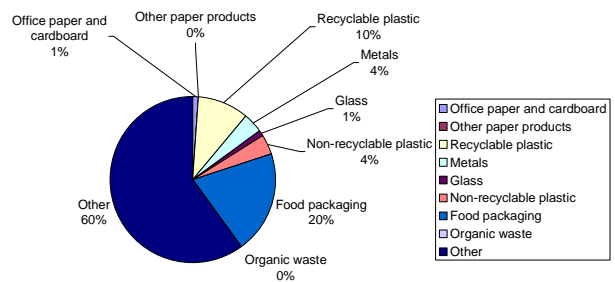


Figure 66 - Physical Sciences 4 Level 4

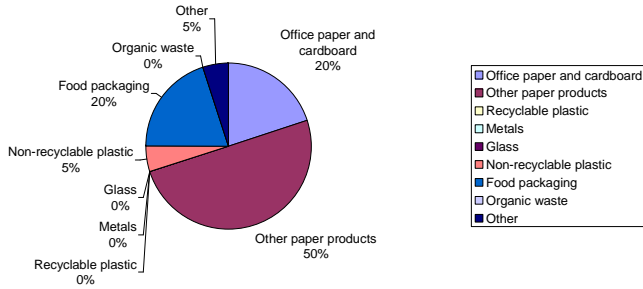


Figure 67 - Health Sciences 2

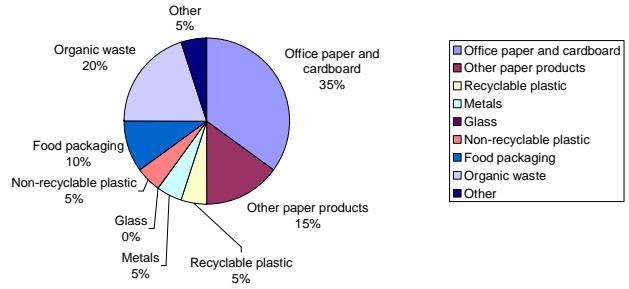


Figure 68 - Health Sciences 1

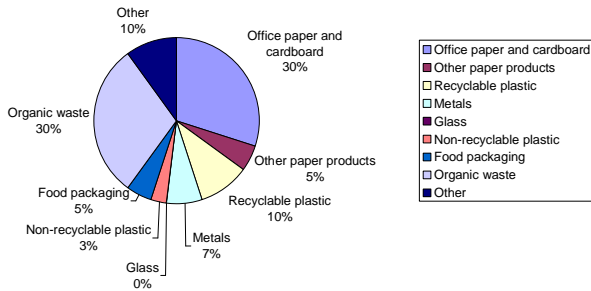


Figure 69 - Beth Gleeson Level 1

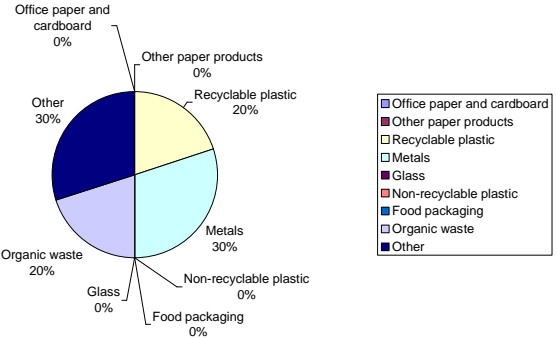


Figure 70 - Beth Gleeson Level 2

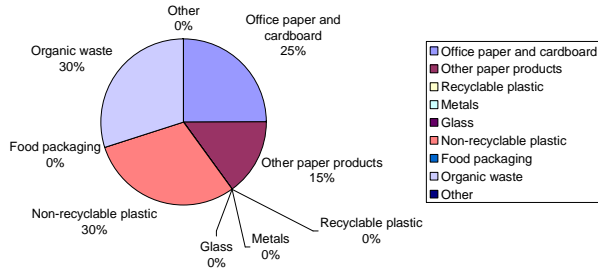


Figure 71 - Beth Gleeson Level 3

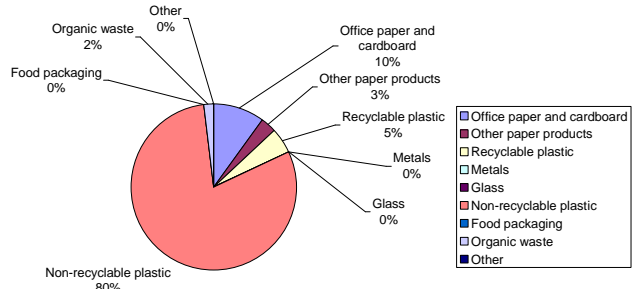


Figure 72 - Beth Gleeson Level 4

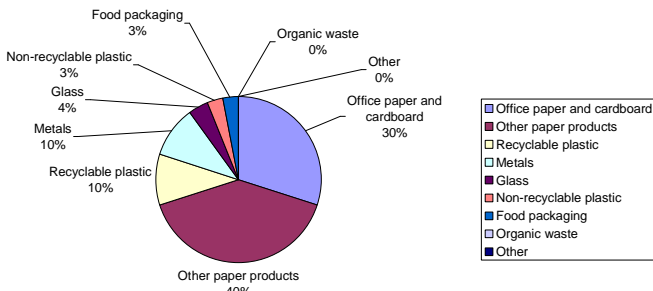
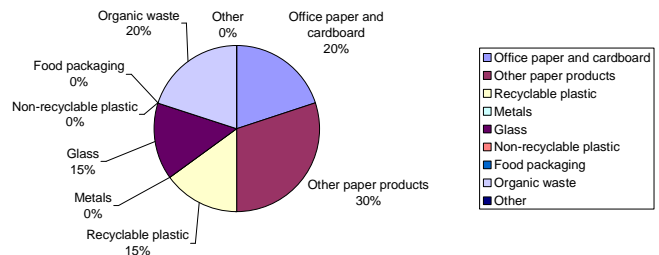


Figure 73 - Health Science 2 Level 2- spot



Appendix 2 (October 2007)

Figure 74 - Humanities 3 level 2 - spot

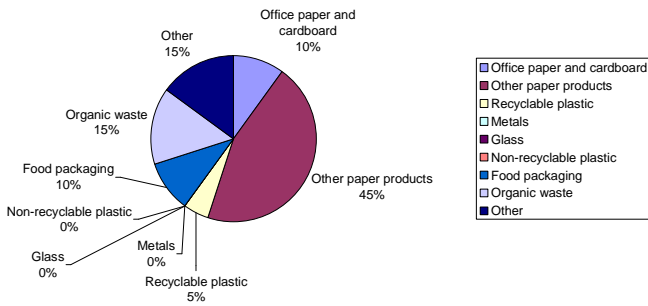


Figure 75 - Humanities 3 level 3 - spot

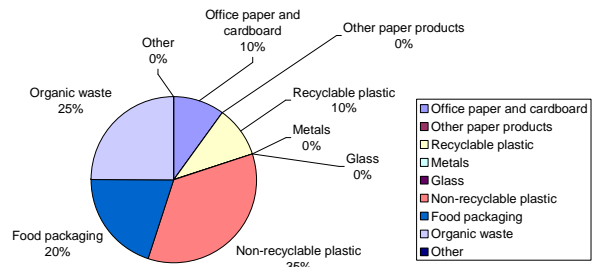


Figure 76 - Humanities 2 - level 1 - spot

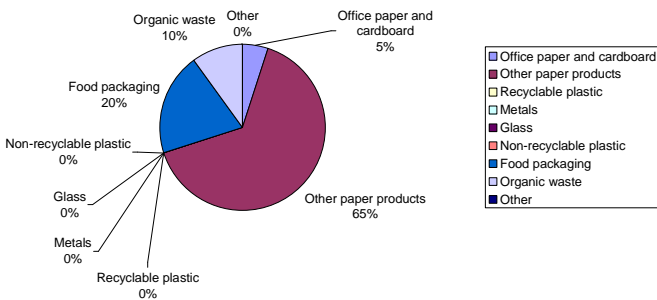


Figure 77 - Humanities 2 - level 2 - spot

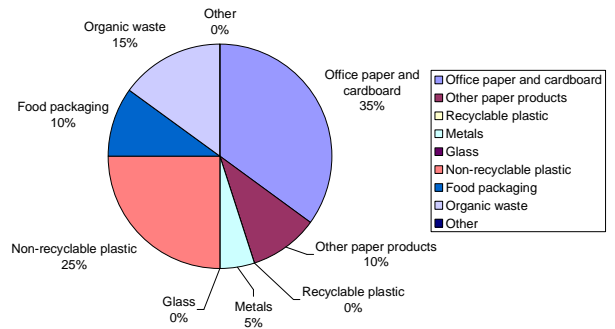


Figure 78 - Education 1 level 1 - spot

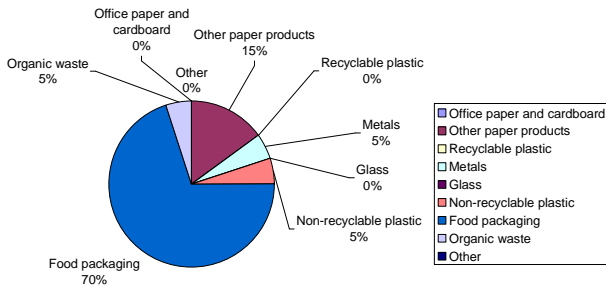


Figure 79 - Education 1 level 2 - spot

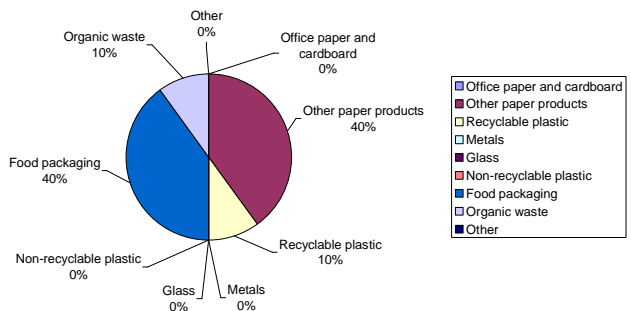


Figure 80 - Education 2 - level 2 - spot

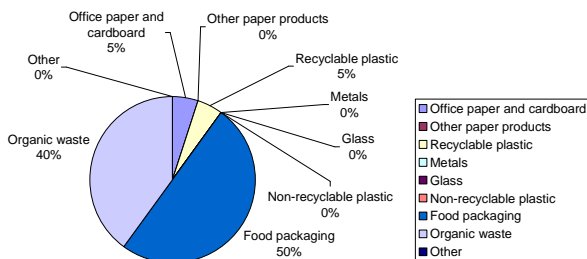


Figure 81 - Physical Sciences 1 Level 1 - spot

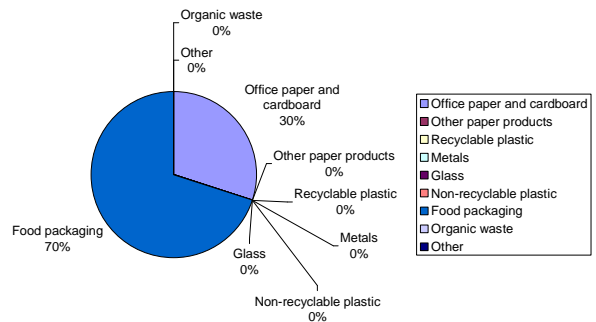


Figure 82 - Physical Sciences 1 Level 2 - spot

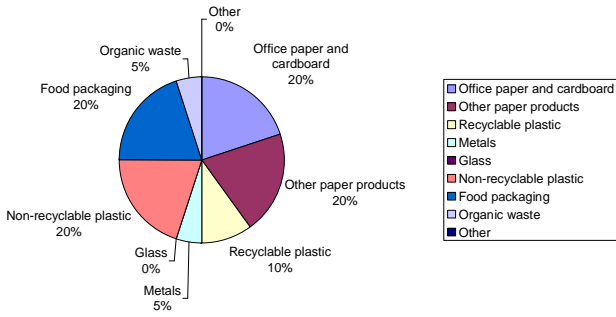


Figure 83 - Physical Sciences 2 Level 1 - spot

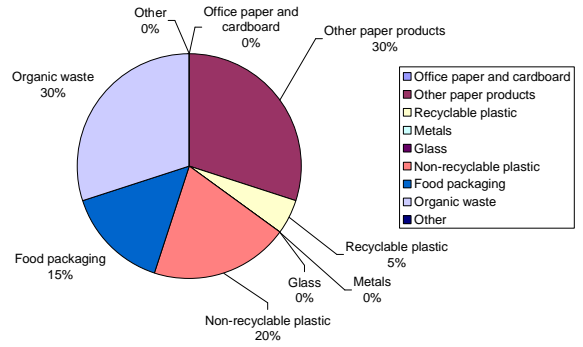


Figure 84 - Physical Sciences 2 Level 2 - spot

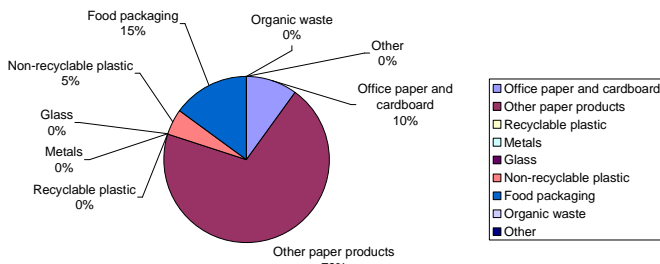


Figure 85 - Physical Sciences 3 Level 1 - spot

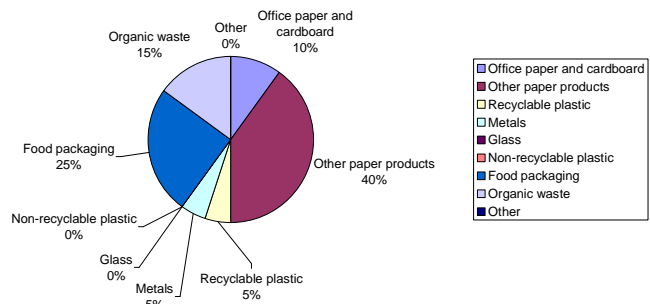


Figure 86 - Physical Sciences 3 Level 2 - spot

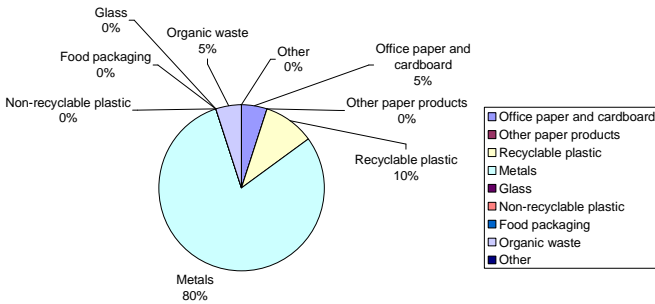


Figure 87 - Physical Sciences 4 Level 2 - spot

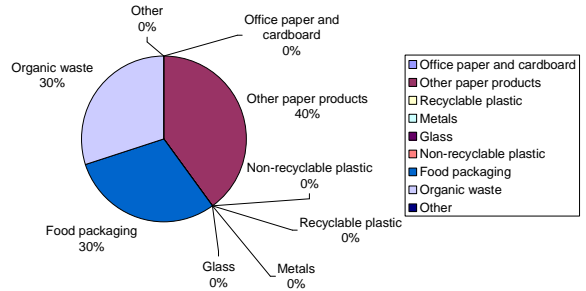


Figure 88 - Health Sciences 2 Level 2 - Spot

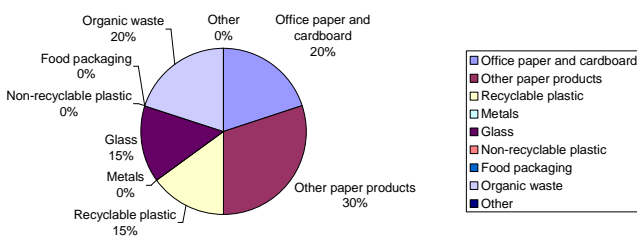


Figure 89 - Health Sciences 2 Level 3 - Spot

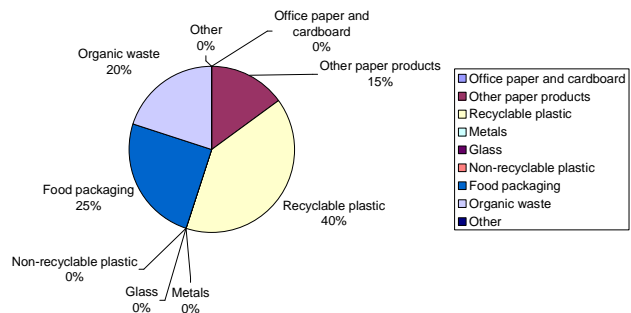


Figure 90 - Health Sciences 2 Level 4 - Spot

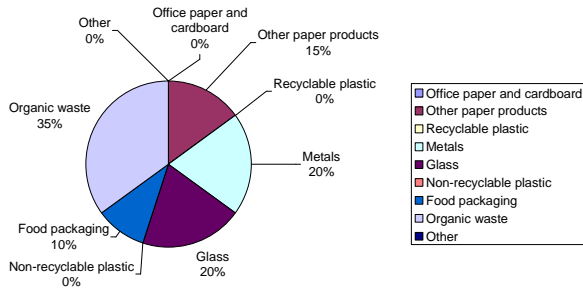


Figure 91 - Health Sciences 1 Level 1 - Spot

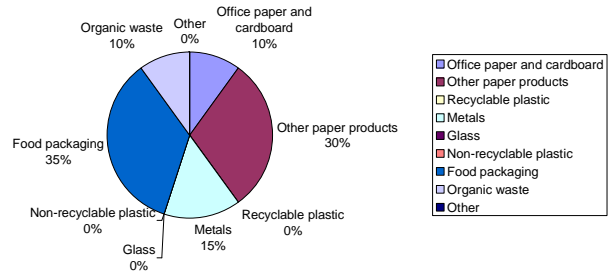


Figure 92 - Health Sciences 1 Level 2 - Spot

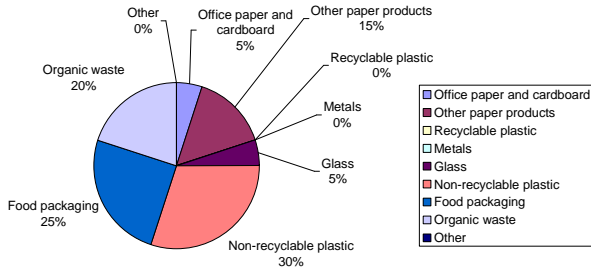


Figure 93 - Health Sciences 1 Level 3 - Spot

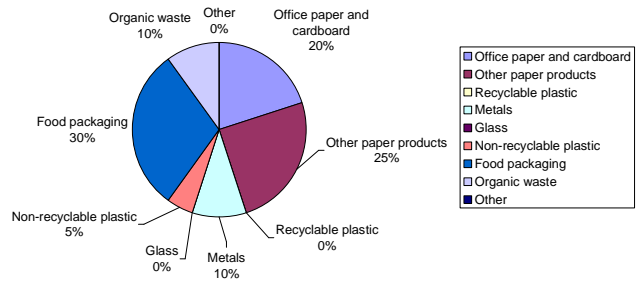


Figure 94 - Health Sciences 1 Level 4 - Spot

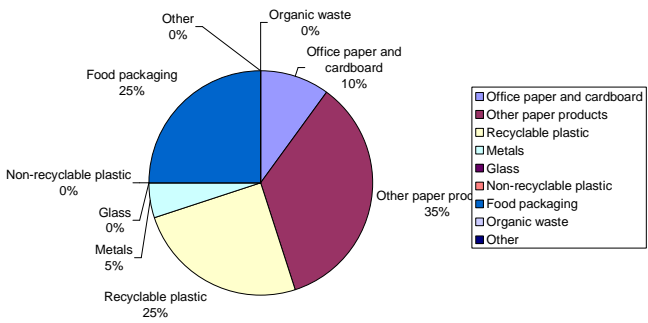


Figure 95 - Beth Gleeson Level 1 - spot

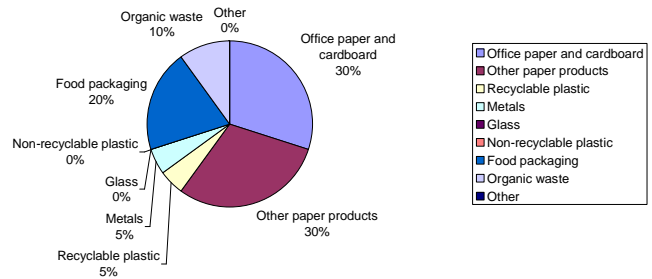


Figure 96 - Beth Gleeson Level 2 - spot

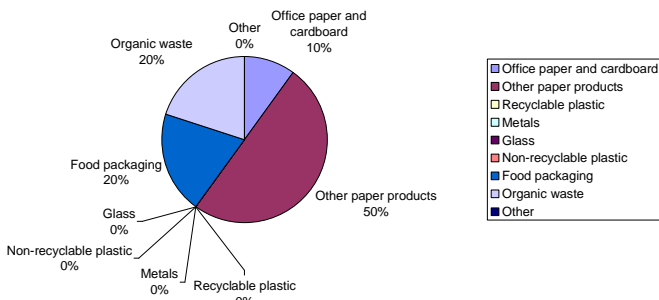
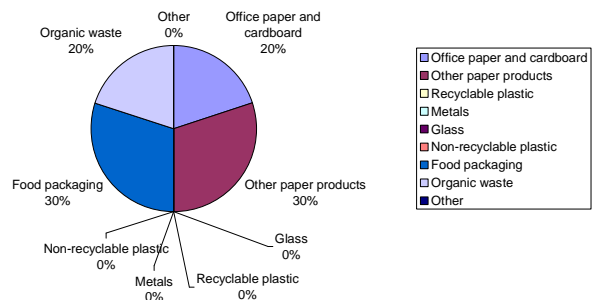


Figure 97 - Martin Building L1 (08')



Appendix 3 (March 2008)

Figure 98 - Martin Building L2 (08)

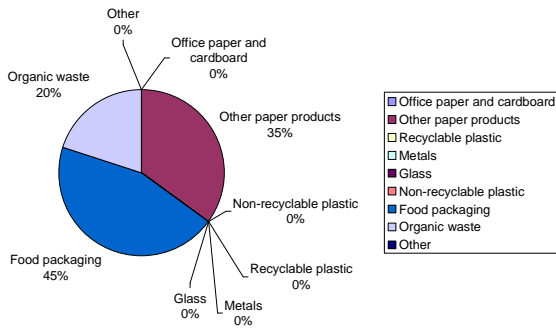


Figure 99 - Martin Building L3 (08)

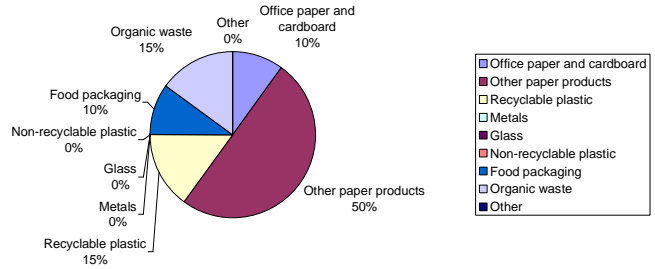


Figure 100 - Martin Building L4 (08)

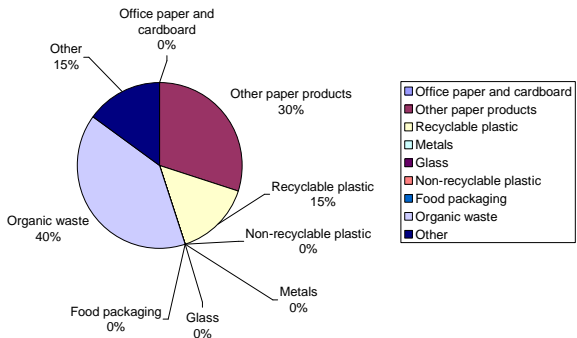


Figure 101 - R H Reid Building L1 (08)

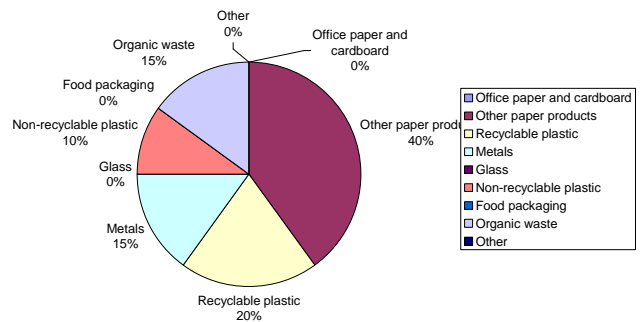


Figure 102 - R H Reid Building L2 (08)

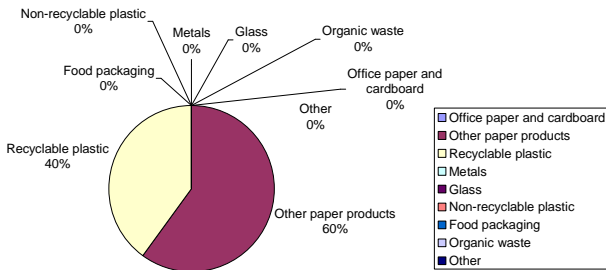


Figure 103 R H Reid Building L3 (08)

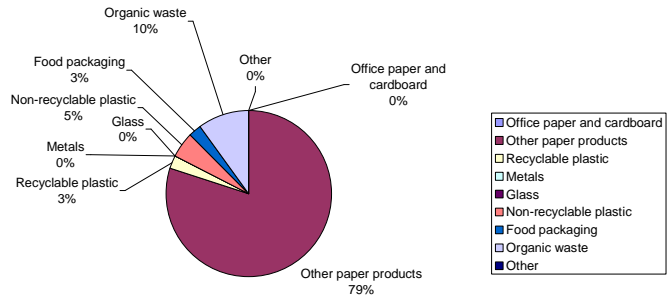


Figure 104 - R H Reid Building L4 (08)

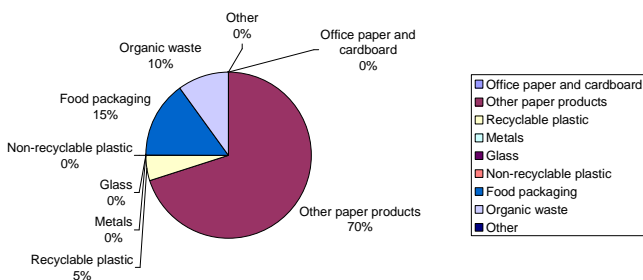


Figure 105 - Social Sciences L1 (08)

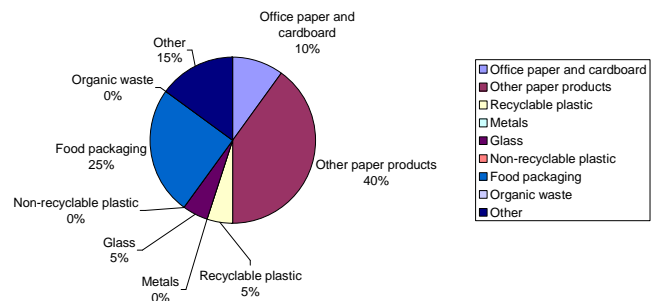


Figure 106 - Social Sciences L2 (08)

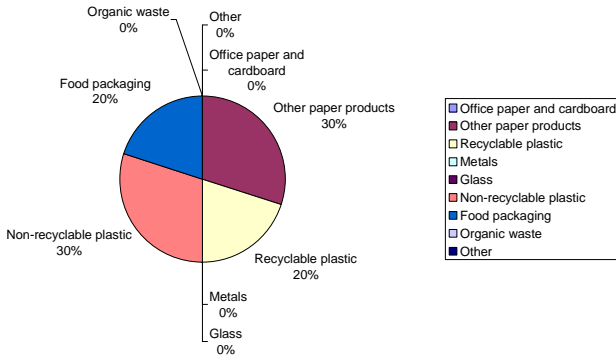


Figure 108 - Social Sciences L4 (08)

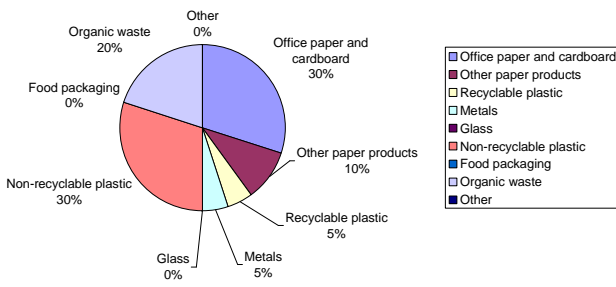


Figure 110 - Bio Sciences 1, L2 (08)

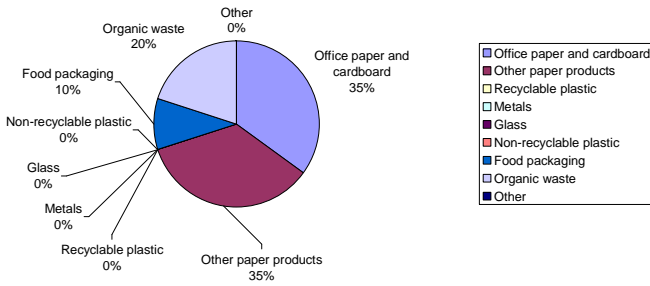


Figure 112 - Bio Sciences 1, L4 (08)

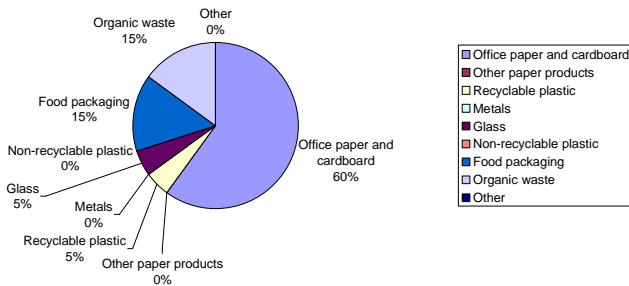


Figure 107 - Social Sciences L3 (08)

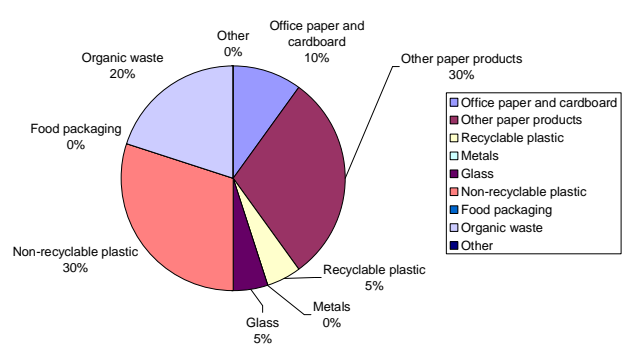


Figure 109 - Bio Sciences 1, L1 (08)

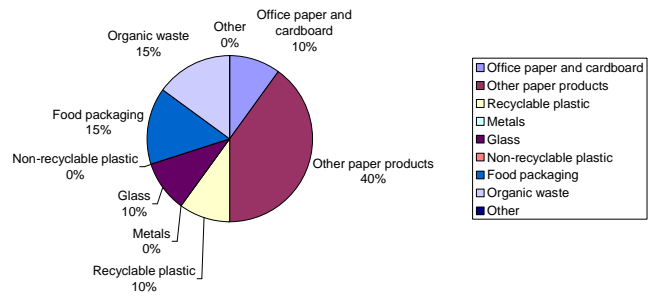


Figure 111 - Bio Sciences 1, L3 (08)

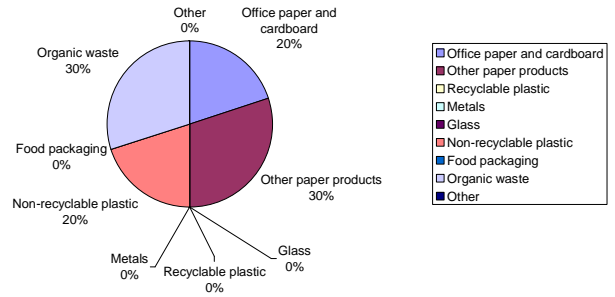


Figure 113 - Bio Sciences 2, L2 (08)

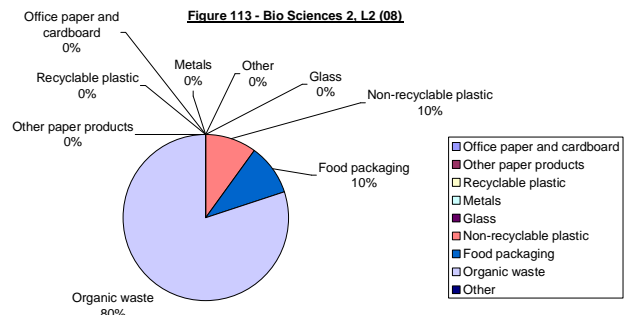


Figure 114 - George Singer L1 (08)

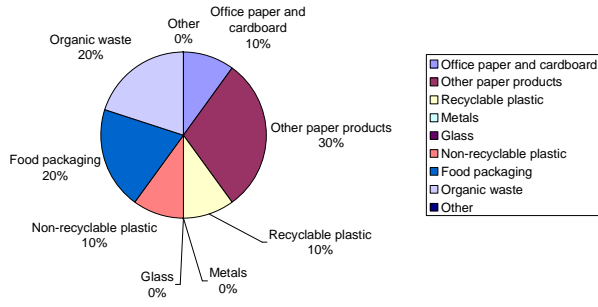


Figure 115 - George Singer L3 (08)

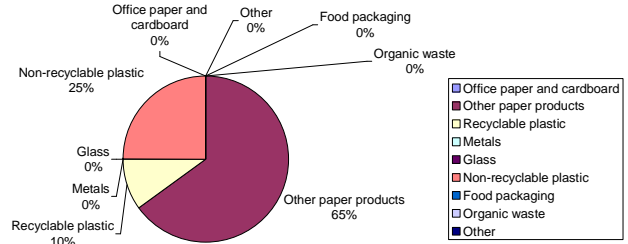


Figure 116 - George Singer L4 (08)

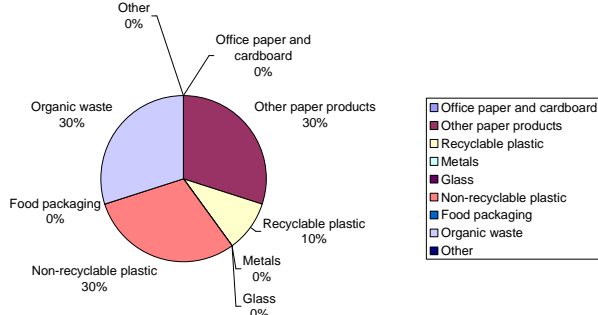


Figure 117 - Donald Whitehead L1 (08)

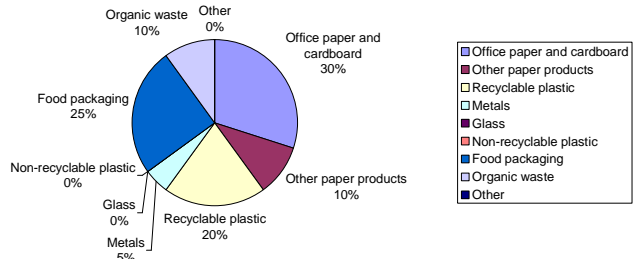


Figure 118 - Donald Whitehead L2 (08)

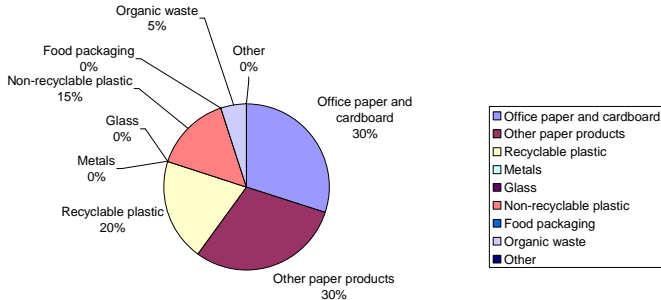


Figure 119 - Donald Whitehead L3 (08)

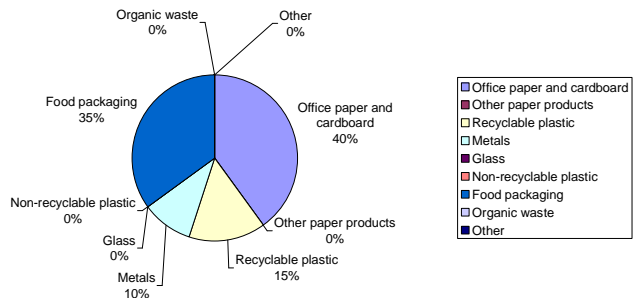


Figure 120 - Donald Whitehead L4 (08)

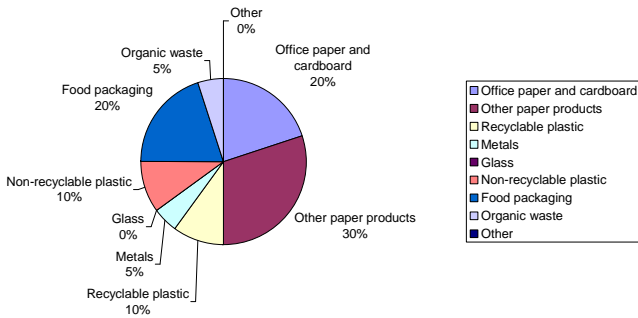


Figure 121 - International College Staff room 1 (08)

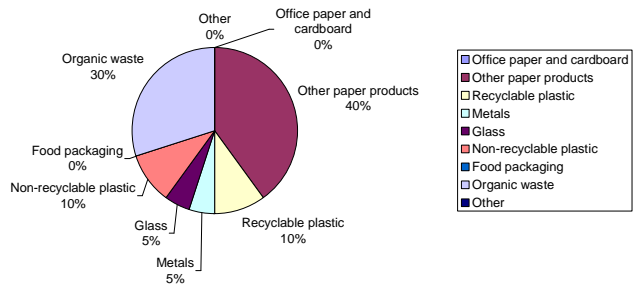


Figure 122 - International College Staff room 2 (08)

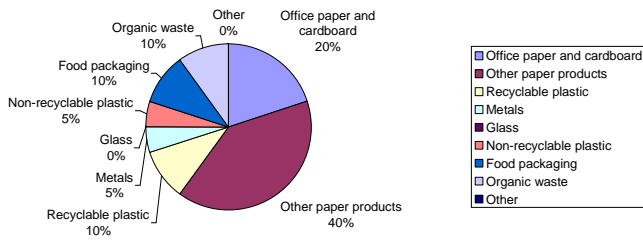


Figure 123 - Library Kitchen 1 (08)

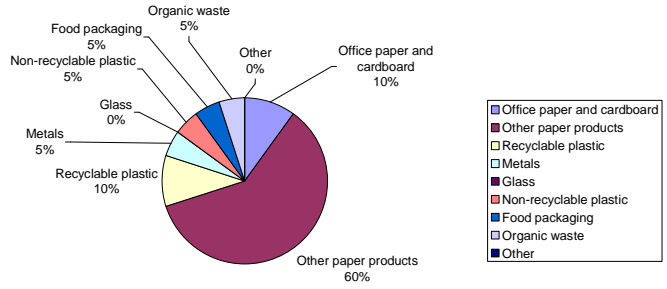


Figure 124 - Library Kitchen 2 (08)

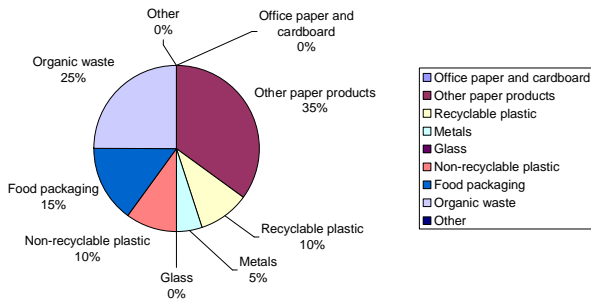


Figure 125 - Graduate School of Management (08)

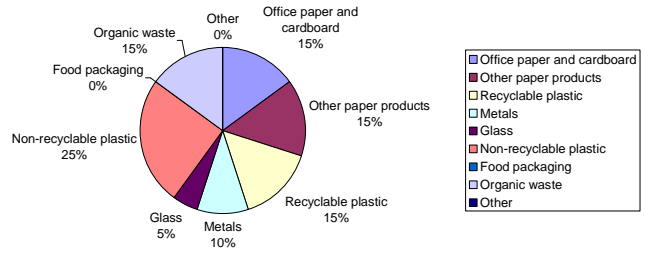


Figure 126 - Campus Graphics (08)

