



Waste at Monash

June 2007

Introduction

Redefining 'waste'

Waste is defined as material that has been produced and consumed and is currently of no value. But more than this, waste represents a lost opportunity because often this material is a valuable resource which can be reused or recycled once it is of no further use to us.

Recycling is important...

Recycling diverts waste from landfill sites which use valuable land, produce greenhouse gases, contaminate soil and water and are unwanted by local communities. Recycling also conserves our natural resources, and production processes using recycled products are far more energy and water efficient. In short, it makes good environmental, social and economic sense!

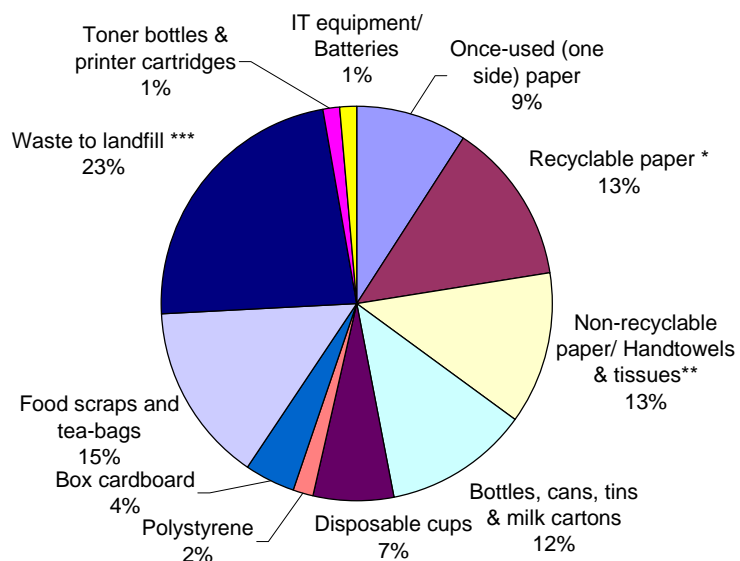
...but focus on the other 'Rs'!

Even with the most advanced recycling techniques, we are still using unsustainable amounts of natural resources. Waste output per person in industrialised countries continues to grow and recycling alone does not provide the solution. We need to *rethink, refuse, reduce and reuse first*, and then try to recycle the waste that cannot be avoided. For this reason, finding ways to use less and reuse products, packaging and materials is our top priority at Monash.

Tell me about this guide

Monash University has been a member of Sustainability Victoria's Waste Wise program since 2001, and has developed a wide range of programs to reduce waste. However as the following graph demonstrates, only 23% of our current waste stream is true waste to landfill. This guide outlines waste minimisation strategies and recycling systems currently available to manage the remaining 77% of our waste stream on Monash campuses. It provides information on how to establish these in your office and addresses frequently asked questions.

Waste to landfill at all Monash campuses 2006



It's easy to reuse paper in your office! Simply place a collection box near your printers/photocopiers for once-used paper. This paper can be used for notes, drafts and internal documents, generating significant environmental and economic benefits for your department.

A simple way to increase the use of once-used paper in your department is to designate a once-used paper printer, or tray in your photocopier. Please contact the Green Office Coordinator to arrange stickers for collection boxes (see back page).

Excess once-used paper can be sent to the Green Office Coordinator by internal mail. It will then be redistributed to other departments, or bound into once-used notepads which can be purchased from Corporate Express for A5 75c, order code 9502 7088, or A4 90c, order code 9503 6700.

Paper recycling systems

Paper recycling for office paper, exercise books, notes, envelopes, manila folders etc is available at all Monash campuses.



Paper recycling boxes are available in two sizes, a smaller box designed to sit under desks and a larger box for printing/photocopying areas. Staff are currently responsible for emptying these boxes into the 240L blue wheelie bins and moving this bin to a central point for weekly collection. The paper is recycled into Softex tissue and toilet paper, which is then sold back to Monash – a fantastic example of 'closing the loop'.

Can paper with staples and envelopes with plastic windows be placed in the paper recycling bin?

Yes. Small amounts of metal and plastic are removed during the recycling process.

Paper

Using less paper in your office

Paper carries a significant environmental impact and is one of the most ubiquitous office resources. Some easy ways to reduce paper usage in your office are:

- Avoid printing unless necessary by utilising emails, pdfs, websites and e-filing
- Reduce the size of your documents by extending margins, reducing text size to 11pt, and printing several pages to one sheet
- Set duplex (double-sided) mode as default for printing

Collect once-used paper

Can disposable paper cups be placed in the paper recycling bin?

No, disposable paper cups cannot be recycled because they are food-contaminated and are waxed in order to be waterproof.

Can newspapers, telephone directories, glossy magazines and coloured paper be placed in the paper recycling bin?

These products contain lower quality paper and/or require more bleaching to remove large quantities of ink. Newspapers (<5) and coloured paper can be recycled in small quantities, but telephone directories and glossy magazines should never be recycled through this system. These items and other lower grade papers (eg. paper towels) can be placed in the cardboard recycling skips, or taken home to council kerbside recycling services.

Large quantities of telephone directories can be collected for recycling into cat litter by *Equinox* on 9570 3855. If your department still receives hardcopy phone books, consider cancelling these and using the online versions instead.

What about shredded paper?

Shredded paper can be placed in recycling bins, however Animal Services is able to reuse this material as bedding. To arrange collection of your shredded paper, please send an email to animal.services@adm.monash.edu.au with your details and location for pick-up.

Is it possible to receive payslips electronically?

Yes! To cancel your paper payslips, login to the eServices website at <https://staffserv.adm.monash.edu.au/sss/eservices>, click 'Your pay information', then scroll to 'Printed payslip', check 'N' and click 'Activate'. You can access the electronic versions using the 'Your payslip' section below.

Bottles and cans

Bottle and can recycling systems for tins, cans, glass and plastic bottles, milk cartons and tetra juice packs are available at all Monash campuses. If kitchens in your department do not have a bottle and can recycling bin, please contact the Environmental Management team (see back page). External recycling stations for bottles and cans are currently being implemented on all campuses.

What can I recycle in Bottle & Can bins?

YES

- ✓ Tins and cans
- ✓ Glass bottles
- ✓ Plastic bottles*
- ✓ Milk cartons (rinsed)
- ✓ Tetra juice packs

NO

- ✗ Broken glass or Ceramics
- ✗ Food waste
- ✗ Margarine/yoghurt containers*
- ✗ Plastic takeaway containers*
- ✗ Polystyrene/plastic cups*

What types of plastic are recyclable?*

Currently, only plastics with recycling codes 1, 2 & 3 can be recycled through this system. These codes indicate the type of plastic and are marked by the following symbols usually located on the base of containers:



Cardboard

Cardboard recycling programs vary between campuses, but generally take the form of small skips or bales located outside buildings. Please remember to flatten all cardboard, and note that handtowels and other low quality paper may also be placed in these skips by cleaners. Please contact Facilities and Services at your campus to see what system is available to your department:

www.adm.monash.edu.au/facserv/campuses/

Printer cartridges

Along with paper, printer (toner) cartridges are one of the major consumables used in office equipment. To reduce toner use in your office:

- Set 'Economy' mode as default for printing
- Avoid dark backgrounds and heavy text when printing documents
- Take action to reduce printing (see page 2)

Printer cartridge collection service

Every year, about 30% of printer cartridges used by Australian businesses are recycled and the remaining 1.8 million end up as landfill, where they will take between 500-1000 years to decompose.

All Monash campuses have access to a free printer cartridge service through Cartridge Rescue. The company collects used cartridges at Monash, sells the remanufactured cartridges to Corporate Express and recycles any remaining materials.

Cartridge recycling boxes are available at no charge from Corporate Express, order code 8666 1340. To have your box emptied, contact Cartridge Rescue directly on 1800 628 854 or use the online form at www.cartridgerescue.com.au/

What is the difference between virgin and remanufactured printer cartridges?

A virgin printer cartridge is made completely from raw materials, while a remanufactured toner cartridge has already been made and used, and only the consumable items such as the toner and drum blades are replaced. Remanufactured printer cartridges are tested and given an Original Equipment Manufacture (OEM) guarantee. Claims from printer companies that remanufactured cartridges will void their warranties are false and against the Trade Practices Act.

Remanufactured printer cartridges are significantly cheaper while of the same quality as their virgin counterparts, and help 'close the loop' by providing a market for recycled products. Remanufactured printer cartridges are available from *Corporate Express* – please contact the Green Office Coordinator for more information (see back page).

E-waste: computers and other electronic equipment

'E-waste' refers to electronic equipment such as computers or photocopiers nearing the end of their 'useful life'. Electronic equipment contains dangerous heavy metals such as lead, mercury and cadmium which can contaminate soil and groundwater. For this reason, it is important that e-waste is disposed of in a responsible manner.

For internal resale:

Printers, photocopiers and other office equipment can be advertised in the *Monash Equipment Recycling Bulletin* for sale to other departments and or staff. To list your equipment for resale visit www.adm.monash.edu/finance/assets/, select 'Assets Forms' and then 'Assets: Equipment for Sale – advertising'. Complete the forms, detailing of the items you wish to dispose of, and submit to Corporate Finance. For further information please contact 9905 5931.

For students or staff interested in selling personal items, please go to the Monash Marketplace website at <https://my.monash.edu.au/community/marketplace/> to post your goods.

For external recycling:

A permanent e-waste recycling skip is located on Clayton campus, and are available for use by all campuses. This is a free service, however departments are responsible for transporting their waste to this skips. The skip can take computers, monitors, keyboards and other types of IT equipment, but *cannot* accept televisions or leased equipment. To obtain a map and key for the skip, please contact the Environmental Management team (see back page).

How is e-waste recycled?

The Monash Engineers Without Borders Computer Co-op has access to this skip. After erasing the hard disk, volunteers refurbish and repair equipment and provide these to students in need. For more information, please visit <http://ewb.monashclubs.org/MCCO> or contact the Welfare Office at MSA on 3 9905 5336. All remaining e-waste is recycled through our waste contractors.

Batteries

Our demand for batteries is growing along with our demand for portability and mobility. While rechargeable batteries offer a cost-effective and environmentally sound solution, previously un-rechargeable Alkaline and Nickel (A, AA, AAA, C, D, 9 volt) batteries can now be recharged and reused up to 10 times thanks to the REZAP Battery Doctor, a new Australian technology. If your department regularly uses batteries, consider purchasing your own machine from www.rezap.com. Due to the hazardous nature of chemicals found in batteries we need to manage the disposal of un-rechargeable batteries in a responsible manner.

To ensure batteries from your department are safely disposed of or recharged wherever possible, please refer to the following table:

Battery type & size	Common uses	Procedure
Alkaline and Rechargeable Alkaline Manganese (RAM) (AA, AAA, C, D, 9 volt),	Cassette players, radios	Send to the Green Office Coordinator marked with 'Batteries to be recharged' and date of start of collection.
Nickel Cadmium (NiCd) and Nickel Metal Hydride (Ni-MH) (AA, AAA, C, D, 9 volt, battery packs)	Power tools, kitchen appliances	
Mercuric oxide (button)	Hearing aids, pace makers	Send to the Green Office Coordinator marked with 'Batteries for safe disposal' and date of start of collection.
Lithium (AA, C, 9 volt, button, coin)	Cameras, watches, computers	

Small sealed lead-acid	Video cameras, computers, portable radios	
Lead-acid	Cars	Contact your local mechanic.
Lithium Ion (Li Ion)	Mobile phones	See page 7.

Office furniture

The following are just a few avenues your department can take to extend the life of your unwanted office furniture:

1. Submit details of the items for resale on the *Monash Equipment Recycling Bulletin* or *Monash Marketplace* (same process as for E-waste – see page 4).
2. It may be possible to donate unwanted furniture to Monash students. Discuss this option with the Student Association on your campus.
3. Donate your furniture to a local charity. The following are charities that offer collection services:
 - The Salvation Army
Contact 13 SALVOS (13 72 58), or place your details online at www.salvationarmy.org.au/donategoods
 - Brotherhood of St Laurence
Contact 9385 6111 or email collections@bsl.org.au to arrange for inspection and pick-up.
 - St Vincent de Paul Contact 1800 621 349 to arrange a pick-up.
4. Broken furniture with metal parts and scrap metal may be taken away by Evelyn Recycling free of charge. Contact 9736 2853 or visit www.evelynrecycling.com.au/.

Fluorescent tubes

Fluorescent tubes contain small but significant amounts of highly toxic mercury. Just one fluorescent tube is sufficient to contaminate 30 000 L of water beyond safe drinking levels!¹ Recycling ensures this mercury is diverted from landfill where it can be leached into soil and groundwater. Fluorescent tube recycling is available at all Monash campuses. Please contact Facilities & Services on your campus to arrange collection:

www.adm.monash.edu.au/facserv/campuses/

How are fluorescent tubes recycled?

Tube recycling involves removing the ends of tubes and then blowing the phosphor powder off the glass. This powder is collected and put through a distillation process in order to capture the mercury. Captured mercury can be refined and sold for a variety of uses. The glass and some metals remaining from the process can also be recycled.

Polystyrene

A polystyrene recycling skip is located on Clayton campus, and is available for use by all campuses. This is a free service, however departments are responsible for transporting their waste to this skip. To obtain a map and key for the skip, please contact the Environmental Management team (see back page).

What are some examples of products manufactured from recycled polystyrene?

Polystyrene can be recycled into food trays, building insulation, and protective packaging. It can also be mixed with other recycled plastics to produce a synthetic timber for playground equipment, traffic signs and barriers, park benches and marine construction.

¹ Source: Department of Environment and Heritage. 2006. Available online at www.deh.gov.au/settlements/government/tubes.html, accessed 26th September.

Transparencies

While the use of overhead transparencies is in decline, old presentations still linger around the office. Transparencies can be replaced with electronic alternatives such as PowerPoint, or sometimes wiped and reused. To recycle transparencies:

1. Place a small box in a convenient location in your department with the label "Overhead Transparencies for Recycling"
2. Once the box is full, either post via internal mail to the Green Office Coordinator (see back page), or send the transparencies directly to:

Attention: Kim Downie
Product Info
3M Australia
950 Pacific Hwy
Pimble NSW 2073

For more information please contact *3M Australia* on 136 136.

Organic waste

Take home your scraps or set up a worm farm

The most simple method of dealing with organic waste is to place a scraps container with a secure lid in your kitchen and establish a roster to take these home to a compost heap every night. Some Green Office Reps have even successfully established worm farms in their departments!²

Use a Bokashi Bucket

If these options are not possible, consider adopting a Bokashi Bucket. While someone in the office will need to be responsible for maintaining the bucket, and taking it home to empty roughly once a month, this

² For more information on worm farms, please see www.sustainability.vic.gov.au/www/html/1656-how-to-build-a-worm-farm.asp

system requires less maintenance than collecting and emptying scraps every day.

Any organic matter including food scraps, tea bags, coffee grounds and even meat, onions and citrus can be added to the bucket, which breaks these down into a fantastic natural fertiliser for gardeners! The Bokashi system is cost-effective, odourless and has been used by OHSE for several years.

For more information or to purchase a Bokashi system for your department, please visit Eco Organics at www.eco-organics.com.au. Signage for your bucket is available from the Green Office Program (see back page).



Arrange an external pick-up

If your department produces a significant amount of organic waste, it may be possible to arrange a regular external pick-up through our waste contractors. Please contact the Environmental Management team to discuss options (see back page).

Mobile phones

Monash has a recycling system for mobile phones, chargers, batteries and accessories. Send these items directly to the Green Office Coordinator, or contact the Environmental Management team to locate the nearest collection box on your campus (see back page).

Disposable cups

Disposable cups are a massive environmental issue on Monash campuses. In 2005, over 120 000 disposable cups were sent to landfill over a 10 month period! These cups use a significant amount of energy, water and other resources to manufacture – they are used for a matter of minutes, and take many years to break down in landfill.

There are no recycling systems for disposable cups, and Monash staff and students are *strongly* encouraged to avoid their use, by either requesting drinks in china cups or bringing mugs and travel flasks for take-away alternatives. As an incentive, a number of outlets on Clayton campus provide a 20c discount if you supply your own mug!



Plastic bags

In 2003, approximately 110 000 plastic bags were distributed on Monash campuses. To combat this issue, the University has committed to becoming plastic-bag-free. In line with this policy, cleaners will no longer provide plastic bags in office waste bins, although liners will remain in kitchen areas.

Although existing supplies of plastic bags may be distributed, these should not be re-ordered and all staff and students are encouraged to bring their own bags and avoid providing these at future events.

Stationery and other miscellaneous items

Collect stationery for reuse

Placing a container labelled 'Stationery for Reuse' in your stationery cupboard is a simple way to redistribute extra items such as notepads, pens and post-it notes which are completely usable, but no longer in brand new condition.

Donate as art materials

Unwanted CDs can become drink coasters, bird chasers, bike reflectors, or even a disco ball! Art teachers are always looking for interesting materials to inspire craft projects. If you have materials that could become masterpieces, try contacting childcare centres and primary schools in your local area.

Contact Green Collect

Green Collect is a not-for-profit organization that collects, recycles and redistributes 'niche waste', which includes stationery, corks, CDs, DVDs, bottle tops, screw tops etc. If you have materials which are not covered by a recycling system at Monash, please visit Green Collect at www.greencollect.org/.

Has your office 'Bin there, Done that'?

Acknowledging that waste bins under each desk are becoming redundant due to the expansion of recycling systems available, the 'Bin there, Done that' project replaces bins with paper recycling boxes and a central recycling station including a landfill bin for non-recyclable waste. The project has been shown to dramatically increase recycling rates. A guide explaining the process and its benefits, and providing practical advice is available from the Green Office Program (see back page).

How to take action on an environmental issue in your office:

1. Check out the website: www.monash.edu.au/green
2. Ask your Green Office Rep or Environmental Officer: www.adm.monash.edu.au/ohse/contacts/environmental-officers.html
3. Talk to your supervisor
4. Submit a Green Action request: www.monash.edu.au/green/action/
5. Contact the Environmental Management team:

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