Smarter Resources Smarter Business

Recycling

Recycle right! A guide for businesses

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Sustainability Victoria

State Government Victoria

Why recycle?

An effective waste management system can help your business increase recycling rates, reduce the amount of waste sent to landfill, while saving your business money.

Sustainability Victoria has developed this guide to provide businesses with an overview of how to increase recycling in the workplace while reducing costs and environmental impacts. Increasing your business' recycling has a range of potential benefits including:

- reduced waste costs to your business
- turning materials that would otherwise become waste into valuable resources
- improved environmental performance
- reduced carbon impact
- reduced exposure to landfill levies through better waste outcomes
- meeting corporate environmental commitments
- promotion of a green company image
- meeting community and consumer expectations.

Recycling business waste using a four step approach

There are many ways to increase recycling rates. Depending on your current set up, some actions can be easily implemented, while others require more planning. This document takes a four step approach:

Step 1 – Understand your waste

Step 2 – Set up your recycling system

Step 3 – Engage your staff

Step 4 – Monitor and evaluate your system

Understand more about waste and recycling in Victoria

The *A Taste of Waste* publication provides an overview of waste and resource recovery in Victoria. To learn more about types of waste, regulatory settings, recycling, product stewardship schemes, energy recovery, advanced resource recovery technologies and more, download the booklet from the Metropolitan Waste and Resource Recovery Group website at http://www.mwrrg.vic.gov.au/.


Step 1
Understanding your waste
• Undertake a waste audit
• Set goals and targets
Step 2
Set up your recycling system
• Know your waste and recycling options
• Bin placement and zoning
• Bin design and appearance
• Organisational policies and processes
• Specialised recycling requirements
• Implementation
Step 3
Engage your staff
• Early involvement
• Champions and leaders
• Communication planning
Step 4
Maintain your system
• Monitor your system
• Reporting

Step 1 – Understand your waste

Taking the time to understand your business' waste generation will give you a good starting point to plan for better management of waste and recycling. The best way to understand your waste is through a waste audit.

A waste audit is a process used to quantify the amount and types of waste generated by your organisation, as well as the cost of your current waste and recycling service. Waste audits can be undertaken by yourself, or someone in your organisation, or you can hire a waste auditor to do this for you.

a. Undertake a waste audit

You can do this yourself

A waste audit can be as simple as walking around the office to get a feel for your current waste set up and reviewing past waste and recycling invoices to work out how much waste is generated throughout the year.

You can also visually inspect the waste collected in different areas of your office or carry out a physical waste audit which involves sorting waste into different categories and weighing and recording weight volumes. A physical waste audit is best handled by a professional waste auditor.

Depending on your needs, you can record information such as:

- different waste steams
- bin placement
- materials by volume or weight of bins (to be recorded at consistent times)
- any contamination in your recycling bins

REMEMBER: Digging through bins can be dirty and dangerous work so observe your business' occupational health and safety rules when assessing your waste.

Or you can engage an auditor

Engaging a waste auditor will provide you with the most detailed and accurate data on your waste volumes and composition. You can find these services by typing 'commercial waste auditors' or 'waste auditors' into your search engine.

Keep in mind that waste audits can vary in their level of detail, so discuss this with your waste auditor.

Waste audit resources

Download 'Bin Trim', an excel tool created by the NSW Environment Protection Authority, to record information on types of materials that are discarded by your business.
Visit www.epa.nsw.gov.au/bintrim.

b. Set goals and targets

Your waste audit will give you an understanding of which materials can be removed from the waste stream and recycled.

Use this data to establish a waste baseline, and set targets (monthly/annual) to improve recycling and reduce waste to landfill. Your business and your waste and recycling contractors can work towards achieving these targets, using them to measure the success of your system and to encourage staff to continue their recycling efforts. Targets will be different for every business and depend on the types of waste produced.

By undertaking regular bin audits (each month, for example) you will be able to measure your progress against your goals and targets.

For a list of measurement indicators commonly used to assess the success of recycling actions, refer to Appendix 1.

Contamination – Did you know?

If your recycling bins are contaminated with non-recyclables you may be charged a penalty by your waste and recycling contractor, and the load may be sent to landfill.

Regular bin audits will help you identify particular items or materials that are contributing to contamination. You may discover that most people are disposing of a particular item in the wrong bin causing contamination. For example, staff may be disposing coffee cup lids in the co-mingled recycling bin when the waste service provider has stipulated this product cannot be recycled.

c. Separating waste materials

There are many items and materials that can be recycled in the workplace. There can also be financial advantages in separating your waste materials into single material streams, such as paper/cardboard or aluminium. Clean materials that have been separated into single material types will attract the best price for a waste and recycling contractor.

You'll need a reasonable volume of any waste stream to make it viable for a waste and recycling contractor to collect it. If your business does not produce enough volume you can consider combining your waste and recycling with neighbouring businesses.

Separated recycling streams are valued differently. The following list indicates the most to least valuable recyclable materials, as at October 2013:

1. Aluminium
2. Hard plastic (PET and plastic bottles)
3. Steel
4. Cardboard
5. Cardboard and paper combination (more cardboard = higher value)
6. Paper
7. Glass
8. Soft plastics (shrink wrap)

Identifying plastics

The Plastics and Chemicals Industries Association (PACIA) has adopted a voluntary coding system based on 1 to 7 to identify the resin composition of plastic containers.

For more information on plastics identification and what is accepted in the co-mingled bin speak to your waste and recycling contractor, or visit www.pacia.org.au.

Step 2 – Set up your waste and recycling system

Now you understand your waste streams and have set some targets, it's time to plan your waste and recycling system.

An effective waste and recycling system handles a range of waste streams and is flexible enough to allow for unscheduled quantities and volumes of waste. Your system should also be set up in a way that makes it convenient for staff to recycle.

a. Know your waste and recycling options

Waste and recycling services can vary a lot, so it is important that you choose the right service for your business. You'll need to consider collection frequency, the types of bins and equipment required and the different costs of removing various waste streams.

To decide whether you need a new service, consider the following:

- Does your local council provide any recycling collection services?
- When does your current waste and recycling contract end?
- What other waste and recycling service options are available to your business?
- Do you need any specialised waste and recycling solutions?

b. Identifying potential waste and recycling contractors

Sustainability Victoria has developed a short guide to provide businesses with advice, guidance and access to practical tools to help identify the best waste and recycling service for their organisation. It includes information on the different services offered by waste and recycling contractors, preparing a contract and ongoing management.

Download *Best Practice Waste and Recycling Contract for Business* from http://www.sustainability.vic.gov.au/ services-and-advice/business/smarter-resources-smarter-business/recycling/how-to-guidance.

You can search for recycling services by area and material using the Planet Ark Business Recycling website at http://businessrecycling.com.au/.

Waste Brokers – Did you know?

You can engage an experienced waste broker to negotiate your waste and recycling contract for you. A waste broker will seek a service on behalf of your business and, using their network of preferred suppliers, present your business with a range of options.

c. Bins and signage

When it comes to bins and other waste and recycling equipment, there are many options to choose from that vary in size, shape, colour and appearance. It is important that you select waste and recycling equipment suitable for your business and ensure it is well placed and adequately signed.

Types

There are generally two types of bins that a business may need, these are:

- Bins used by contractors to collect your waste and recycling (wheelie bins, skips etc.) that are generally stored outside of your business' building. Sustainability Victoria's *Best Practice Waste and Recycling Contracts for Business* provides a run-down of common bins you might like to consider.
- Bins used to collect waste and recycling within the workplace. For guidance purchasing these bins, please see the 'bin design' section below.

Depending on the type, bins and other equipment can be purchased or leased from your waste and recycling contractors. Contractors offer a range of bins with differing features including size, collection frequencies, site requirements and pricing. Generally, the cheapest waste and recycling services will use the most common bins, such as 240 litre wheelie bins or skip bins.

Placement

Place bins in areas commonly used by staff, close to where waste or recycled materials are likely to be generated. Your waste audit will give you an indication of how much waste and recycling to expect and where it is occurring. For example, you might consider the following placements:

- Paper recycling bins in printer and photocopier rooms.
- Combined paper and cardboard recycling bins near stationary rooms or facilities areas.
- Organics recycling bins in tearooms and kitchen areas.
- Printer cartridge collection in photocopy and storage rooms.
- General rubbish alongside recycling bins at central recycling stations to avoid

contamination. You may also wish to consider:

- Identifying an area for storing electronic and IT equipment for recycling.
- Using additional recycling receptacles (e-waste, batteries, etc.) near main recycling stations to make staff aware of their existence.

You might wish to remove landfill bins from individual desks and replace them with paper recycling bins to encourage staff to consider the materials they are disposing. You can provide posters of your recycling and reuse zones to help staff know where to go to dispose of waste appropriately (see Appendix 2).

Remember: Keep bins clean and well maintained to encourage staff to use them. Leave fire exits and access points clear.

Bin design

Bin design and appearance influence disposal behaviour. Choosing the right types of bins, colour-coding and signage will help staff use your waste and recycling system correctly.

- Shaped lid openings can help prevent rubbish being put in recycling bins, for example, rosettes for cans and bottles.
- For recyclables that are mixed together, paper can be collected in one bin, while co-mingled recyclables can be collected in another.
- Look for bins with hygienic openings that are easy to use. Swivel lids are more hygienic than flip tops. Keep bin openings clean and well-maintained.

What is co-mingled recycling?

Co-mingled recycling is a service that accepts several items in the same bin, usually food and drink containers such as cardboard, plastic bottles, glass jars, aluminium and steel cans.

Colour code your bins lids

Consistent signage for waste and recycling systems is important to trigger instant and positive recognition. By using Australian Standard colours, you can develop consistent and meaningful communications that make recycling decisions easier.

Bin signage should conform to the Australia Standard for Mobile Waste Containers – Colours, Markings and Design Requirements (AS 4123.7). This can be found at www.standards.org.au. The four most relevant colours in the workplace are listed below.

Type of waste	Colour	Pantone colour code	RGB colour code
Recyclables	Yellow	PMS 109	R249 G214 B22
Paper/cardboard	Blue	PROCESS BLUE	R0 G140 B204
Food organics	Green	PMS 375	R140 G214 B0
Rubbish	Red	PMS 1807	R160 G48 B51

Bin signage

The correct use of signage will be critical to the success of your waste and recycling system as the most frequent communication method with staff/bin users. There are two types of signage you can use around the workplace:

› Instructional signage: Gives users direction about what materials to place in each bin.

Instructional signage is placed on, above and around bins to communicate what can be placed in each bin.

Use brightly coloured, simple signs based on the standard colours for bins to help reinforce correct disposal behaviour.

› Supplementary signage: Reinforces waste and recycling messages.

Supplementary signage also provides an opportunity to communicate:

› frequently asked questions ('what bin do I put my coffee cup in?')
› recycling tips ('no need to clean your takeaway containers – just a quick rinse is fine')
› who to contact if you need help
› a floor plan showing recycling locations (see Appendix 2), and
› benefits of recycling and interesting recycling facts.

Posters and signage are available for free from the Planet Ark Business Recycling website at http://businessrecycling.com.au/research/signage.cfm.

Your waste and recycling provider may also provide signage materials as part of your contractual agreement.

You may also wish to develop a 'Recycling Zone' map, identifying where within your workplace, various waste and recycling bins are located. See Appendix 2.

d. Specialised waste and recycling solutions

Depending on your business activities, you may need to consider specialised waste and recycling solutions:

Secure document disposal: Place shredded documents in the paper recycling bin, not the waste bin. Limit the use of secure document bins where possible and ensure that the contents are collected and recycled.

Less common products: Various recycling providers deal with uncommon waste items such as light bulbs and compact florescent lamps, plastic wrap, batteries, CDs/DVDs, mobile phones, stationary supplies and electronic equipment. Some common programs and services are:

- Green Collect: A non-profit group offering collection services for aluminium, bottle tops, printer cartridges, mobile phones and accessories, batteries, DVDs and CDs, aluminium, bottle tops and small IT items to businesses in Melbourne's CBD. They also find new homes for discarded items, including stationery, office and computer items. Visit www.greencollect.org.au.
- Cartridges 4 Planet Ark: Planet Ark and participating partners have organised a free printer cartridge drop-off service across Australia. Visit http://cartridges.planetark.org/ to find participating retailers.
- MobileMuster: The official recycling program for mobile phones in Australia. This free program collects mobile phone handsets, batteries and accessories to recover the plastics and metals for use in manufacturing new products. Visit www.mobilemuster.com.au.

You will find a list of services and collection points on Planet Ark's Business Recycling website at http://businessrecycling.com.au/.

Office events and activities: Plan for your peaks. Think ahead for activities outside of your normal business practices by hiring extra recycling bins or ask contractors about additional services.
Activities might include clearing out office storerooms, libraries and filing cabinets, rebranding office stationary, product launches and marketing events.

e. Organisational policies and processes

It is worth reviewing any existing organisational policies and systems to ensure that recycling and sustainability is embedded across your entire organisation.

Environmental or sustainability policy

An environmental policy states an organisation's commitment to the environment and outlines any key activities being undertaken to reduce the environmental impacts of operations.

If you already have an environmental policy, you may need to update it to ensure it reflects your current waste and recycling plan.

If you do not currently have a policy, the Sustainability Victoria website has some guidance on creating an envirwww.sustainability.vic.gov.au/publications-and-research/knowledge-archive/resourcesmart-state-government-program/develop-an-environment-policy

Procurement

An environmental purchasing policy prioritises environmentally preferable products and services wherever feasible. Building environmental requirements into your business' procurement policy will ensure all produce and service purchasing decisions consider environmental considerations, such as materials used in manufacturing or the waste management practices of a service provider.

ECO-Buy provides advice to organisations on environmental procurement. Visit www.ecobuy.org.au.

Environmental Management System

An Environmental Management System (EMS) integrates environmental management into a company's daily operations, long-term planning and other quality management systems.

The AS/NZS ISO 14000 EMS is an internationally recognised standard that provides organisations with a systematic way of putting environmental management at the heart of their operations. For more information on ISO accreditation, visit the Standards Australia website at www.standards.org.au.

f. Implementation

You may wish to propose a trial roll-out to test the functionality of a new or altered waste and recycling system by selecting a small designated area ahead of a full roll out. A trial gives staff the opportunity to get used to the new system and raise any concerns.

You, or the person in your business responsible for waste, may wish to consider drafting a waste and recycling system document outlining:

- your baseline data by waste stream
- current bin signage placement
- staff communication activities (outlined in Step 3)
- monthly bin audit findings (outlined in Step 4).

Step 3 – Engagement

A successful waste and recycling system relies on participation from key groups of people, including staff, cleaners and facility staff. There are a range of tools your business might like to consider using to ensure successful engagement.

Things to consider…

a. Early and regular involvement

Engaging staff from the outset facilitates greater understanding and creates ownership of your waste and recycling system. You may also wish to establish a periodic forum for cleaners to relay issues or concerns they are experiencing with collecting bins or storing waste.

Senior staff need to be involved early to ensure a common approach and support for the change process. You may also wish to engage facility managers.

c. Leadership

A 'green team' or 'champions program' is a good initiative to get staff, and other stakeholders, to actively participate and take on a level of responsibility for your business' waste and recycling system. These teams are generally voluntary and can be incorporated into performance plans.

You can find a fact sheet on establishing an environment team on the Sustainability Victoria website at www.sustainability.vic.gov.au/ services-and-advice/business/smarter- resources-smarter-business/energy-and- materials/resources-and-tools/other-resources.

Facility managers may provide additional support in setting up and maintaining and monitoring the system on a day-to-day basis. They are also in direct contact with service providers.

b. Communication

Communication will be central to keeping staff engaged, aware and informed of your waste and resource recovery system.
By highlighting progress, achievements or simply providing information about recycling, your staff will have a greater level of awareness and engagement of your waste and recycling system.

Your business may already have a number of established channels to communicate waste and recycling information, such as

- induction training
- staff meetings
- newsletters
- notice boards.

Communications tips

Keep your message simple

Keep it positive: Report on progress and achievements

Consistent: Use consistent messaging and designs for all your communications materials

Clear signage: Make sure your 'call to action' is prominent so that staff can easily do the right thing. For more on signage, see 'Bin design' under Step 2

Regular communication: Keep staff up-to-date with selective and interesting communications. Avoid overloading them with information.

Other resources

The Planet Ark Business Recycling toolkit provides adaptable emails, posters and signage to notify staff about changes and information on using signs and promotions to encourage positive environmental behaviour. Visit http://businessrecycling.com.au/research/toolkit.cfm.

Sustainability Victoria has created a short fact sheet on behaviour change in the workplace. Visit www.sustainability.vic.gov.au/services-and-advice/business/smarter-resources-smarter-business/energy-and-materials/resources-and-tools/other-resources.

Step 4 – Maintain and monitor

Your waste and recycling system will need maintaining and monitoring. This will help your business:

- track progress on achieving recycling goals and targets
- identify opportunities for improvement.

a. Monitoring

Collecting regular data on types and volumes of waste your business is creating will allow you to make informed decisions on improvements and changes to your waste and recycling system. You might wish to consider:

- regular audits of your waste and recycling streams
  - This can be a simple visual inspection, or recording the weight of each bin within your workplace on the same day each week, or same week each month. See Appendix 3 for waste recording sheet.
- collating your waste and recycling invoices
  - You may wish to request volumes per bin from your waste and recycling contract to be included on your invoices.
- carry out a full waste audit (like the one used for your baseline) at least once a year.
  - You might also consider asking your waste and recycling service provider for periodic detailed reports with volumes, composition and contamination data. These reports provide the most accurate data, but may incur a fee.

b. Maintenance

- Ensure you regularly clean your bins.
- Ensure your signage is up to date.
- Seek feedback about performance.
  - Continue to invite feedback from staff about your business' waste and recycling system. You could also request feedback on specific topics.
  - Consider running a survey to see how many people use the recycling bins and how well they understand your educational materials and posters.

c. Problem solving

Problem	Resolution
Too much contamination in recycling bins	Keep rubbish and recycling bins close together to minimise unwanted rubbish in recycling bins. Reinforce what items can be recycled. Improve information available to staff and provide training
Bins smell and staff won't use them	Talk to the cleaner(s) about emptying bins more regularly. Ensure a cleaning schedule is in place.
Recyclables in the rubbish bin	Move the recycling bin close to the rubbish bin that is receiving recyclables. If the recycling bin is already close by, check your instructional signage.
Recycling bin fills too quickly and overflows	Use a larger or second bin or increase the collection and emptying schedule.
Recycling is too costly/no access to recycling services	Focus on reducing materials and waste creation.
New staff are not using the system correctly	Ensure new staff learn about the recycling and reuse systems during their first week, either through a formal induction process or an informal chat.
Lots of ongoing enquiries from staff	Improve information available to staff.

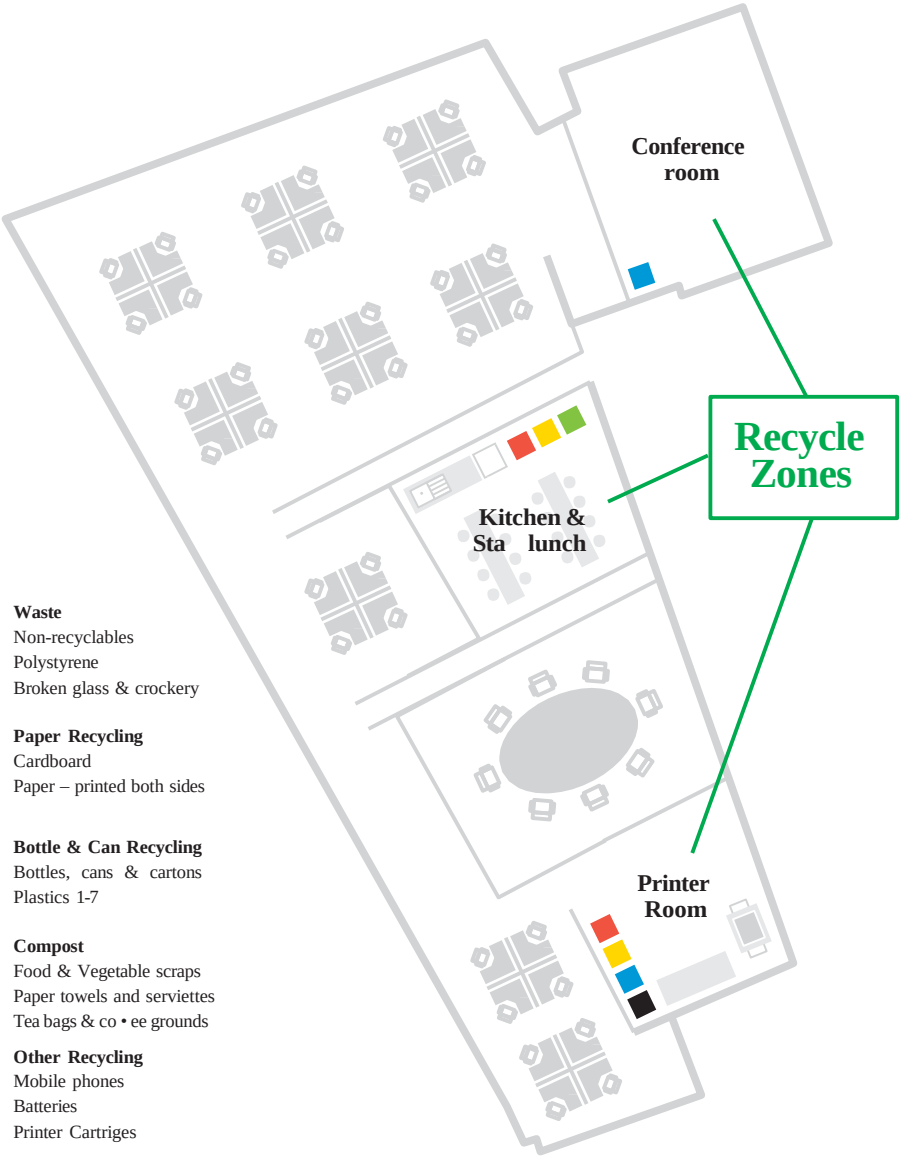
Appendices

Appendix 1 – Measurement indicators

The table below lists commonly used measurement indicators to assess the success of your waste and recycling actions.

Measure	Unit	Details	Example
Total waste generation	Weight (by kg or tonne) or volume (by litre or m^3)	› Indicates total waste generated in weight or volume of all your waste and recycling steams combined. › Set a target to reduce this measure. › You can use this to calculate waste per employee.	A business may generate 1 tonne of waste and recycling, each year.
Diversion rate for recyclables	Per cent (%)	› The rate of recycling as a percentage of total waste production. › Set a target to increase your diversion rate.	A business may recycle 50% of their total waste generation.
Unit variables	Kg per full-time employee Kg per m^2 of office space Kg per hours of operation	› Unit variables help to understand your impacts and offers easier comparisons against industry benchmarks. › Variables should be chosen based on your business operations. › A common measure is total waste production (by weight) normalised by the total number of full-time (or equivalent)	A business with 10 staff and a total waste generation of one tonne each year, equates to 100kg of waste per year/per employee.
Cost indicator	Cost per kg of each stream of waste	› Your invoice may provide a breakdown of cost per kg for your waste and/or recycling service. If not, you may wish to request this from your service provider. › You may wish to keep track of how much you're paying each month, year etc. to measure the economic benefits of meeting waste and recycling targets.	It may cost a business $25-$55 per kg for the collection of co-mingled recycling, and $140-$165 per kilo for the collection and recycling of
Level of contamination	Per cent (%) or count of non-recyclable items in the recycling waste stream(s)	› High count or percentage of non-recyclables in recycling bin(s) indicates whether staff are using recycling bins correctly. › You may be charged by your recycling service provider if your contamination levels are above a certain level. › Set a contamination target.	Monthly waste assessments may reveal that 10% of materials in the co-mingled bin is food organics. This would be a 10% contamination rate.
Staff engagement (number of suggestions/ queries)	Number or list of common suggestions/queries	› Indicates staff awareness and interest in using the system properly and making it better.	Staff may suggest 10 improvements to the waste and recycling system per month.

Appendix 2 – Waste and recycling locations map



Waste
Non-recyclables
Polystyrene
Broken glass & crockery

Paper Recycling
Cardboard
Paper – printed both sides

Bottle & Can Recycling
Bottles, cans & cartons
Plastics 1-7

Compost
Food & Vegetable scraps
Paper towels and serviettes
Tea bags & co • ee grounds

Other Recycling
Mobile phones
Batteries
Printer Cartriges

Appendix 3 – Monitoring Checklist

Site name | Date

Check carried out by

Waste and recycling stations

- Aim to inspect approximately 10% of bins.
- Choose bins from different areas including photocopy or stationery rooms, kitchen areas, high traffic areas (walkways), public spaces, desk side bins.
- Try to inspect more bins in areas of high use.
- Carry out the check just before the bins are collected by the cleaners.

Waste bin location | Time observed

Bin stream	Bin size	Estimated level of contents (% full)	Main contaminants	Estimated contamination (%)
Paper recycling				
Rubbish				
Additional				

	Yes	No	Comments
Are bins clearly and correctly signed?	☐	☐	
Is educational material visible from bins	☐	☐	

Waste bin location Time observed

Bin stream	Bin size	Estimated level of contents (% full)	Main contaminants	Estimated contamination (%)
Paper recycling	240 L			
Rubbish	120 L			
Additional				

	Yes	No	Comments
Are bins clearly and correctly signed?	☐	☐	
Is educational material visible from bins?	☐	☐	

Photocopier rooms

Check two random photocopier/printer locations on your floor and record the following:

Number of print outs that are not double sided
Number of print outs that are unclaimed

	Yes	No	Comments
Are designated paper reuse trays in use?	☐	☐	
Are paper reduction posters located near photocopiers	☐	☐	
Follow up actions required?	☐	☐	

Staff survey

Select a few staff during break time and ask the following five questions.

	Comments
Do you use a reusable cup to get take-away coffee?	☐ Yes ☐ No What
do you do to reduce paper consumption?	
Where do you put <insert contaminated object>?	
Paper towel	
Coffee caps	
Do you know what to do with old batteries and mobiles in this office?	
Where do you put your food scraps?	

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