

Conducting a Waste Audit

In order to establish a baseline and get a clear picture of what waste can be diverted from landfill a waste audit should be conducted. . Once you have implemented an improved waste reduction system, follow-up waste audits allow you to measure and celebrate progress. Sharing this information with staff helps to build support and participation in the waste reduction system.

Although you may initially be focusing on specific wastes e.g. paper and cardboard waste, an audit is a good way of identifying other waste issues as well.

Before the Waste Audit:

Identify Who will Complete the Waste Audit

Workplace waste audits are ideally completed by staff. The reason for getting staff involved in waste audits are:

- To keep staff aware of their own impacts on waste in the office.
- To allow staff a chance to suggest ways to reduce waste in the office.

A minimum of 5 - 10 people should be participating. For bigger workplaces (300+) a ratio of at least one volunteer per 40 staff will ensure the waste audit is finished within an hour. If you get more volunteers, consider having two tables to sort the waste to reduce time.

Reward volunteers attending the waste audit for example, with a morning tea. Consider the participation of the managers or the executive team to acknowledge the work of the volunteers.

If your cleaning contractor or waste management supplier has the facilities and skills to complete an office waste audit, they may conduct it on your behalf. However, this does not provide the advantages listed above.

Identify What Waste Goes to Landfill

During the waste audit, you weigh and record all office waste going to landfill. This includes anything collected in the main office rubbish collection, and any separate waste collections disposed of to landfill.

If cleaning contractors sort and recycle waste as part of their service, only the material that they normally send to landfill needs to be weighed and recorded in the waste audit.

There is no requirement to measure materials, such as recycling, that are not going to landfill during this waste audit. However, you should check and monitor these waste streams regularly. Obtain collection quantities of these materials from your recycling service providers to measure and get a baseline of paper and cardboard recycling quantities. This data will be used to show the effectiveness of your paper and cardboard reduction program.

Familiarise Yourself with the Waste Audit Reporting Templates

The Ministry for the Environment provides several waste audit recording templates for recording and evaluating your waste data.

[Office waste audit form](#) – this is used on the day of a waste audit, to help you to separate and weigh your waste.

[Office waste sorting instructions](#) – these further help you to identify what waste goes into each category.

[Waste audit data sheet](#) – here you enter the data collected during the waste audit. The spreadsheet provides you with the total amount of waste, and percentages for each category for a whole year (250 working days) and per FTE (Full-Time Equivalent staff member covered by the waste audit). Areas for potential waste diversion will become obvious.

[Waste audit data comparison sheet](#) – this spreadsheet combines the data collected from your baseline waste audit with the data from your second waste audit. It provides you with an indication of improvement in waste reduction from year to year, and gives the reduction in waste in percentages.

These tools are all available from the Ministry for the Environment website:

<http://www.mfe.govt.nz/issues/sustainable-industry/govt³/topic-areas/recycling-waste/waste-audit-templates.html>.

Develop a Waste Audit Kit

To perform the waste audit you will need a kit comprising:

- The [Office waste sorting instructions](#).
- The [Office waste audit form](#).
- One set of scales.
- Large tables.
- One large tarpaulin.
- Latex or rubber gloves.
- Surface spray and wiping cloth.
- At least eight sorting boxes with labels.
- A camera to document the waste audit for staff newsletter etc.

Determine Sample Size for Waste Audit

Identify an average five-day week to collect waste in. This should be when most staff will be present in the office. If your workplace is open five days a week, start saving waste on a Friday, collect all the waste until the end of the following Thursday, and audit on the following Friday. This way there is a week of waste, with a minimum stored over the weekend. This depends on the size of the workplace, or the size of the offices being audited. An alternative is to audit four or fewer days of waste. However, this does not allow for variations in workload over a full working week.

Consider when you might do your annual waste audit. Aim to audit around the same time each year. Many workplaces have seasonal variation in workload, and consequently variations in waste production.

At Least One Week before Collection Week:

- Seek the manager's support in encouraging and allowing staff to participate in the waste audit, and encourage the manager's own participation.
- Do not broadcast to staff that a waste audit will be conducted as they may change their waste and recycling habits during the audit period.
- Identify an area to store collected waste (e.g. basement or cleaning cupboard). The area should be cool in temperature and free of pests. If you store the waste in a container or a skip bin with

a lid, consider leaving the lid open in order to prevent the rubbish heating up and decomposing.

- Identify an area to conduct the waste audit. This area should be well ventilated and close to a power point if the scales require electricity.
- Make sure the cleaning supervisor and cleaning staff know to store all office and bathroom waste (does not include sanitary bins) in the designated storage space from Friday to Thursday of the following week. Emphasise that no waste should be taken to landfill during the collection week. The cleaning regime can go back to normal on the Friday, once the waste sort is complete.
- If necessary, contact the waste collection contractor to cancel collection for the week of the audit. Organise for pick up after the audit has been completed.
- Select volunteers to participate in the waste audit. Make sure not to tell other staff exactly when the waste audit will take place. This way staff will continue disposing of all office waste as normal.
- Organise all templates, audit sheets etc.
- Identify a budget or volunteer to provide morning/afternoon tea or other form of reward to thank volunteers.

Each Day of the Collection Week:

- Confirm that cleaners are storing waste correctly.

During the Waste Audit:

Set Up the Equipment Provided

- Bring rubbish bags from the storage area to where the waste sort is being held.
- Cover the tables with the tarpaulin to create the sorting area.
- Assemble the scales and place them on an even surface.
- Zero the scales.
- Put the sorting boxes with labels on the tarpaulin ready for sorting.
- Provide rubber gloves to volunteers.
- Have the Office waste sorting instructions for reference and the Office waste audit form and a pen ready to record results.
- Ensure a camera is on hand to record the event.
- Ensure you have a system for disposing of the waste once sorted, either by re-bagging it and carrying it to the skip or recycling area, or by placing it directly into a skip.
- Should you already have a recycling system in place (e.g. for office paper), make provisions to divert any such uncontaminated materials found in the waste audit back to the appropriate recycle bins after the audit is complete.

Brief Volunteers About Health and Safety Hazards to Watch Out For.

Tell Volunteers to:

- Spread the waste out so that sharp or hazardous objects can be clearly seen.
- Ensure the confidentiality of any material is respected.
- Be careful not to lift heavy objects.

- Be aware of individual's sensitivity to dust, mould or odour (e.g. pregnant women, people with allergies). These people should work at the scales rather than sorting.

Assign Roles

- The quality controller is part of the audit team, but ensures consistent sorting decisions are made. This person is in charge of swapping full boxes with empty ones, and taking the full ones to the scales for weighing.
- The weigher/recorder must zero the scales to account for the weight of the sorting box (tare) and must note the waste category and weight of each sorted box on the [Office waste audit form](#). Once the waste has been weighed and recorded, transfer waste either into rubbish bags or recycling facilities for disposal.
- Sorters place each piece of waste into the appropriate sorting box according to the categories of waste (see the [Office waste sorting instructions](#)).
- A photographer could take photos of the participants, visible waste types (e.g. disposable coffee cups, plastic water cups), and generally document the waste audit for programme promotion.

Procedure

- Before everybody arrives record the weight of all bags of rubbish in the "Unsorted waste" section of the [Office waste audit form](#) before emptying the bags for sorting.
- Make sure the weight of the empty collection bags and any other bulky items of waste get counted in both the unsorted and sorted waste figures.
- Discuss the different sorting categories with volunteers (see the [Office waste sorting instructions](#)).
- Empty the rubbish bags onto the tarpaulin and sort the waste into the relevant categories.
- Weigh each sorting box, ensuring the scales have been set to zero with a box (tare) so the reading represents the contents of the box only.
- Record the weight of each box's contents in the appropriate column.
- Weigh bags containing only one material (e.g. paper towels, shredded paper) without sorting.
- Keep a record of individual items that show a strong trend, such as takeaway cups or plastic water cooler cups.
- Clean the sorting area and dispose of waste appropriately (either into rubbish bags or recycling facilities).
- Note down any potential improvements to office waste management that volunteers have identified during the waste sort.
- Thank volunteers for their participation and go to morning or afternoon tea together.

After the Waste Audit:

Results

- Enter the collected data from the [Office waste audit form](#) into the [Waste audit data sheet](#).
 - First fill in the name of the organisation, the date, the name of recorder and the number of day's worth of rubbish that were audited.
 - Then enter all individual weights in a category into the "Raw data" sheet. The totals automatically get filled into the "Data evaluation" sheet and the percentages get calculated.

- Check that the total weight of sorted waste is equal or very close to the total weight of unsorted waste. Small discrepancies often represent the weight of plastic bags, small rubbish debris and so on. Large discrepancies point to an error in measuring or data entry and should be re-checked.
- Enter the number of full time equivalent (FTE) staff members for the audited offices or workplace. The spreadsheet will provide you with a pie chart representing the percentages of different waste categories in your “waste to landfill” stream.
- Additionally, there is a bar graph showing the amount of waste in the different categories per FTE per year.
- If you are conducting a second waste audit, the Waste audit data comparison sheet will provide you with a clear comparison of the results of both audits and a reduction in percentage.
- Provide the results and photos to staff via the intranet, email or other methods.
- Use the information from the waste audit to help focus design or improve the recycling system and as a framework for internal awareness. Review your recycling programme every six months by conducting a waste audit, and compare results to your previous ones. If the programme is not meeting your expectations, your options include:
 - A survey of staff.
 - Increased education on the workplace recycling system.
 - Competitions, prizes for top performing sections.

For Paper and Cardboard Audits Only

To focus on the specific volumes of paper being sent for recycling or to landfill it is good to do a sub sample audit of paper recycling receptacles. The categories may include:

Internally Generated	Non Email	Multi pages non double sided
		Single pages
		Double sided
	Email	Multi pages non double sided
		Single pages
		Double sided
	Other	One sided reused
		Stationary
		Continuous paper
Other (notes etc)		
Externally Generated	General	Magazines
		Books, diaries etc
		General correspondences
	Reports	Single sided
		Double sided
Other	Envelopes	With windows
		Without windows
	Other	Blank paper
		Contamination

You could also make up your own categories depending on your type of work place.