

Business Waste Audit to Action

A Guide to Conducting Waste Audits and Developing
a Waste Action Plan for Small to Medium Sized
Enterprises

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Regional Council, Mid-Western Regional
Council and Narromine Shire Council



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Introduction

Substantial economic and social benefits for businesses can be achieved through investing time and thought into reducing waste to landfill.

Sending resources to landfill is expensive and environmentally harmful, with landfill space becoming scarce and filling quickly resulting in increasing landfill costs along with compounding environmental impacts.

This brief guide will outline how your business can begin to undertake waste audit activities to identify opportunities for change to reduce generation of particular waste streams and divert resources from entering landfill. Potentially saving your business money, as well as harnessing added benefits associated with business social responsibility actions.

Waste audits provide businesses the data they need to effectively address waste issues. This is particularly beneficial for addressing the issue of food waste in food retail and hospitality businesses, but applied to all small and medium sized enterprises. The ability for a business to effectively identify wastage and take action to reduce waste issues can result in substantial cost savings.

This guide will also provide information on how to create, implement and evaluate an action plan once opportunities for improvement have been identified.

The NSW EPA waste hierarchy in Figure 1 prioritises most preferred actions for efficient resource use. When rethinking the waste your business generates and how it is handled this hierarchy is central to improving waste behaviours, processes and systems.

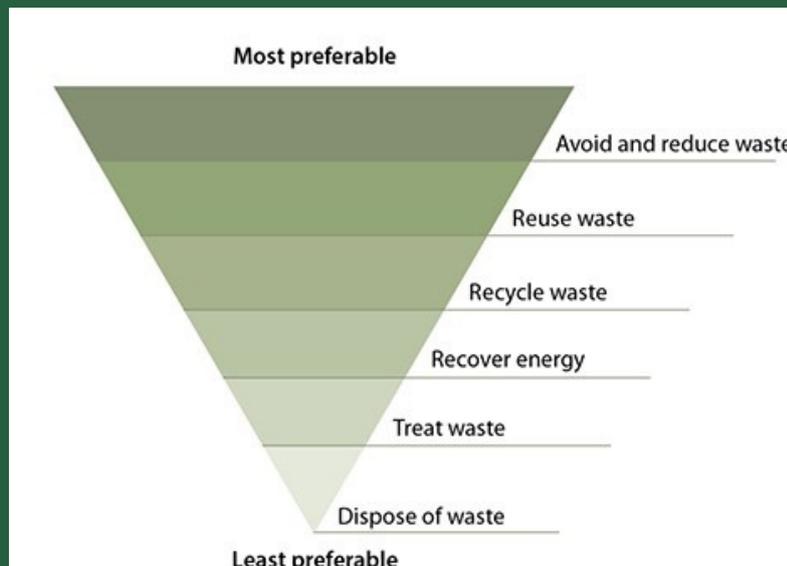


Figure 1. The Waste Hierarchy. NSW EPA.

Waste Audits

What

A waste audit is a hands on observation, recording, and analysis of regular waste generated in your business. Waste audits assist in gathering and analyzing data to understand the volumes and types of waste a business generates.

Conducting an audit with employees is an important tool for identifying the nature of the waste problem so that solutions can be developed and implemented. Having employees involved can assist in their personal investment to change.

Why

Waste audits are a pivotal step in creating effective action plans to reduce waste to landfill and reducing your businesses emissions. The current increasing volumes of waste entering landfill is unsustainable and expensive. It is crucial that all actors across the community including businesses, take responsibility for the waste they produce and make changes in their waste practices.

Did you know..
on average 66% of all food waste produced in hospitality is pre-consumer waste, 34% of food waste is left behind on plates from customers.



Benefits of waste audits

Cost Savings

It's expensive to send valuable materials to landfill. Reduce operational costs by reducing waste generation and diverting waste streams such as food waste or recyclables from entering landfill. Reducing your waste costs can allow spending elsewhere.



Social Responsibility

Sharing your waste journey including audits with your customers and the community can demonstrate your intentions for social responsibility which holds benefits of:

- better brand recognition.
- positive business reputation.
- increased sales and customer loyalty



Rescue Resources

Preventing valuable finite resources from ending up in landfill improves resource recovery and reduces greenhouse gas emissions. These outcomes provide important social and environmental benefits for the broader community.



Planning & Conducting an Audit

Waste audits don't need to be daunting or difficult. Waste audits can also be conducted on many scales. This may be a single kitchen waste bin, front of house bins (conducted in back of house), or a larger scale of all bins on the premises.

The initial audit can also be conducted on a single day or across multiple days.

The important thing is to make it achievable and realistic. A clear plan will help make the process more enjoyable and interesting for staff engaged. It is always recommended to schedule ongoing audits so that you can observe changes in your waste streams and measure the success of your actions.

The below technique will help you plan and conduct your audit, whatever scale you choose.

1. Preparation and Safety.

Select a location to conduct the audit that complies with safety and hygiene requirements. Make sure you have all items required, explain the objectives and process clearly to staff.

Put on gloves and other protective equipment. Talk about safely handling waste before commencing the audit. It is also important in this step to clearly define each waste category and give examples of what belongs where.

2. Task allocation

Determine who is responsible for what. Staff members may be responsible for multiple jobs e.g. scribing and visual recording.

- **Sorters:** Staff will sort through waste placed on tarp and separate the waste types into separate labelled containers, one for each waste type.
- **Weighers:** One staff member will weigh each bucket in each waste type. Weighers can weight in increments (each bucket) then total the waste type at the end.
- **Scribes:** One person must write down and record the waste types, weights & volumes, and make comments on what is being found as the audit is being conducted.
- **Visual recorder:** One staff member can be responsible for taking photos and video of the collaborative process to be used in reporting of the audit and for future promotion and possible grant applications to demonstrate the positive steps the business is taking to reduce its impact on the natural environment.

3. Collect

Collect your waste samples (kitchen and floor bins, skip bin etc).

4. Spread out

Spread out the waste ready to sort it on a tarp, newspaper, table, a clear flat surface in an out of sight, sheltered area if available ensuring health and safety compliance. If outdoors consider a sheltered space to avoid rubbish potentially blowing away.

5. Sort

Sort your waste materials into different categories using appropriate PPE such as tongs and gloves. Categories can include compostable organics, return and earn, other recyclables, reuse, problem wastes (batteries, paints etc.), landfill waste- the categories are endless, choose types and numbers that are realistic and meaningful. To start with keeping it simple with recyclables, organics, landfill and drink containers can be helpful and avoid confusion.

6. Measure & record

Measure and record the location, volumes and types of waste found. Tally the items in each category then find out the total number of units (buckets) and weight of the different waste types. You can use the template attached in Appendix A to record your findings or create your own if you would like to add more waste streams.

Taking photos during this process and of final waste volumes is also a helpful record.

7. Clean Up

Put away tools and items used and wash hands thoroughly.

8. Discuss & analyse

As a team discuss and analyse in detail the overall findings. What kinds of waste did we find? What volumes of different waste categories did we find? Are all these items going to landfill? There are questions on page 2 of Appendix A to help shape this discussion.

9. Act

Take action by creating a SMART (specific, measurable, achievable, relevant and time-bound) action plan to improve the businesses waste management systems. This plan will likely be informed by the findings of the audit and the waste hierarchy.

Appendix B provides a helpful template for this.



Equipment Needed

- Gloves*
- Aprons* (optional)
- Tongs or grabbers
- Separate containers, bags or buckets for each waste stream.
- Tarpaulins, drop sheets or Newspaper to sort the waste on (it is important to also ensure you pick a sorting location that is hygienic and safe).
- A pen and a Waste Audit Record Sheet (Appendix A or create your own template to add more waste streams)

*For each staff member.

All participating staff should also be wearing enclosed footwear.



Audit Kits for loan

We have a limited number of audit kits available that businesses can book in to borrow from council. Please contact your relevant councils Resource Recovery Education Officer to see if a kit is available to borrow on wasteeducation@dubbo.nsw.gov.au or

- Dubbo Regional Council (02) 6801 4000
- Mid-Western Regional Council 1300 765 002
- Narromine Shire Council (02) 6889 9999

After an Audit: Review & Planning

After an audit it is important to undertake a post audit review to discuss findings. These findings should inform the basis of the changes you wish to action.

The audit data will likely support one or more of the following changes being implemented: composting, charitable food redistribution, recycling, container deposit schemes, or targeting reduction of single use plastics.

Page 2 of Appendix A will assist with this review and identifying a focus for action. While creating an action plan is not a magic formula, it is important in establishing goals and identifying what is required to achieve them.

Your business can work on a waste action plan by starting with the following 5 steps. Appendix B is a helpful tool in this process.



Why? Making a case for change

What? Developing the opportunity

How? Defining the proposal

Act. Implementing the change

Reflect. Evaluating and reflecting



Tips for Successful Waste Campaigns

Alongside having a solid plan for changes you wish to implement, the below factors have shown to make for an effective campaign:

- Self-elected 'green team'- an opportunity for staff to develop leadership and take ownership of the change through waste tasks, monitoring and communication.
- Regular meetings
- Green team members should be recognised, celebrated, and rewarded
- Daily duties- short 10 minutes start and end of shift e.g. maintenance of compost or recycling
- All staff to be consulted and kept informed about change of waste services and processes

Ideas for Action

Some ideas for Action:

- Swap out single use sachets and packets for bulk stations e.g. remove tomato sauce packets & provide pump bottle station
- To reduce the use of takeaway coffee cups provide a small monetary incentive (e.g. 50c discount) to encourage reusable coffee cup use or start a borrow a coffee mug library
- Establish a compost, bokashi bin or worm farm for food scraps or contact Council to see if you can sign up for Council's Organics (FOGO) collection service for your business *offerings vary across council areas
- Link up with your local Food Rescue to redistribute your surplus food
- Find ways to reuse waste material or finding other businesses that can use it
- Implement recycling processes and engage a recycling collection service
- Drink container return and earn collection scheme, funds may contribute to staff Christmas party, employee of the month reward or other
- Develop waste education signage around the premises, there is a lot available for free through NSW EPA

We are excited to see what other fantastic ideas you come up with and implement. Please let us know how your enterprise is being waste wise. Contact us on wasteeducation@dubbo.nsw.gov.au



Conclusion

Activities such as waste audits and waste change campaigns aimed at preventing waste from ending up in landfill produce positive environmental, economic and social benefits for businesses and the broader community.

This guide provides basic information to help business owners and managers develop and conduct waste audits and action plans with their staff to catalyze that positive change.

Dubbo Regional Council, Mid-Western Regional Council and Narromine Shire Council wish to support small and medium sized enterprises across our communities in reducing their waste to landfill.

Please contact our Resource Recovery Education Officer via email on wasteeducation@dubbo.nsw.gov.au to share waste audit and action photos, stories and outcomes or to ask any questions.

Dubbo Regional Council (02) 6801 4000

Mid-Western Regional Council 1300 765 002

Narromine Shire Council (02) 6889 9999

References

NSW Environmental Protection Authority 2017, The Waste Hierarchy, <<https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy>>.

Love Food Hate Waste 2015, How to Conduct a Food Waste Audit, <http://www.hccrems.com.au/wp-content/uploads/2016/02/lfhw_how-to-conduct-a-food-waste-audit_factsheet_final1.pdf>.



Other Business Waste Resources

- **Love Food Hate Waste** is run by the NSW Environment Protection Authority as part of Waste Less Recycle more, a NSW Government Initiative funded from the waste levy. Love Food Hate Waste have some excellent resources around food waste for businesses, which can be found here.
- **VISY** has excellent free educational materials to help support business change around recycling. Check out the materials here.
- **NSW EPA** provides industry specific factsheets to provide advice about avoiding, reducing, re-using and recycling your business waste. Find them here.
- The **Australian Government** provides information for businesses on how to manage their environmental impact. This information can be found here.
- The **NSW Government** also provides information on managing your business waste here.
- **Planet Ark** provide excellent information about recycling. Inspirational case studies of businesses rethinking their waste can be found here. They also provide helpful signage that can be printed and used in your workplace.
- For charitable organisations illegal dumping can be a huge waste issue, **NSW EPA** has provided a guide and signage resources to help address this issue. Please find them here.



Appendix A: Waste Audit Recording Sheet

Date: _____ Business: _____ Audited area: _____

Auditing Team: _____

Current Waste Management Services/ Streams (e.g. recycling & general waste): _____

Instructions

Safely sort and record weight and number of buckets of each category on a recording sheet. When all waste items have been sorted and recorded, calculate the final totals and discuss findings.

Recycling	Tally (buckets)	Total weight (gms/ kgs)
 <p>Examples: Cardboard, clean paper, food containers, food tins.</p>		
Drink Containers	Tally (number of containers)	Total \$ value(10c each)
 <p>Bottles Cans Cartons Juice boxes or poppers</p>		
Organics	Tally (buckets)	Total weight (gms/ kgs)
 <p>Examples: Fruit & vegetable scrap, chips, biscuits, cakes, rice, pasta, bread, dairy, meat, soiled paper & paper towel.</p>		
General Waste	Tally (buckets)	Total weight (gms/ kgs)
 <p>Examples: Plastic bags, soft plastic packaging, plastic straws, plastic cutlery, polystyrene.</p>		

Total buckets: _____

Total weight: _____

WASTE TOTALS

Waste Category	Total Buckets	Total Weight	% of Total Waste
Recycling	_____	_____	_____
Organics	_____	_____	_____
General Waste	_____	_____	_____

Total Drink Containers _____ **Weight** _____ **Total \$ Value** _____

Let's talk about it

1) Are you surprised by the contents of the bin/s? If so, how?

2) What percentage of the waste do you think could be kept out of landfill?

3) What were the most common items found?

4) What could we do better? (For example encourage reusables, start a compost bin, recycle drink containers, paper recycling, reduce single use plastic- remember the waste hierarchy).

5) How can we achieve this? (who, when, where, what now)

Appendix B: Waste Action Plan

Answer the questions to help form a plan to improve waste practices in your business. This can be done individually or in teams and then discussed, or as a whole class.

1. Complete a bar graph that shows the percentage of total waste in each waste category.

2. Describe the problem/s you identified?

3. Explain why is this a problem? Why is change needed?

What are some of the negative issues with current practices? Why should something change e.g. wasting valuable finite resources, expensive, missing out on opportunities such as saving funds by composting, recycling or generating funds through return and earn container deposit scheme.

4. Describe what action you think should be taken to address this problem.

Some examples: for a composting system be introduced, for a recycling system to be introduced. for containers to be collected to take to return and earn machines, to rethink purchasing.

5. Detail how this will work? What are initial and ongoing tasks required? Who will be involved and responsible for waste tasks? How will this be communicated?

How will the change be achieved

What are the initial and ongoing costs of the change? What are the expected savings?

What (tasks) need to be undertaken to make this happen

Who is responsible for each task

How would change be communicated

6.How can you reflect and evaluate if the change is a success?

