



Environment Unit

WASTE MANAGEMENT ACTION PLAN

2015-2018



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1 Introduction

UOW aims to reduce its environmental impact of waste and control operational costs through a strategy of reducing waste to landfill. The strategy is underpinned by a guiding principle to work towards achieving zero waste. It aims to avoid, reduce, reuse and recycle and, where there is no other feasible option, disposal of waste. UOW's commitment to continuous improvement also guides the strategy through actions of planning, implement practices and systems, educate, monitor, research and review all aspects of waste management.

2 Background

Australia is amongst the highest producers of waste per person in the world. Collectively, we dispose of 24.9 million tonnes of waste to landfill each year¹. This waste directly impacts our physical environment, reduces the availability of financial resources and does not take account of society as a whole. Waste releases contaminants into our air, soil and water. The financial costs associated with wastage reduce productivity and despite increasing poverty, reusable and recyclable items are lost to landfill.

The combined efforts of government organisations and individuals are required to reduce waste per person and overall waste volumes. Improved waste management can reduce environmental impacts, improve utilisation of financial resources and achieve better social outcomes.

The Australian Government has a policy and targets which aim to:

- *avoid the generation of waste,*
- *reduce the amount of waste (including hazardous waste) for disposal;*
- *manage waste as a resource;*
- *ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner; and*
- *contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency and the productivity of the land².*

The NSW State government has diversion targets of 66% for municipal waste, 63% for commercial and industrial waste, and 76% for construction and demolition waste³.

3 Waste Audits

UOW's last waste audit was conducted in 2014. It involved a physical audit of Wollongong Campus and Innovation Campus. The audit had three objectives:

- Determine composition and quantities of waste being generated.
- Measure the effectiveness of current waste management systems and practices.
- Identify opportunities for improving waste management systems and strategies to inform ongoing actions in achieving the University's environmental targets for materials management.

¹ Australian Bureau of Statistics (2013), 'Waste Account, Australia, Experimental Estimates, 2013', <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4602.0.55.005Main%20Features42013?opendocument&tabname=Summary&prodno=4602.0.55.005&issue=2013&num=&view>

² Australian Government Department of the Environment (2009), 'National waste policy fact sheet', <http://www.environment.gov.au/system/files/pages/94aa70c5-6681-44c6-8d83-77606d1d6afe/files/fs-national-waste-policy.pdf>

³ Department of Environment, Climate Change and Water NSW (2011), 'Reducing waste: implementation strategy 2011–2015', <http://www.epa.nsw.gov.au/resources/wastestrategy/110147-implement-strat-2011-15.pdf>

The audit found that 22 tonnes of waste was generated per week or an estimated 1,130 tonnes in 2014. The types of waste as a percentage of waste generated at UOW are 7% landfill, 39% recyclable and 54% organic, suggesting that 93% of waste generated could be diverted from landfill, as shown in Figure 1.

**Types of waste at UOW
(tonnes in 2014)**

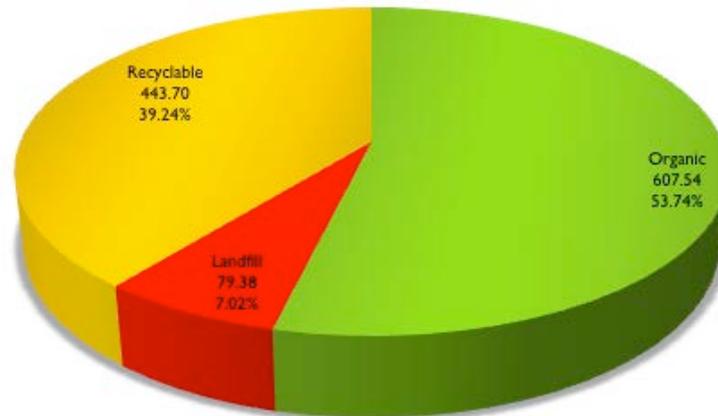


Figure 1: Types of waste at UOW (tonnes in 2014)

The material composition of waste at UOW in 2014 is detailed in Figure 2

Material composition of the waste at UOW

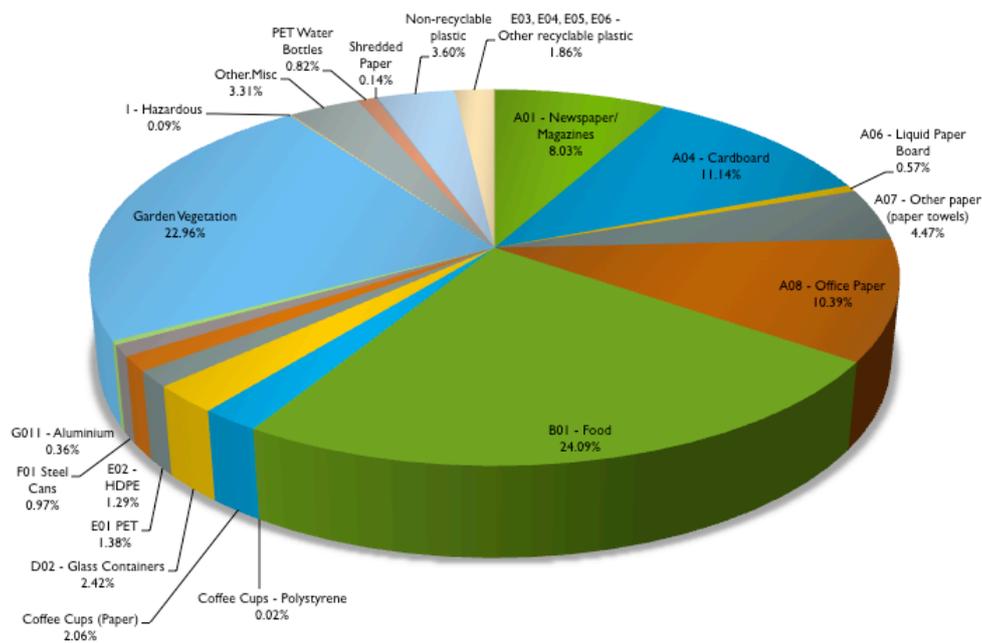


Figure 2: Material composition of the waste at UOW

The audit found 42% of waste is sent to landfill, 31% of waste is recycled and 27% of waste is composted, which reflects a diversion rate of 52%, as shown in Figure 3.

Waste landfilled, recycled and composted at UOW (tonnes in 2014)

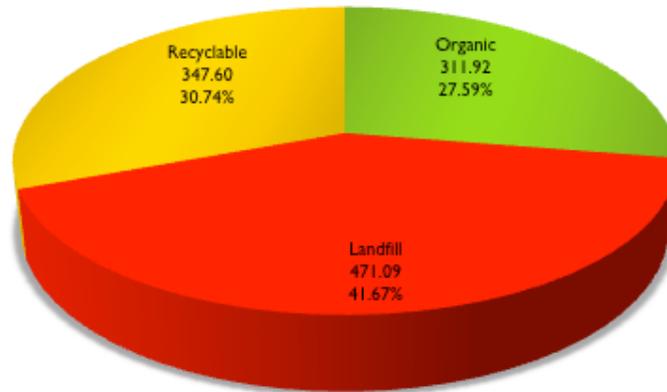


Figure 3: Waste landfilled, recycled and composted at UOW (tonnes in 2014)

Evaluation and comparison against previous waste audits shows the following:

- 1999 – 175 tonnes landfilled and no measurable recycling
- 2009 - 469 tonnes 70% (330 t) landfilled and 30% (139 t) recycled
- 2014 - 339 tonnes 56% (217 t) landfilled and 44% (172 t) recycled

Changes to landfill generated per student per year:

- 12 kilograms in 1999
- 20 kilograms in 2009
- 11 kilograms in 2014

4 Waste Management Objectives

The University is committed to continuous improvement by decreasing the production of waste, both in the University's own operations and that of its suppliers.⁴ UOW aims to achieve the following:

- Continuous reduction in solid waste to landfill per EFTSU each year
- Increase overall recycling rate to 66% of total waste by 2016
- 66% of organic waste diverted from landfill by 2016
- Work towards zero waste to landfill.⁵

⁴ University of Wollongong (2014), 'Environmental management plan 2014-2016', <http://www.uow.edu.au/content/groups/public/@web/@environment/documents/doc/uow171916.pdf>

⁵ University of Wollongong (2014), 'Environmental management plan 2014-2016', <http://www.uow.edu.au/content/groups/public/@web/@environment/documents/doc/uow171916.pdf>

5 Waste Management Actions

The following actions have been selected for further preparation and implementation and relate specifically to benchmark figures from the end of 2014 when the waste audit was conducted.

5.1 Planning

Project/Activity	Project Measure
Waste system consideration in building design standards for all developments and refurbishments.	Building Design Standards to include waste system
Prioritise the purchase of assets and products that can be reused or recycled at end-of-life.	Procurement policy review and update.
Ensure waste guidelines, policies, objectives, monitoring and reporting are incorporated into tenders and contracts	Procurement policy review and update
Establish uniform data sets needed to monitor and review waste practices, and assign responsibility.	Inclusion of data in annual environmental report
Set progressive targets to achieve aims of continuous improvement and zero waste to landfill.	EMP review and update.

5.2 Practices, Systems & Education

Project/Activity	Project Measure
Investigate expanding collection of food and garden waste to include other organic material – specifically paper towels, paper coffee cups, shredded paper and garden vegetation.	Review of expansion complete and report to EAC
Increasing small scale composting of organic waste on University grounds.	Increase in the volume of composting units on campus
Create consistent waste disposal points that catch attention and are easily identifiable.	Standardised system of waste containerisation implemented.
Consolidate waste collection points and have options for all streams and volumes.	Reduction of waste collection points across campus
Reduce the number of waste bins serviced by cleaners from desks.	Reduction of office waste bins serviced
Collect more recyclables by stream, including plastic bags and wrap and polystyrene.	Increase the number of waste streams recovered
Extend the Green Labs program to additional University laboratories.	Increase number of laboratories aware of the green lab program
Limit delivery of excessive products where surplus is clear e.g. newspapers.	Improve total waste generated per student

Set up and support reuse programs e.g. furniture, electronics and office materials.	Reuse opportunities documented and formalised
Ensure waste management is a part of student, staff and contractor orientation.	Information included into induction processes
Encourage all University events to be waste wise. Promotional campaigns explaining correct disposal e.g. compostable waste, and coffee cups.	Waste education programs delivered
Publish and promote clear and concise guides to waste management at UOW.	Guidelines developed and accessible

5.3 Monitor, Research and Review

Project/Activity	Project Measure
Incorporate responsibilities to monitor and review waste management into positions or contracted services.	Clear responsibilities established
Conduct a purchasing audit that looks at waste pathways for products coming onto campus.	Completion of audit and report to EAC
Promote feedback mechanisms for staff and contractors that reward reporting problems and opportunities. Incorporate findings into continuous improvement processes.	Monitor level of feedback received through existing mechanism and update waste management action plan
Link waste initiatives to research, led by faculties.	Involvement in waste related projects led by academic staff

6 Version Control Table

Version Control	Release Date	Author/Reviewer	Approved By	Amendment
1	150701	David Low, Manager Environmental Services	Bruce Flint, Director FMD	New Document