



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

# Waste Management Action Plan 2019 – 2021 and Status Report 2020

University of Wollongong

Facilities Management Division

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## 1 INTRODUCTION

This Waste Management Action Plan aims to identify opportunities and track implementation of onsite management and resource recovery of waste material generated on the Wollongong and Innovation Campus.

The Wollongong Campus Master Plan 2016-2036 sets targets for the University to achieve a 20% reduction in waste generation and build upon prior efforts of diversion from landfill.

This plan is underpinned by a guiding principle to achieving zero waste to landfill. It aims to avoid, reduce, reuse and recycle and, where there is no other feasible option, disposal. UOW's commitment to continuous improvement also guides actions of planning, implementation, education, monitoring, and then review.

## 2 OBJECTIVE

The objective of this Waste Management Action Plan is to expand upon the guiding principles set out in the UOW Environmental Management Plan 2017-2020,<sup>1</sup> by decreasing the generation of waste,<sup>2</sup> by both UOW and that of its suppliers<sup>3</sup> and define strategies and actions to achieve the following:

- Reduce waste sent to landfill by 2020 (kg/EFTSL\*)
- Divert 75% of materials from landfill by 2020
- Recycling rate of 70% by 2020
- No adverse environmental impacts from the management of other wastes.
- \*EFTSL means Equivalent Full Time Student Load.

## 3 BACKGROUND

Australia is reported to be amongst the highest generators of waste per person in the world. Collectively, we generate 54 million tonnes of core waste each year which is processed by the Waste and Resource Recovery Industry.<sup>4</sup>

Despite waste being diverted from landfill (refer to Figure 1) previous waste audits have indicated that general waste still contained more materials capable of being diverted and reprocessed such as organic materials (food and plant matter) and plastics (refer to Figure 2).

UOW has established a number of collection streams according to a variety of material types. Most of these waste material streams have established downstream suppliers. Continual and close monitoring of the Resource Recovery market is essential in the current industrial climate as the Australian Federal Government looks to stimulate this industry and the circular economy<sup>5</sup>.

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<sup>1</sup> University of Wollongong, 'Environmental management plan 2017-2020',

<https://documents.uow.edu.au/content/groups/public/@web/@environment/documents/doc/uow245661.pdf>

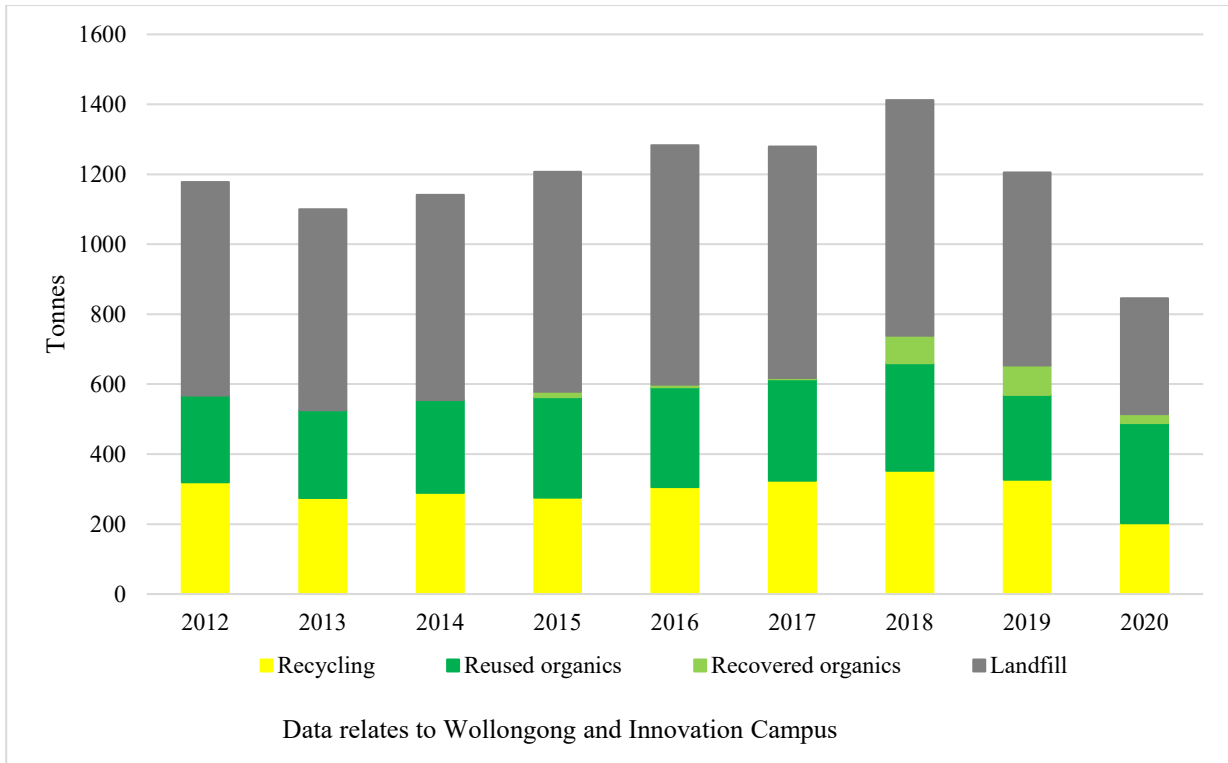
<sup>2</sup> UN Sustainability Development Goals <https://www.un.org/sustainabledevelopment/progress-report/>

<sup>3</sup> UOW Purchasing and Procurement Policy 2017; <https://documents.uow.edu.au/about/policy/UOW058712.html>

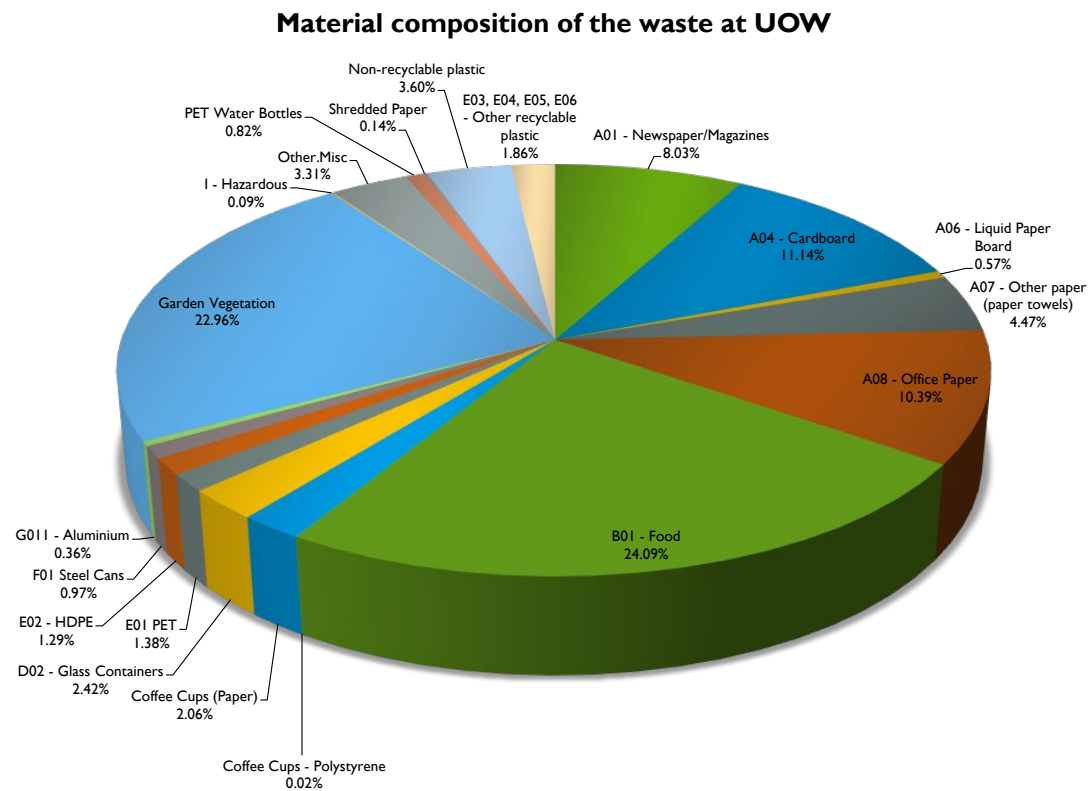
<sup>4</sup> National Waste Report 2018 <https://www.environment.gov.au/system/files/resources/7381c1de-31d0-429b-912c-91a6dbc83af7/files/national-waste-report-2018.pdf>

<sup>5</sup> Ibid





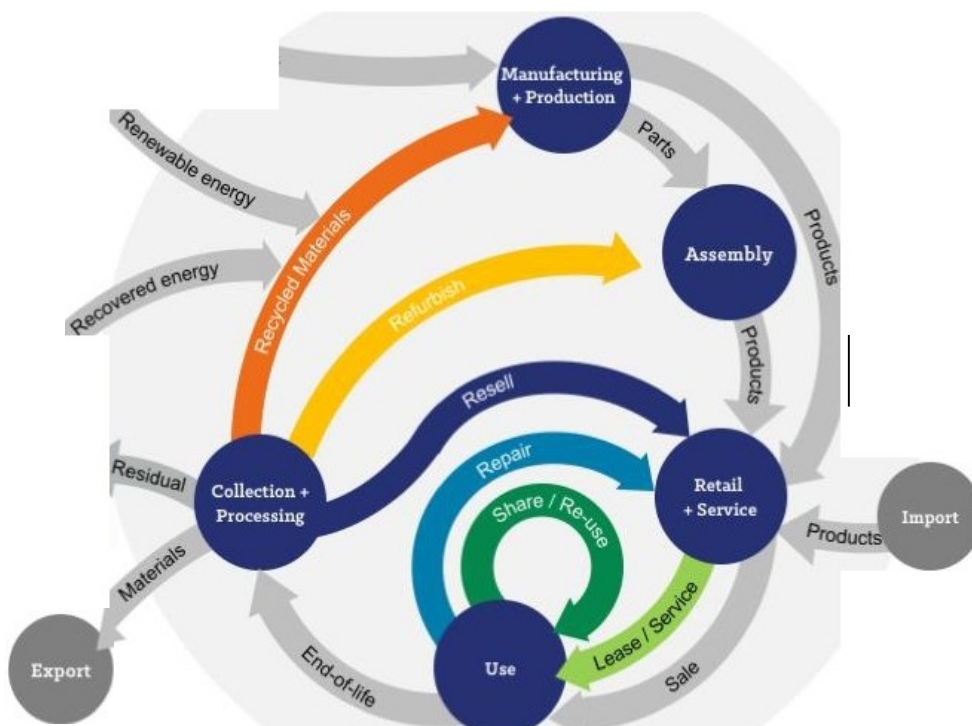
**Figure 1. UOW Waste Disposal 2012 - 2020**



**Figure 2. UOW Waste Material Audit Analysis**



The NSW Government’s 20 Year Waste Strategy for NSW states “we will provide a long-term strategic focus where communities, industry and all levels of government are working together to build resilient services and markets for waste resources”.<sup>6</sup> The diagram from their report shown at Figure 3 demonstrates the planned integration of the key stakeholders in order to make up the Materials Circular Economy.



**Figure 3. Materials circular economy<sup>7</sup>**

This Waste Management Action Plan considers the various stages at which material is received by UOW, and seeks to ensure that materials are managed within the options of the circular economy. This plan aligns with the National Waste Policy (2018) that aims to:

- Avoid waste
- Improve resource recovery
- Increase use of recycled material and build demand and markets for recycled products
- Better manage material flows to benefit human health, the environment and the economy
- Improve information to support innovation, guide investment and enable informed consumer decisions.

## 4 WASTE MANAGEMENT ACTIONS

This action plan focuses on the following strategic areas:

### PLANNING

UOW waste management plans have been integrated into various operational functions carried out on campus. These functions include cleaning, event management, capital works, logistics, landscaping, administration, teaching and research.

<sup>6</sup> NSW EPA 20 Year Waste Strategy for NSW <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/20-year-waste-strategy-for-nsw>

<sup>7</sup> NSW EPA Materials Circular Economy; <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/20-year-waste-strategy-for-nsw>



This enables waste material to be ‘funnelled’ to central locations in an efficient manner suitable for the next stage of collection, and then to the downstream supply. It also provides data for monitoring of waste generation and diversion practices. Instruments used in the planning process include legislation, guides, policies building standards and operational plans.

## PRACTICES, SYSTEMS AND EDUCATION

UOW Facilities Management Division utilise action request software systems to administer and track requests for movement of waste across campus and within buildings. This enables the collection of data relating to users rates of generation, timing of the service of bins, and trends of generation throughout the academic session cycles.

The action request software, waste tracking forms, manifests and contractor collection records inform overall campus waste statistics which are aggregated for review.

Strategic messaging and signage has been developed based on the Australian Standard colour codes for the various streams of waste material. Simple and consistent messaging using colours and images assist in circumstances where language may initially be a barrier. These standards are reviewed to ensure currency of compliance with these standards.

## MONITORING AND REVIEW

Key issues identified within the planning and practices phases are assessed during the monitoring and review phase. Monitoring provides opportunity to determine if modification or improvement need to be made to methods of supply, consumption or disposal of materials.

**Table 3.1 Waste planning actions**

ACTION	PRIORITY	INDICATIVE DATE	STATUS
Plan UOW’s waste needs and adjust services accordingly to maximise resource recovery opportunities.	High	Ongoing (Monthly)	Completed 2019 & 2020
Identify emerging opportunities for problem wastes e.g. polystyrene, paint, e-waste etc.	High	Ongoing (Annually)	Polystyrene – complete 2019 Paint – complete 2019 E-waste – complete 2019
Plan for expanding collection of food and garden waste to include other organic material – specifically paper towels, paper coffee cups, shredded paper and garden vegetation.	High	2020	Commenced 2019



<b>ACTION</b>	<b>PRIORITY</b>	<b>INDICATIVE DATE</b>	<b>STATUS</b>
Packaging materials - aim to use compostable packaging for all food packaging across campus rather than plastic, collaborate with stakeholders and obtaining a uniform supply chain in order to unify the disposal method and downstream supply chain.	Medium	2021	To commence
Work with FMD assets and maintenance and IMTS to ensure appropriate waste disposal facilities and processes are provided for contracted services.	Medium	2019	Complete 2020
Consider waste systems in all developments and refurbishments and include preferred design in building standards for waste.	High	2021	To commence
Consolidate waste management contracts and services in order to support the achievement of our waste management goals and objectives.	High	2021	To commence
Ensure waste management requirements are incorporated into FMD tenders and contracts.	High	2021	To commence
Develop uniform data sets needed to monitor compare and review waste practices.	High	2020	Underway
Review waste management targets to reflect the UOW Strategic Plan and the State and Federal Government policies and guidelines.	High	2020	To commence

**Table 3.2 Waste practices, systems and education actions**

<b>ACTION</b>	<b>PRIORITY</b>	<b>INDICATIVE DATE</b>	<b>STATUS</b>
Implement a separate waste stream for compostable materials including food, paper towel and coffee grounds etc.	High	2019	Completed 2019
Create consistent waste disposal points that are easily identifiable.	High	2019	Completed 2019



<b>ACTION</b>	<b>PRIORITY</b>	<b>INDICATIVE DATE</b>	<b>STATUS</b>
Remove under desk bins from open plan offices serviced by cleaners (Wollongong Campus).	Medium	2020	Commenced
Consolidate waste collection points and have options for all streams and volumes.	Medium	2019	Completed 2019
Collect more recyclables by stream, including plastic bags and wrap and polystyrene.	Medium	2019	Complete 2019
Through the UOW Procurement policy prioritise the purchase of assets and products that <ul style="list-style-type: none"> <li>• are made from recycled materials</li> <li>• or that can be reused or recycled at end-of-life</li> <li>• avoid purchase of single use items.</li> </ul>	Medium	2021	To commence
Identify consumables that are surplus to needs and adjust procurement to suit the actual need.	High	Ongoing (Annually)	Completed 2019 & 2020
Set up a furniture recycling and surplus centre on campus.	High	2019	Completed 2019
Continue to provide waste management information for student, staff and contractor orientations.	Low	Ongoing (As required)	Completed 2019 & 2020
Continue to create promotional campaigns explaining correct disposal (e.g. compostable waste, and coffee cups and other problem wastes) and waste avoidance and reuse opportunities to minimise use of disposables	Medium	Ongoing Annually	Completed 2019 & 2020
Continue to record collection services, action requests, contractor service records and weights.	Medium	Ongoing (Quarterly)	Completed 2019 & 2020
Event support for waste disposal – organics waste bins for events including educational displays, auditing and monitoring of use and assessment of contamination levels.	Low	Ongoing (As required)	Completed 2019 & 2020





<b>ACTION</b>	<b>PRIORITY</b>	<b>INDICATIVE DATE</b>	<b>STATUS</b>
Continue to publish and promote operational guides to waste management at UOW and the difference between the various waste containers and waste streams according to material type.	Medium	Ongoing (As required)	Completed 2019 & 2020
Work with WHS to continue to provide safe and environmentally responsible Hazardous Waste disposal facilities and procedures as well as associated training and educational materials.	High	Ongoing (Fortnightly)	Completed 2019 & 2020

**Table 3.3 Waste monitoring and review actions**

<b>ACTION</b>	<b>PRIORITY</b>	<b>INDICATIVE DATE</b>	<b>STATUS</b>
Collate waste data collection from service providers.	High	Ongoing (Quarterly)	Completed 2019 & 2020
Collect, collate and review data on waste and recycling from outsourced services (construction and maintenance contracts).	High	Ongoing (Quarterly)	Completed 2019 & 2020
Analysis of data for ongoing performance and emerging trends.	Medium	Ongoing (Quarterly)	Completed 2019 & 2020
Use data for benchmarking exercises such as TEFMA comparisons, site comparison and bill verification processes.	High	Ongoing (Quarterly)	Complete 2019 & 2020
Use data to compile monthly internal reporting, quarterly EAC/FRC reporting and annual UOW corporate reporting.	Medium	Ongoing (Monthly)	Complete 2019 & 2020
Ongoing waste auditing – Analysis of the composition of waste and recycling bins presented for collection on any given day informs areas where either more education, or additional disposal options may be required.	High	Ongoing (Annually)	Complete 2019 & 2020



ACTION	PRIORITY	INDICATIVE DATE	STATUS
Transport and access – Analyse efficiency of collection, availability of re-processors and emerging downstream markets.	High	Ongoing (Annually)	Complete 2019 & 2020

## 5 DELIVERY

The prioritisation and implementation of tasks and actions defined in this Plan depends on feasibility, priorities and the availability of resources. A structured approach will be taken to assess, develop and implement actions in consultation with relevant stakeholders and following UOW processes.

