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Waste Management Strategy

2023 – 2028

Estate and Built Environment

UNE
University of
New England

Future fit
your life



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1. Introduction

The University of New England (UNE) has a significant and diverse waste footprint.

This Waste Minimisation Strategy 2023-28 outlines UNE's plan for managing the waste generated at UNE facilities in a more sustainable manner. It defines our targets and a roadmap to achieve them.

The Strategy will provide guidance on how UNE can advance our waste management practices and continually improve processes to avoid, reuse and recycle the waste generated on campus.

2. Vision

In line with our Future Fit Strategy, UNE is committed to environmental, social, and financial resilience for the university, our staff, our students and our communities.

Our vision for waste management is to:



Be Open:

We will provide transparency of our waste and recycling operations



Be Enquiring:

We will continue to seek new markets for recyclable materials, more sustainable products and explore new methods to reduce our waste footprint



Be Exceptional:

We will commit to continuous improvement of the ways in which we manage our resources over the full life cycle



Make A Difference:

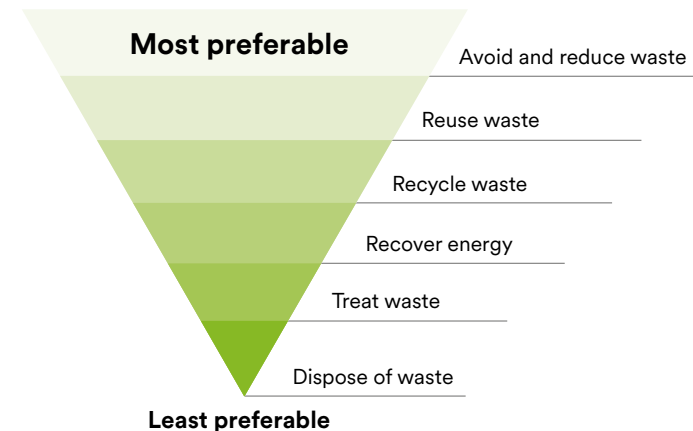
We will strive to reduce the impact that our facilities have on our environment.



In line with the EPA Waste Hierarchy, ordered by the most preferable, UNE aims to:

Avoid and reduce > Reuse > Recycle

Disposal is the least desirable option.



3. Scope

The scope of this strategy is limited to the general waste generated at the UNE Armidale campus. The management of hazardous waste, e-waste, clinical waste and special waste is managed through existing procedures.

4. Guiding principles



Sustainable

- Apply the waste hierarchy, aiming as far up the hierarchy as possible;
- Recognise the effect that waste has to the environment, and the continuing legacy impacts from landfilling and other waste treatment processes;
- Consider the social, cultural, environmental and economic impacts of waste; and
- Support reducing greenhouse gas emissions.



Collaborative

- Recognise that to achieve waste minimisation targets requires a personal level of commitment from the students, staff and visitors to the University;
- Understand that waste minimisation starts with the procurement of materials, and the life cycle of these products needs to be a consideration; and
- Continue to provide education to the UNE community to support them in making sustainable decisions.



Resilient

- Build our resilience to changing local and global conditions;
- Consider the needs of different groups in the UNE community; and
- Aim to deliver the most cost effective and efficient solutions to meet the targets of the strategy.



Better

- Establish a baseline to enable the success of the strategy to be measured;
- Monitor and report on waste management regularly; and
- Regularly review our waste programs and strategies to facilitate continual improvement.



5. United Nations Sustainable Development Guidelines



This strategy aligns with
**SGD 12: Ensure Sustainable
Consumption and Production Patterns**

12.2: By 2030, achieve the sustainable management and efficient use of natural resources

12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities

6. Objectives

Avoid and reduce waste generation

Advocate for product stewardship to avoid or reduce waste at source

Increase individuals' sense of personal responsibility for waste reduction by providing training and education to staff and students on correct disposal and management of waste generated at the University

Reduce waste to landfill

Improve source separation by ensuring there is easy to access waste disposal information

Reduce recycling and composting contamination rates

Restrict organic and recyclable materials going to landfill

Reduce the incidence of litter and illegal dumping

Maximise opportunities for reuse, recycling and resource recovery

Develop infrastructure and processes to enable resource recovery

Identify local economic development opportunities through resource recovery

Provide resources and infrastructure for students and staff to avoid, reuse or recycle waste

Achieve operational efficiencies in UNE's waste and recycling services



7. Targets

Our targets for waste minimisation for 2028 are:



8. Context

8.1. Waste Management in Australia

According to the National Waste Report 2020, released by the Department of Agriculture, Water and the Environment, in 2018-19 Australia generated an estimated 74.1 million tonnes (Mt) of waste. This is equivalent to 2.94 tonnes per capita.

In 2018-19, the Australian recycling rate was 60%.

8.2. Legislation

In New South Wales (NSW) waste is governed by the following legislation:

- Protection of the Environment Operations Act 1997 - defines waste for regulatory purposes, establishes management and licensing requirements for waste, and defines offences and penalties relating to waste;
- Protection of the Environment Operations (Waste) Regulation 2014 - allows the EPA to protect human health and the environment, and provides a platform for a modern and fair waste industry; and
- The Waste Avoidance and Resource Recovery Act 2001 - promotes waste reduction and better use of our resources in NSW. It includes provisions for waste strategies and programs, and for industry actions to reduce waste.
- The Plastic Reduction and Circular Economy Act, 2021 - promotes and supports the principles of a circular economy, including a ban on single use plastic items from 2022

8.3. NSW Waste and Sustainable Materials Strategy 2041

The NSW Waste and Sustainable Materials Strategy 2041 was released in June 2021 and focuses on the environmental benefits and economic opportunities in how we manage our waste. Transitioning to a circular economy means more efficient use of resources, less waste and emissions, less harm to our environment, and more jobs.

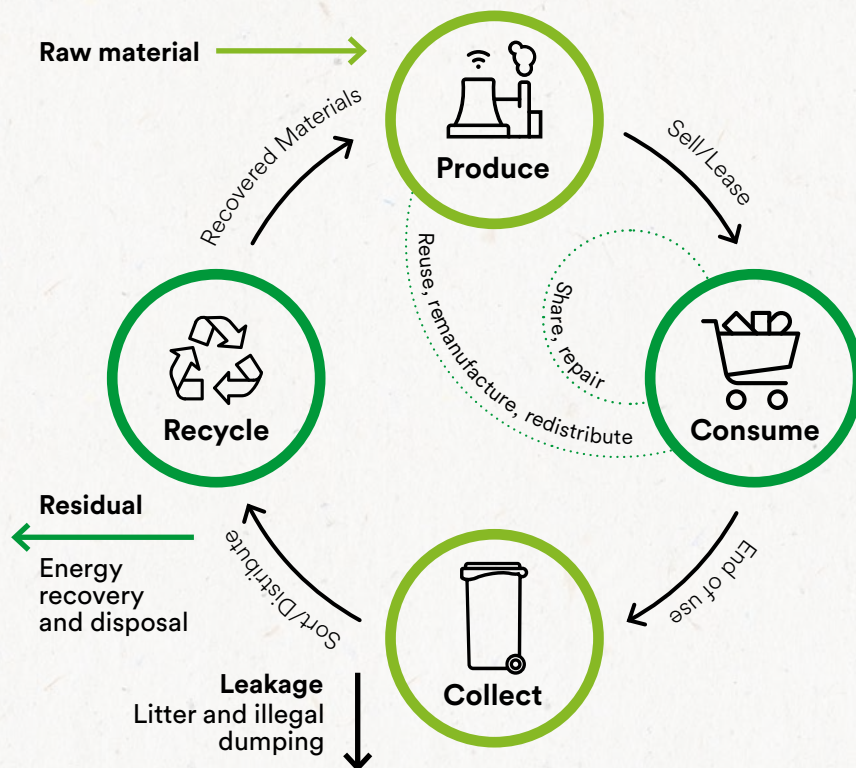


Figure 1: Circular Economy (Department of Planning, Industry and Environment | NSW Waste and Sustainable Materials Strategy 2041)

To complement this strategy, the NSW government have also released:



NSW Plastics Action Plan:

Strategies for phasing out problematic plastics, tackle litter from plastic items like cigarette butts, and support innovation and research;



NSW Waste and Sustainable Materials Strategy:

A guide to future infrastructure needs, which sets out the investment pathway required for NSW to meet future demand for residual waste management and recycling.

UNE seeks to align with the key aims of the Strategy through:

- Waste avoidance and reduction;
- Increased recycling;
- Better management of problem wastes; and
- Procurement of products with recycled content and/or less unnecessary packaging.

9. The current situation

According to the Armidale Regional Council (ARC)



Waste management in Armidale relies heavily on source separation into the following waste streams:

- ✓ Paper and cardboard;
- ✓ Plastic, glass and metal;
- ✓ Organic green waste; and
- ✓ General waste.

The local Waste Management Facility also has disposal facilities for:

- | | |
|------------------------|--------------------------|
| • batteries | • metals |
| • compact fluorescents | • mobile phones |
| • e-waste | • oil |
| • fire extinguishers | • paint |
| • fluorescent tubes | • polystyrene |
| • gas bottles | • pool chemicals |
| • household chemicals | • smoke detectors |
| • ink cartridges | • tyres and windscreens. |

9.1 Waste Management at UNE

The University adopts the same four-bin method with varying levels of success. To maximise impact, bins are colour-coded with corresponding signage that is consistent across the campus:

Green:

- Food
- Organics
- Soiled paper towel
- Garden waste

Yellow:

- Clean metals
- Plastics and glass

Blue:

- Paper and cardboard

Red:

- General waste (landfill)

<p>All food scraps and pizza boxes</p> 	<p>Plastic bottles, glass bottles, drink cans, food cans</p> 	<p>Clean paper and clean cardboard only</p> 	<p>Everything else</p> 
<p>Which bin is which? Follow the colours to help reduce waste.</p>			

10. Barriers to Waste Minimisation

The key barriers for improving waste management have been identified in order to develop a plan of action to address the issues.

The University is unique in that it is essentially a small municipality including:

- ✓ the residential element
- ✓ commercial operation
- ✓ expansive grounds and gardens
- ✓ sporting facilities
- ✓ ad hoc construction and demolition projects
- ✓ varying streams of waste generated on the academic campus.



The key barriers for waste minimisation have been identified as the following:



Diversity:

A large proportion of students and staff are from outside the region and therefore unfamiliar with the waste and recycling source separation requirements for the Armidale LGA;



Knowledge:

There are issues with understanding/ conflicting advice regarding source separation requirements due to outdated signage, incorrect advice from colleagues/ peers, and not knowing where to find this information;



Behaviour:

Some individuals simply do not care and are unmotivated;



Communication:

Potential barriers in communicating waste protocols to international staff, students and visitors;



Change:

The rules for waste management are ever evolving, whether driven by new technologies or legislation.

11. Our Waste Minimisation Action Plan

Our Action Plan can be broadly classified into 4 areas:



11.1. Planning

- Establish baseline data for UNE waste composition and volume
- Review University administrative processes and systems to identify where resources can be more efficiently managed to eliminate potential waste
- Identify emerging markets for additional recycling or reuse streams
- Continue to work with UNE Life to identify new compostable packaging options
- Ensure UNE's capital project plans include requirements for waste management plans for all capital development works
- Incorporate standardised waste and recycling facility stations in all new developments and refurbishments
- Organise for monthly reporting on waste from all contractors
- Ensure the asset disposal procedure includes options for reuse and donation as the priority
- Explore markets for items that can no longer be used due to branding being out of date
- Prioritise the procurement of products made from recycled materials and materials that can be easily recycled
- Develop digital solutions to existing paper-based procedures
- Monitor changes to waste management legislation to ensure compliance
- Review current procurement and purchasing policies to incorporate waste sustainability as a factor



11.2. Operations

- Ensure consistency across waste and recycling stations in staff common areas and kitchenettes
- Ensure waste management practices are addressed in all new staff inductions
- Regularly provide educational material for staff and students regarding correct disposal procedures
- Implement standardised signage across the Armidale campus that is consistent with the local government waste facility requirements
- Remove all under-desk bins on the academic campus
- Work with researchers in the planning phase of projects to ensure adequate waste disposal facilities are available and that all options for reuse and recycling are considered
- Continue to run annual auctions and sales for surplus assets and materials requiring disposal
- Expand reuse programs, particularly focussing on those that provide support to the community
- Encourage staff to audit their stationary supplies prior to purchasing new materials
- Continue to donate felled trees to the local Aboriginal community and the Men's Shed so that these can be reused for Cultural or community purposes
- Seek regular feedback from the cleaning staff regarding problem areas and general feedback
- Identify and implement new education opportunities
- Expand compostable package labelling to the wider Armidale businesses
- Audit of the commercial kitchens at UNE to determine whether higher recycling and green waste diversion can be achieved
- Engage with students and the community to provide education and facilities at events, open day, orientation week etc.



11.3. Monitoring and Reporting

- Monthly collection of waste data to identify trends, opportunities, areas of concern
- Report on waste management to the Executive Team on a monthly basis through the monthly ESM reporting
- Report on waste to staff and students in quarterly ESM reports
- Annual reporting against established baseline levels
- Regular bin inspections to identify locations on campus that require further education



11.4. Continual Improvement

- Annual review of policies and procedures relating to waste management
- Address annual compliance waste management requirements
- Trial new technologies and procedures to minimise waste and report on success of initiative
- Encourage feedback from students and staff as to what could improve their understanding of waste disposal
- Promote a culture of sustainability within each area of the university

12. Sustainability in action

Café Life

Café Life is in the central hub of the campus, serving thousands of students, staff and visitors each year.

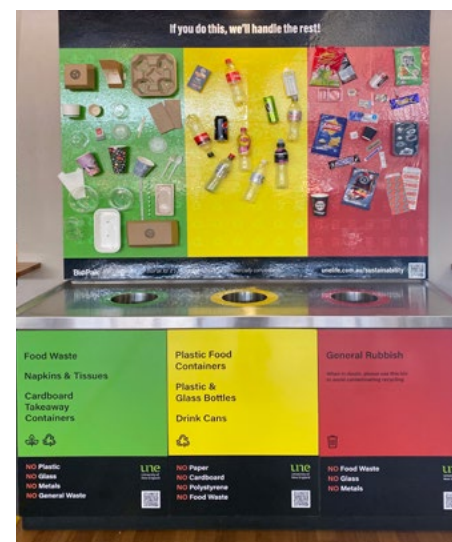
Managed by UNE Life, the Café is committed to sustainability and ensured they sourced biodegradable packaging materials for practically all of their products – even the takeaway coffee cups!

EBE took samples of their packaging to the Armidale Regional Council City2Soil facility to confirm that the products would break down in the composting facility, and the trial was a success.

The next step was getting the message out to the wider UNE community – yes you can dispose of these materials in our green organic bins located throughout the campus. EBE teamed up with Marketing and UNE Life to create a package labelling program where each biodegradable package is labelled with a natural dye stamp so the customer knows that it can go in the green bin.



Green organic waste levels noticeably improved and UNE has been able to decrease the volume of waste going to landfill each year.



Tips for Waste Avoidance:

- 1 Ask yourself if you *need* to buy it

- 2 Go paperless and transition to digital solutions wherever possible

- 3 Set up an electronic signature to avoid having to print

- 4 If you have products with out of date UNE branding, don't throw them away – let EBE know. We work with a range of charities to find people who really appreciate these donations

- 5 Ask contractors and vendors to switch to electronic billing if you still receive paper invoices

- 6 Get in the habit of reviewing digital documents on-screen, rather than printing them

- 7 Cater events using reusable plates, cups, glassware and cutlery

- 8 Serve water from a jug for meetings instead of providing bottled water

- 9 Check in the stationary supply area of your department before buying new products

- 10 If you no longer need an item of stationary such as a folder or desk caddy, don't throw it away, take it to your department stationary supply so that it can be reused by someone else

- 11 Avoid printing meeting agendas and minutes – project your screen or meet via zoom and share your screen instead

- 12 Use a reusable water bottle and mug

- 13 Bring your lunch and snacks to work in reusable containers

- 14 Purchase a reusable straw kit including a straw cleaning brush from UNE Life's "The Shop" located in the courtyard beneath the 'Stro

- 15 Familiarise yourself with the various materials that we recycle on campus. There are facilities to recycle paper and cardboard; mixed plastic, metal, glass; batteries; e-waste; soft plastics etc.

- 16 Set a target for office paper reduction in your department – EBE have the baseline data that we can use to measure your success

- 17 Find products that are made from post-consumer content (materials have been collected back from previous products and remade into new ones) such as paper and plastic products.

- 18 Update Mailing Lists to avoid sending out unnecessary letters, thus saving the paper, printing, and postage

- 19 Avoid unnecessary packaging or select recycled-content packaging,

- 20 When comparing products, think about replacement cost, life span, and the cost of parts and consumables as well as upfront cost.



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