Circular Economy Plan

Property Services

Published January 2023

RMIT UNIVERSITY

Scope

This Circular Economy Plan focuses primarily on RMIT University's onshore operations, with specific limitations applying to various reporting requirements and will be based on operational control assessments. This document applies to all RMIT staff, students, operators, contractors and tenants that occupy our campuses.

Version Control

This document will be updated and re-issued to reflect approved changes to the content and is subject to version control. The version record and document status are documented below:

Document Change History:

Version	Date	Author	Comments
2.0	19/10/2022	Hamsa Farah	Update to circular economy

Owner

The overall responsibility for this plan resides with RMIT Property Services.

Review

This document is reviewed every two years by Property Services, with a full refresh every five years.

Control

Printed copies of this document are considered uncontrolled and may not reflect the most recent revision.

Feedback

Any feedback on this documents or related actions can be addressed to **sustainability@rmit.edu.au**

Contents

1. Overview

1.1 Aim

This Circular Economy Plan aims to provide direction on how RMIT can integrate the principles of the circular economy into practices in the operation and development of our campuses.

The circular economy aims to transform the current mindset of the take-make-waste linear model towards circularity, where waste and pollution are eliminated through good design, and the life of existing materials is prolonged through new and innovative ways of repairing, reusing and remanufacturing.

1.2 Benefits

RMIT is committed to the practice of incorporating sustainability principles and practices into learning and teaching, research and operational activities. This Circular Economy plan directly supports the *RMIT Strategic Plan to 2031: Goal 3.1 – Advance sustainability*.

The benefits that can be realised through improved circularity include:

- Conserving resources through waste minimisation activities – eliminating the use of materials in the first instance avoids unnecessary consumption of resources and the need for future disposal.
- Improved natural resources use – by recycling products, the raw materials found within these products are recovered, which increases the efficiency of this process as it can take a lot of energy and water to extract and refine raw materials from the earth.
- Educating our community that materials considered to be 'waste' are valuable resources.
- Reduced greenhouse gas emissions – by disposing of materials in landfill, the embodied energy used to originally make them is lost. Recycling can help us recover some of this energy. Organics waste that is diverted from landfill also has less of an impact on the climate by reducing the amount of methane that is produced.
- Reducing land contamination – aside from the physical space that landfills require, many materials in products that end up in waste contain hazardous substances. Over time these substances can leach into the soil, groundwater and surface water causing an environmental hazard that can last for many years.
- Reduced cost – waste disposal is becoming increasingly expensive, and waste (landfill) disposal costs will become higher than recycling costs. By reducing the amount of waste and the amount of waste to landfill, RMIT can push drive down costs associated with waste.
- Increased opportunity for the application of innovative technologies, materials and methods.

1.3 Strategic Alignment

This Circular Economy plan directly supports the following strategic outcomes:

RMIT Strategic Plan to 2031: Goal 3.1 – Advance Sustainability

RMIT's commitment to advancing sustainability models a whole system approach, achieving institution-wide excellence by embedding sustainability principles and practices throughout learning and teaching, research and operational activities.

Sustainability Policy

The RMIT Sustainability Policy is in place to guide all activities, across all RMIT entities. The purpose of this policy is to express RMIT's commitment to advancing its sustainability ambitions as an organisation that models institution-wide excellence by embedding sustainability principles and practices throughout learning and teaching, research and operational activities.

- Make sustainability an organisational priority – embedding sustainability principles into all university activities and ensuring decision making reflects RMIT's values.
- Behave as a socially responsible organisation and ensure that our activities have a positive impact on individuals and communities.
- Exceed, wherever possible, all legislative and regulatory requirements for sustainability and aim to achieve exemplary sustainable practice in all university operations.
- Minimise the consumption of resources through sustainable procurement, waste avoidance, good design, reuse and recycling

Environment Policy Statement (Property Services Integrated Management System)

RMIT Property Services is focused on providing quality property, facilities and services to support all University activities in a safe and sustainable manner. Property Services is committed to protecting the environment, including the prevention of pollution by working proactively with stakeholders, contractors and business partners to implement the following environmental management objectives:

- Compliance with all applicable statutory, regulatory and RMIT requirements.
- Building and operating infrastructure to a high environmental standard, utilise best-practice sustainable design and innovative technologies to deliver efficient, resilient and adaptable buildings.
- Encouraging sustainable behaviours and minimising the consumption of resources through sustainable procurement, circular thinking, and water conservation.

UN Sustainable Development Goals (SDGs)

The UN Sustainable Development Goals (SDGs) provide a pathway for organisations to a more sustainable future. The 17 goals and their respective set of targets and indicators help organisations to identify sustainability aspects relevant to their operations and add value.

Governed by the Sustainability Committee, RMIT made a formal public commitment to the SDGs through the Sustainable Development Solutions Network in June 2017. This plan contributes to the following SDGs:

1.4 Key Objectives

	Objectives
1	Eliminate waste and encourage reuse.
2	Improve systems and processes to divert waste from landfill.
3	Improve data reporting and traceability of materials.
4	Encourage circularity in capital projects to reduce waste and improve material recovery.
5	Educate the RMIT community (students, staff and contractors) so they understand the circular economy and their role in it.
6	Trial and implement new technologies with industry partners and academic experts.
7	Leverage RMIT supply chains to support the circular economy.

1.5 Target

Due to the impacts of COVID on campus operations and facility occupation levels, RMIT seeks to utilise the 2023 calendar year as the new baseline year.

Waste audits will be conducted every three years to understand trends and establish specific operational targets.

RMIT will reduce operational waste to landfill to 10kg per person by 2025.

RMIT will maintain a minimum of 90% diversion from landfill for construction and demolition waste.

This plan should be read in conjunction with *Appendix A – Completed Actions from Previous Plan*.

1.6 The Circular Economy

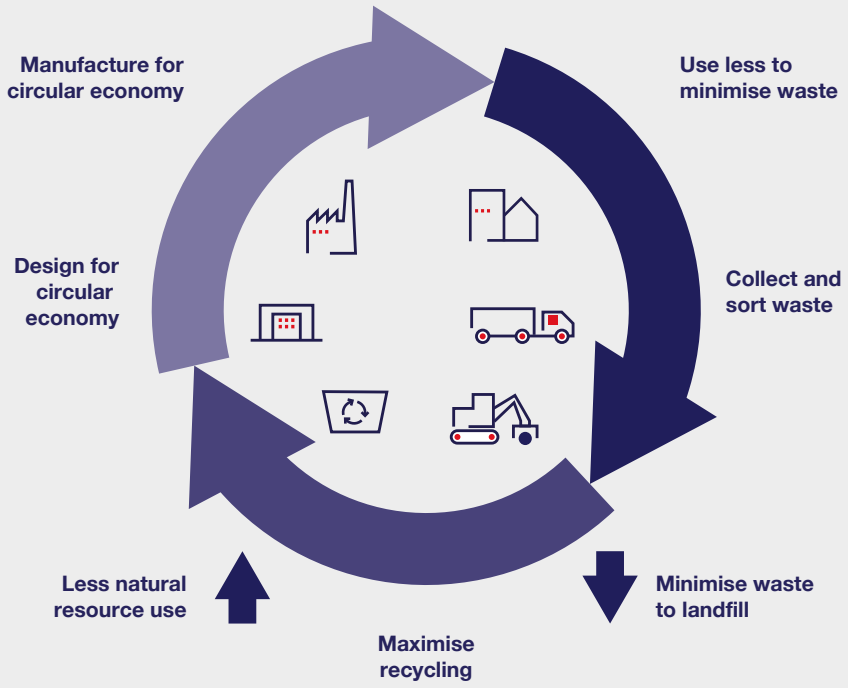
According to the United Nations Environmental Programme, each year 90 billion tonnes of primary materials are extracted and used globally, with only 9% being recycled. This imbalanced rate of consumption vs reuse is unsustainable, and therefore the linear economy model of 'Take-Make-Waste' requires urgent reform to take action and prevent potentially devastating impacts on the community and environment.

The solution to this challenge of consumption is to adopt a circular economy. A circular economy is a system that transforms a linear economy model, into a system of constant reuse and resource recovery to eliminate the overconsumption of resources and excess generation of waste.

A circular economy system is founded on 3 key principles that are:

1. Eliminating waste and pollution
2. Circulating/Reuse of products and materials
3. Supporting the regeneration of nature

Circular economy



1.7 Waste Management in Australia

Australian National Waste Policy

The Australian National Waste Policy: *Less Waste, More Resources* (2018) provides a framework for collective action by businesses, governments, communities, and individuals until 2030. The policy aims to address the current challenges facing waste management and resource recovery in Australia with a focus on waste avoidance, improved material recovery and the use of recovered materials. The policy also reflects the need for Australia to shift towards a more circular economy and to be more resilient in its response to the changing international waste markets.

The National Waste Policy Action Plan (2019) included targets and actions to implement the 2018 National Waste Policy. These targets and actions guide Australia's investment and national efforts to 2030 and beyond and include:

- Banning the export of waste plastic, paper, glass and tyres, which commenced on 15 December 2020
- Reducing the total waste generated in Australia by 10% per person by 2030
- Achieving an 80% average recovery rate from all waste streams by 2030
- Significantly increasing the use of recycled content by governments and industry
- Phasing out problematic and unnecessary plastics by 2025
- Halving the amount of organic waste sent to landfill by 2030
- Making comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions.

The plan complements and supports the implementation of better waste management and circular economy plans by state and territory governments, local governments, businesses and industry.

At the Environment Ministers Meeting in October 2022, ministers acknowledged the progress that had been made to improve waste management and recycling activities under the National Waste Policy Action Plan. However, they agreed that more must be done to prevent waste, including better product design and more efficient production processes. The National Waste Policy Action Plan will be expanded to strengthen Australia's efforts towards the 2030 targets and reflect adjustments required to accommodate the long-term impacts of COVID-19 and the series of natural disasters which caused disruptions to supply chains and resources.

National Circular Economy Roadmap

In 2021, the CSIRO developed the 'National Circular Economy Roadmap' to review the implementation of this system in Australia, throughout this report the CSIRO found that the rate of production and consumption in Australia has led to a surge in the development of plastic, glass, and paper waste specifically from industry. In past these waste materials were exported; however, countries have started to refuse to accept low-quality waste such as what is generated in Australia. This had therefore led to the Australian Government implementing a phasing out of the export of waste to ensure Australia takes responsibility for its waste generated.

Since the development of the national roadmap, Australian industries and governments have made progress in adopting circularity principles and transitioning to a circular economy with plans and policies.

1.8 Circular Economy in Victoria

Victoria's population is increasing and with it the amount of waste that is being produced. Current projections are that by 2046, Victoria is expected to produce 40% more waste than it did in 2017-2018. Victoria too was heavily reliant on exporting large amounts of waste to overseas markets such as China and Malaysia and was significantly impacted in 2018 when China enforced the contamination threshold on its import of recycled materials.

To address this, the Victorian Government released a circular economy plan '*Recycling Victoria*' (2020). The 10-year policy and action plan aim to reduce waste and landfill and provide better recycling and a sustainable and thriving circular economy. Key commitments include:

- Kerbside reform
- Stronger recycling oversight
- New rules to cut waste
- Waste to Energy
- High-risk and hazardous waste management
- Reducing business waste
- Invest in priority infrastructure
- Provide support for local communities and councils
- Behaviour change.

From this plan came the *Circular Economy Act (Waste Reduction and Recycling) 2021* which provides for stronger regulation of the state's waste and recycling sector for more and better recycling, less waste and landfill.

The Act provides the foundation for Victoria's transition to a circular economy, including enabling laws for the new container deposit scheme and new state-wide four-stream household waste and recycling system. Both systems will significantly increase the recycling of discarded, but valuable, materials that would otherwise end up in landfill.

The Act will see the establishment on 1 July 2022 of Recycling Victoria, a dedicated government business unit to oversee and provide strategic leadership for the waste and recycling sector. Recycling Victoria will deliver state-wide stewardship, planning, regulatory and market oversight functions, and have a strong regional focus.

The Victorian Government's circular economy plan is being delivered in partnership with Sustainability Victoria, the Environment Protection Authority, Major Transport Infrastructure Authority and waste and resource recovery groups.

The state-wide *Waste and Resource Recovery Infrastructure Plan* is a 30-year vision that will help position Victoria as a national leader in resource recovery and waste management. The plan looks at effectively managing waste to protect public health, community amenity and the natural environment. It is an integrated plan that provides an overarching view that guides the development of cascading regional waste and resource plans.

Through a consultation process with local communities, councils and industry, regional waste and resource implementation plans are being developed to reflect the needs of each region in Victoria and to ensure these needs are met.

1.9 Circular Economy at RMIT

RMIT has been committed to implementing circular economy principles not only through the University's operations led by Property Services (PSG), but also across research and industry engagement. Key pillars of RMIT's circular economy work include:

The Circular Economy Hub

The Circular Economy Hub (CEH) at RMIT is a cross-disciplinary, industry-engaged network of around 60 researchers and experts across the University working on cutting-edge and innovative Circular Economy (CE) research across Australia and internationally. The work supports RMIT as an industry leader in circular economy research at national and global forums. The CEH's cross-disciplinary nature supports empirical approaches to holistic and systemic engagement across research partnerships, expanding the university's impact and expertise on CE. It also supports the emergence of a new capability-building platform across micro-credentials, executive training, vocational and higher educational outcomes. The RMIT Circular Economy Hub's cross-disciplinary nature supports empirical approaches to holistic and systemic engagement across research partnerships, expanding the university's impact and expertise on circular economy internally at RMIT, and externally.

TREMS

The Transformation of Reclaimed Waste Resources to Engineered Materials and Solutions for a Circular Economy (TREMS) is an initiative which draws upon industry connections to form a 'network' interested in exploring new ways to engineer construction and other high-value materials from recyclable household, commercial & industrial waste.

IC3P

The Integrated Circular Economy, Climate Resilience, and Clean Energy Platform (IC3P) is an initiative dedicated to developing strategies and acting on complex problems at the intersection of Circular Economy, Climate Resilience and Renewable Energy. IC3P consists of a team of researchers and experts passionate about helping leaders gain clear insight, devise practical strategies, and make informed decisions for a thriving future.

RMIT Activator

RMIT Activator is the University's growth engine for entrepreneurship and innovation which strives to expose students to 'wicked problems worth solving'. This initiative supports capability development and the connections needed to make a practical difference. An example of a project delivered in relation to applying circular economy principles was the "Supporting circular innovation through start-ups" initiative. This was a six-week pre-accelerator program delivered in partnership with Circular Economy Victoria. This program supported eight start-ups progress towards finding the right customers and industry partners to successfully apply innovative solutions and new business models relevant to a circular economy.

2. Waste Management

2.1 University Sector

Numerous Australian Universities have set quantitative targets for waste management, with the targets and recycling rates vary significantly between institution. For example, high recycling rates at some NSW universities reflect the facilities available in that state, with all their general waste being processed through a materials recovery facility.

RMIT undertakes regular benchmarking and information sharing with other universities through networks such as Australasian Campuses Towards Sustainability (ACTS), the Tertiary Sustainability Network (Victoria) and the Tertiary Education Facilities Management Association (TEFMA). Throughout this document, 2019 data will be utilised as an indicator of full university operations, as the pandemic has dramatically impacted on-campus attendance numbers.

The long-term impacts of the pandemic on waste management include:

- COVID-induced supply chain disruption (workforce shortages, collection frequency, and waste stream operations) and the introduction of new difficult-to-divert waste streams (face masks, gloves, and plastic utensils).
- Inconsistent numbers on campus make it difficult to plan regular collections for items such as organics.

Recovering from these pandemic-induced impacts has been a multi-industry challenge as waste service providers are looking to rebuild operations and campus activities are scaling back up to pre-pandemic levels.

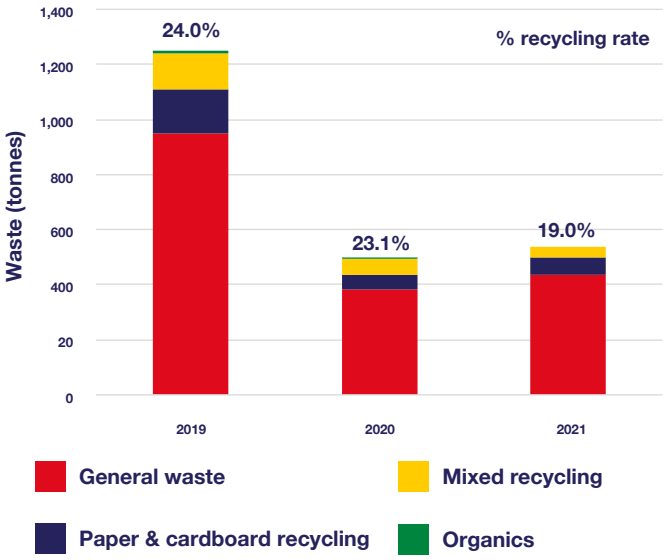
2.2 RMIT Waste Profile

RMIT aims to improve waste management practices across the campuses. RMIT's Waste Management systems are designed to divert waste from landfill by following the waste hierarchy of avoidance, minimisation and recycling.

The RMIT Australian waste profile consists of operational waste from collection points throughout its campuses, as well as the construction and demolition (C&D) waste generated from projects. Data is collated from various third-party contractors throughout the year. Waste data does not include Vietnam operations, although Vietnam staff are introducing a range of waste and recycling processes that will result in greater levels of data capture and landfill diversion.

RMIT's operational waste from campus life consists of four main streams:

- General waste
- Mixed recycling (commingled)
- Paper and cardboard recycling
- Organics (limited scope)



* Percentage shows annual recycling rate

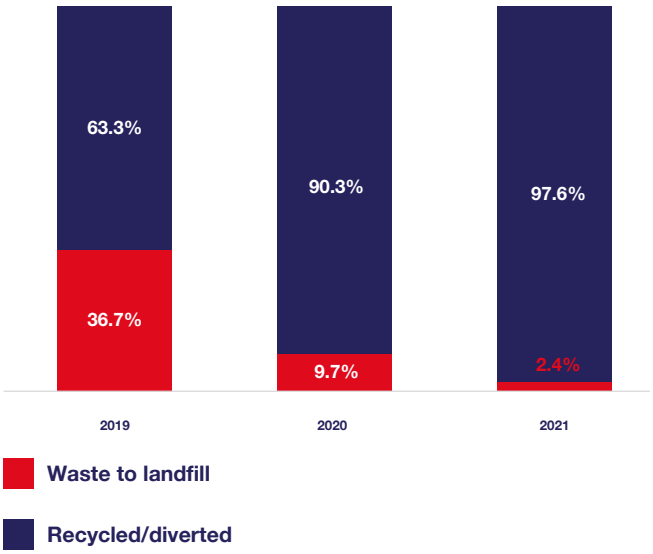
Assumptions

- Mass is calculated by volume – this method assumes all waste bins that are emptied are full and a generic figure is used to convert volume to mass. These two assumptions can lead to misleading figures.
- Data is not holistic – does not include construction waste, confidential waste, hazardous waste, organics waste and other smaller contracts held directly by other RMIT Schools/Colleges.
- Landfill kgs/person – calculated on the total operational general waste divided by the Australian Student EFTSL + Australian Staff FTE.

Data is currently entered in the Envizi platform on a whole-of-university basis; suggest further granularity of data be entered in Envizi to show each campus and drive improvements in the dataset.

Construction and Demolition Waste

RMIT collates Construction and Demolition (C&D) waste data from all capital development projects. RMIT has been applying circular economy principles to capital projects to continue avoiding waste and strengthening reuse. A benchmark target has been set to recycle 90% of all construction and demolition waste, this target has been achieved each year since it was introduced in 2019. RMIT reduces waste from capital development projects by putting circular economy principles into practice, such as prioritising the reuse and upcycling of furniture before buying new items.



Other sources

A range of other materials used at RMIT creates a range of waste streams, with control and oversight from various departments and third parties.

These include:

Stream	Source	Managed	End use
Batteries	All RMIT	Property Services	Recycled
Fluorescent tubes	All RMIT	Property Services	Recycled
E-Waste	All RMIT	ITS/Departments	Recycled
Toner Cartridges	All RMIT	Property Services	Recycled
Furniture	All RMIT	Property Services	Refurbished Repurposed Resold Recycled Residual landfill
Organics	Retail and limited staff kitchens	Property Services	Offsite commercial composting
Mulch	Grounds	Property Services	Onsite reuse and offsite composting
Confidential Paper	All RMIT	Departments	Secure destruction and recycling
Lab and Medical Waste	Labs	Departments	Hazardous material disposal
Workshop materials (timber, metals)	Workshops	Departments	Some recycling Landfill
Glass	All RMIT	Property Services	Currently in mixed recycling

Constraints

RMIT University presents a unique environment for the end-to-end management of waste. There are certain challenges that RMIT faces when it comes to implementing improved waste management infrastructure and practices. This plan looks at overcoming some of these constraints by improving waste systems, processes and community engagement.

These challenges can be summarised as follows:

- Spatial constraints: due to the nature of our building stock there are inadequate back-of-house areas, waste collection areas and fit-for-purpose waste infrastructure
- City centre locations: restricted access on campus and high levels of space utilisation
- RMIT has a diverse range of buildings with different functional uses and layouts – this makes it hard to implement standardised systems and reduces opportunities for centralisation
- Education: recycling practices vary across regions and local councils which makes recycling practices difficult for users to apply correctly
- Specialised waste streams: with volumes too small or complex to sort for recycling i.e. timber and textiles
- Control structures: College functions such as laboratories and workshops are not directly controlled by Property Services
- Victorian recycling industry: recycling and reprocessing infrastructure is limited in the state
- Support facilities: flux in recycling markets and insufficient processing options in Victoria change and limit materials that can be sent for recycling.

Contractor Management

RMIT University is responsible for ensuring that all contractors maintain high standards of work and comply with all legislative and RMIT University requirements. This is managed through the tender and procurement process and built into individual contracts. Cleaning and Waste contractor responsibilities include:

- Having standard operating procedures for the collection/disposal of waste
- Demonstrating staff are properly trained in waste segregation, disposal methods and how to address contamination
- Providing on-time and relevant waste reporting data
- Provide suitable and appropriate bins to RMIT for collection
- Provide support to enable the recycling of ad-hoc waste streams
- Driving continuous improvement is the reduction, reuse and recycling of materials.

Audits are conducted by the Property Services Sustainability Team to ensure the above is occurring as part of an Integrated Management System.

3. Implementation

Through the implementation of circular economy principles, RMIT is looking to transition towards a system where waste and pollution are eliminated through good design, and the life of existing materials is prolonged through new and innovative ways of repairing, reusing and remanufacturing. The implementation of this plan is linked to 3 key sections that provide a significant opportunity within the Property Services remit.

3.1 RMIT Waste Operations

RMIT waste operations encompass all the property services managed waste services that are located within university campuses. This plan looks to drive innovation and improvements that seek to increase the waste landfill diversion rate and boost resource recovery through upgrading waste infrastructure and implementing new education and signage practices.

The current challenges identified within waste operations include:

- COVID-induced supply chain disruption (workforce shortages, collection frequency, and waste stream operations) and the introduction of new difficult-to-divert waste streams (face masks, gloves, and plastic utensils)
- Inconsistent numbers of staff and students on campus make it difficult to plan regular collections for items such as organics
- Public place recycling across Victoria has high contamination rates.

The opportunities that are available to advance the actions in this plan are:

- There are contractual opportunities to drive further outcomes in the waste management contract with the Facility and Asset Management (FAM) team
- As landfill levies increase (From $65.90/Tonne in 2019 to $125.9/Tonne in 2023) the business case for more recycling streams could become more viable
- An increase in State government funding through bodies such as Sustainability Victoria e.g. establishment of the Victorian Container Deposit Scheme.

This section should be read in conjunction with *Appendix B – Waste Management Design Specifications*.

Waste Operations Actions

Action	Target Date
Waste Operations	
Identify opportunities for waste/ recycling infrastructure through campus development and master planning	Ongoing
Undertake waste audits every three years to understand trends and establish specific operational targets	Ongoing
Establish 2023 as the new baseline year for all waste and recycling data (to allow for post-COVID adjustments)	2023
Embed sustainability objectives and targets in the new waste/recycling contract to pursue opportunities to progress new initiatives in waste diversion and market innovations (i.e. material recovery)	2023
Refresh bin signage to reflect updated waste and recycling contracts	2023
Work with ITS to implement an e-waste collection panel and associated processes (exc ITS leased assets)	2023
Introduction of organics waste stream for all retailers across all campuses	2023
Introduction of organics waste stream to all staff kitchens	2024
Implement recycling collection points on each campus to accommodate low-volume recyclable streams (i.e. batteries, cosmetics, mobile phones) and increase awareness of recycling within the RMIT community	2024
Investigate technological opportunities such as smart bins to influence user behaviour	2025
Investigate the upcoming opportunity for the installation and operation of container deposit machines on campus	2025

3.2 Retail Operations

RMIT's retail operations encompass all retailers working within the university campuses. These businesses primarily incorporate cafés and food/lunch eateries. RMIT aims to partner with retailers to ensure compliance with upcoming environmental legislation (plastics ban) and to also improve best practices in supporting the uptake of utilising recycled and reusable materials.

The challenges that are associated with achieving these targets are:

- Current Financial difficulties facing retailers regarding supply chain (workforce shortages, increase materials cost, and profit margin reduction)
- RMIT has a diffused retail model which doesn't allow for centralised dishwashing/reusable crockery service
- The State Government Plastics Ban coming into effect in February 2023, which requires retailers to transition away from polystyrene and specific plastics
- The current coverage of organics waste servicing is not consistent and available to all retailers.

The opportunities that are available to advance the actions in this plan are:

- Retailers are receptive to taking part in waste diversion activities and initiatives
- Incoming Federal and State Government funding opportunities for research and innovation in the Circular Economy.

Retail Operations Actions

Action	Target Date
Retail Operations	
Continue to drive reuse/recycling opportunities through the Sustainable Retail Framework	Ongoing
Support University retailers by ensuring they are compliant with upcoming legislative changes (plastics ban)	2023
Trial programs for returnable reusable coffee cups	2023
Supporting on-campus purchasing by identifying alternative supply chain options and vending machines	2024
Encourage the uptake of reusable crockery and the installation of washing stations	2025

3.3 Materials

RMIT aims to improve the circularity of material flows through the university and beyond. Materials encompass the University's capital works, furniture management/storage and broader supply chains.

The capital development program of new and refurbished buildings provides a significant opportunity for RMIT to incorporate innovative material selections and processes to increase the reuse of materials on projects.

The challenges that are associated with the implementation of these aims are:

- The increased cost of recycled materials due to supply chain issues
- Furniture storage and logistics on a spatially constrained campus
- Traceability, chain of custody and end-use transparency is lacking in the Australian waste and recycling markets
- Current storage systems lack the capability for reuse, repurposing and upcycling.

The opportunities that are available to advance the actions in this plan are:

- The opportunity to obtain more data and quantify costs saved about furniture reuse
- The Capital Works team are willing to utilise furniture for reuse if clearly catalogued and assessed against design standard
- Third-party certification standards for many materials are robust and used widely across the construction sector
- The strong research and innovation capability within RMIT, such as the Integrated Circular Economy, Climate Resilience, & Clean Energy Platform (IC3P).

Materials Actions

Action	Target Date
Materials	
Investigate opportunities to extend the Asset Management register to include FF&E tagging	Ongoing
Leveraging supply chain influences to eliminate materials and buy recycled content – working with Procurement Team to minimise waste, buy-recycled and encourage take-back schemes with suppliers	Ongoing
Utilise RMIT research expertise and industry partners, to understand the evolution and application of circular economy principles and trial new technologies, systems and processes.	Ongoing
Strengthen reporting accuracy, granularity and chain for custody to establish clear baselines and targets for all material streams	2023
Support a tender process to assess market opportunities for furniture management and storage	2023
Develop a holistic furniture management solution that can assess, repurpose, reuse and divert furniture from landfill.	2023/24
Update the design standards/ materials selection to ensure they are in line with the most recent ISC/GBCA market directions	2023
Understand material flows and opportunities in College/School practical spaces and workshops	2024
Expand the use of the circular economy calculator and establish circularity targets by project type	2024

3.4 Engagement

The RMIT community of students and staff play a vital role in the effectiveness of our circular economy plan. Clear and consistent information needs to be provided to our stakeholders to ensure they follow the actions of this plan correctly and are empowered to minimise their own waste footprint.

Keeping stakeholders up to date on objectives, targets and new initiatives can promote a positive community culture around implementing circularity. Sharing the challenges we face as an organisation can be a benefit for knowledge sharing and generating innovative ideas.

The challenges that are associated with the implementation of these aims are:

- Recycling systems across Victoria are complex and not standardised making them difficult to communicate
- Behaviour change is difficult when people are making split-second decisions about what to buy and how to recycle, so systems need to be easy and cost-effective.

The opportunities that are available to advance the actions in this plan are:

- Students and staff are keen to do the right thing and want to see action on environmental issues
- There has been substantial media coverage of waste and recycling issues, which is resulting in greater regulatory oversight and legislation
- RMIT has several good 'living lab' examples where courses and programs are using the campus to showcase their circularity initiatives.

This section should be read in conjunction with *Appendix C – Stakeholder Engagement and Communication*.

Engagement Actions

Action	Target Date
Engagement	
Continue to produce 'Sustainability Alerts' through the Contractor Safety mailing list to raise awareness of waste management practices with contractors and retailers	Ongoing
Utilise partners such as the GBCA and Supply Chain Sustainability School to provide online learning models on waste management and circular economy	Ongoing
Assist Student Life Team and RUSU to support student-led initiatives	Ongoing
Showcase student and alumni innovations in the circular economy	Ongoing
Utilise research capabilities to showcase and educate the community on the circular economy	Ongoing
Continue to support on-campus awareness events, including reuse libraries, repair cafes and upcycling sessions	Ongoing
Increase student and staff awareness of reduction and recycling initiatives through comms channels	Ongoing
Develop new signage that is more informative and targeted towards reducing levels of public waste stream contamination	2023
Identify funding sources and work with external partners (industry and government) to develop new initiatives	2023
Further develop training programs for cleaning staff to ensure competency in standard operating procedures, such as effective recycling and disposal processes.	2023
Embed reuse and circular economy initiatives within learning & teaching programs and support student projects	2024
Support Schools & Colleges in implementing waste minimisation and reuse initiatives, including green labs	2024

4. Monitoring, Reporting and Validation

4.1 Data Monitoring

Monitoring of metrics promotes continual improvement in waste management processes. The table below conveys the relevant roles and responsibilities for monitoring waste at RMIT.

Table 4: Roles and responsibilities and frequency of waste monitoring

Role	Responsibility	Frequency
Reporting Re-use of Furniture on projects	Project Manager	Monthly
Use of Circular Economy Calculator	Project Manager, Project Contractor	Monthly
Waste volume reporting to RMIT	Waste Contractor	Monthly
Dedicated weighing waste streams	Waste Contractor	Quarterly
Construction waste reporting	Project Manager, Project Contractor	Monthly
Entering information into Envizi	Manager, Carbon and Sustainability	Monthly
Reviewing raw waste data	Advisor, Sustainable Systems	Monthly
Reviewing waste data	Sustainability, FAM, Suez, GJK	Quarterly
Tracking of targets	Sustainability, FAM, Airmaster	Quarterly
Waste Audit	Advisor, Sustainable Systems	Every 3 Years
Report waste data	Senior Manager, Sustainability	Annually

4.2 Data Reporting

Reporting data metrics is an important step in the circular economy plan, as it promotes understanding across all levels of the business and allows for benchmarking of performance against other universities and similar industries.

The Capital Works Project Managers are responsible for the implementation and tracking of Construction and Demolition (C&D) waste and reuse data for all capital development projects. Although the reporting frequency of this item will vary depending on the availability of this option and the development of capital works projects, this data will be used by the Sustainability Team to review the performance of implementing the aims of this circular economy plan. Formal collation of C&D waste data commenced in late 2018 and a baseline was established in 2019, with the corresponding target being set at 90% landfill diversion.

The RMIT Cleaning Contractor is responsible for all waste and recycling contracts and is required to provide the University with the raw waste data monthly; this report must show the volume, waste stream and pick-up location of each waste bin. The waste contractor is also responsible for providing dedicated weighing of RMIT waste/recycling only on a quarterly basis, provided by type, weight and site. This information is used by the Sustainability Team to monitor the University's waste profile; it can be reviewed in monthly contract meetings with service providers to discuss how things can be improved.

The Sustainability Team is responsible for reporting RMIT's waste profile in the RMIT Sustainability Annual Report, which is a high-level public document. The report aligns with the Global Reporting Initiative (GRI) Standard an internationally recognised framework for sustainability reporting. Waste is reported under the GRI disclosure 306-2: Total Weight by Disposal Method.

4.3 Waste Audits

Waste audits are a formal assessment of individual bins in an area which gives accurate data on waste composition to further help us understand problems and potential opportunities. Given that RMIT waste data is currently based on the number of bins collected and assumed average weights audits can strengthen reporting methodologies and identify any problems at the source. The results can measure the effectiveness of initiatives and assist in engagement with stakeholders and contractors. Waste audits will be conducted every three years.

4.4 Validation

As RMIT proceeds with this circular economy plan it becomes an important step to validate any changes that are made to the waste system. This will ensure that the systems RMIT have in place are working as first thought and help drive continual improvement. The validation step should also help ensure that the changes are being implemented as designed and if any tweaks need to be made.

RMIT Property Services will undertake regular reviews of waste data and feedback from across the university to track how the waste systems are performing. These reviews may result in changes to the waste systems to support continual improvement.

Appendix A: Completed Actions from Previous Plan

The following actions were completed from the previous RMIT Waste Management Plan (2017-2022):

Completed Actions	Comment
Standardise all exterior bins across all campuses with two bin system	Outlined in RMIT Design Standard and completed install
Implement standardise office recycling system across all campuses (removing under-desk bins)	Outlined in RMIT Design Standard and completed rollout
Pilot organics recycling with a retailer	Completed
Sustainability Annual Works – Build bin enclosure at Brunswick campus	Installed
Promote the use of the Sustainable Events Guide – pilot zero waste events, crockery library for events	Sustainable Events guide in use and zero waste events successfully piloted
Create a catalogue of reusable and meaningful items to be used for giveaways	▪ The Events Team focuses on excluding single-use plastic items. ▪ The Sustainability Team use various items for promotion seed cards, bamboo straws etc
Work with the RMIT Store to provide a range of reusable items	The Store is now fully stocked with reusable cups, bags, drinks bottles etc
Work with campus retailers to offer discounts for the use of bring-your-own reusable items	Incorporated into the Sustainable Retail Framework
Enforce the development of site waste management plans for construction projects with an emphasis on the reuse and recycling of materials to increase landfill diversion rates	Embedded into Property Services Gateway and evidenced in projects
Further develop furniture catalogue and strengthen furniture reuse in capital project	▪ Furniture Standard developed ▪ Circular Economy calculator developed ▪ Strong reuse in Capital Work projects, such as Brunswick Café
Gateway and Design Standard – Ensure that project design considers operational waste management, especially where users of the space will be generating high volumes or specialist waste streams	Complete
Raise awareness of how to report incidents of incorrectly disposed waste	Complete – implemented through our work with HSW Team and the General Environmental Duty.

Appendix B: Waste Management Design Specifications

RMIT require specific design and specification for waste management to comply with their waste management contracts. All waste collection shall be designed to comply with the following criteria:

Provision shall be made for the sorting, segregation, compaction, storage and collection of waste and recyclable materials.
Waste and recycling requirements should be developed as part of a waste management plan, in partnership with Property Services (FAM/Sustainability) and the RMIT cleaning contractor.
Paths of travel for the movement of bins, including goods lift access, as well as clear collection points shall be established as part of the circular economy plan.
Three-phase power shall be supplied for compaction/bailer technology.
Suitable visual screening shall be provided around the waste disposal facility.
Adequate space for large vehicles to enter and manoeuvre shall be provided. Loading bays should have a clearance height of at least 3m.
The pavement design shall be adequate to support large vehicles and to withstand ‘tyre scrubbing’ forces arising from vehicle manoeuvring.
Bin wash areas should be included, along with a large cleaner’s cupboard with storage, sink and power points.
Bin types specified for internal and external spaces shall be as specified in RMIT’s standard bin specifications as shown in below.

Standard Bin Specifications

Office/Study Areas (No desk bins permitted)

Three Bin System

General Waste (red lid), Mixed Recycling (yellow lid), Paper & Cardboard (blue lid).
Space should be provided to allow for an additional stream to be implemented in the future.

Supplier Specification	Design
Source Separation Systems – MULTISORT SYSTEMS ▪ MULTISORT 60L BASE DARK GREY (MS-60L-DGRY) ▪ MULTISORT LGE LID LANDFILL (MS-LGE-LANR) ▪ MULTISORT LGE LID RECYCLE YELLOW (MS-LGE-RECY) ▪ MULTISORT LGE LID PAPER & CARDBOARD – BLUE (MS-LGE-PCSB) Phone: 02 4940 4648 **sourceseparationsystems.com.au**	

Alternative Option – allowed through discussion with Sustainability and FAM

Method Recycling

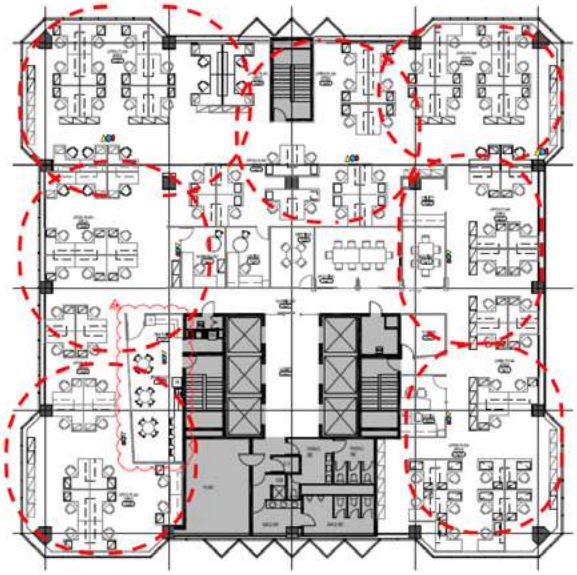
- 60L Red Landfill
- 60L Yellow Mixed Recycling
- 60L Blue Paper 60L Green Organics

Phone: +64 (0) 4 473 5566
methodrecycling.com/au/contact

Bin quantities and space allocation

A set of three 60L bins (general waste, mixed recycling and paper & cardboard) should serve 20-30 desks on an open floor plan, depending on the space layout.

Example floor plan layout:



Kitchens/Kitchenettes (No bins allowed in cabinetry)

Three Bin System

General waste (red lid), mixed recycling (yellow lid), organics (green lid).
Future waste stream Glass (purple lid).

Supplier Specification

Source Separation Systems – MULTISORT SYSTEMS (details as above)

- MULTISORT 60L BASE DARK GREY (MS-60L-DGRY)
- MULTISORT LGE LID LANDFILL (MS-LGE-LANR)
- MULTISORT LGE LID RECYCLE YELLOW (MS-LGE-RECY)
- MULTISORT LGE LID ORGANICS (MS-LGE-ORGG)
- MULTISORT LGE LID RECYCLING GLASS ONLY (MS-LGE-GLP) – Future expansion

Method Recycling

- 60L Red Landfill
- 60L Yellow Mixed Recycling
- 60L Green Organics
- 60L Purple Glass – Future expansion

Other Spaces

Utility Areas

- Space should be allowed for a 120L wheelie bin for paper recycling and a secure destruction bin (wheelie bins supplied by waste contractor via Property Services).

Toilets

- A general waste bin is to be provided in the handwashing area for miscellaneous items (paper towels are only provided in accessible toilets).

Streetscape – External/Internal Circulation Spaces (high spec, urban aesthetic)

Twin-Bin System

General waste (red signage) and mixed recycling (yellow signage)

Supplier Specification | **Design**

FURPHY FOUNDRY

- Litter Receptacle 120lt
  RMIT Logo Custom (no ashtray)
- Recycling Receptacle 120lt
  RMIT Logo Custom

Finishes:

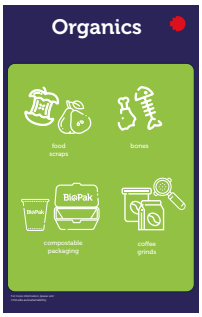
- External – Stainless steel
- Internal Circulation Spaces – Powder coated

FURPHY FOUNDRY
Phone: 03 9810 3183
furphyfoundry.com.au

Sample Bin Signage

Consistent signage across all bins, buildings and campuses is key to increasing recycling rates and reducing contamination of recyclable waste streams. Given that RMIT has such a diverse range of people that interact with the waste system, it is important to show both textually and visually which bin waste should be placed into.

Example RMIT signage for the waste streams is as follows:



Appendix C: Stakeholder Engagement and Communication

An important part of the plan is ensuring that all stakeholders are aware of their roles and responsibilities and any issues with the plan are addressed early with corrective actions put in place. The following section is used to discuss how communications and engagement methods can be used to assist in the implementation and consistency of this circular economy plan.

A stakeholder engagement matrix has been used to identify all the relevant stakeholders to this plan and provides an analysis of their roles in delivering the plan's objectives. The completed matrix is utilised internally by the Sustainability Team in Property Services and is referenced in the development of communication and engagement activities. The table below provides a range of example initiatives that can be used to engage with the relevant stakeholders.

Target Audience	Communications/ Engagement Initiatives
All	▪ Consistent signage across all bins, buildings and campuses ▪ Utilise digital signage across the University with positive messaging to increase engagement (colourful and fun) ▪ Set goals and target values that the University can work towards and be inclusive of the RMIT community in achieving these targets. Celebrate the success together ▪ Update the sustainability section of the RMIT website to display up-to-date and accurate information ▪ News items on RMIT home page carousel ▪ Social media messaging ▪ Positive messaging narrative.
Students	▪ Engagement through learning and teaching – supporting student projects ▪ Sustainability Ambassadors – students participating in the program are provided with the resources and training on landfill diversion principles ▪ Competitions and quizzes (interactive, repeatable, eye-catching) ▪ Video competition for creative student messaging on waste minimisation and recycling ▪ Visual waste displays/signage and demonstrations to promote behavioural change ▪ Social media posts ▪ Interactive/art installations in high-waste volume areas ▪ Use of sustainability space to hold events to promote recycling and upcycling events ▪ Opportunity for a container deposit scheme ▪ Campus store features reusable item displays.
Staff	▪ Demonstrate senior leaders are 'walking the talk' on waste ▪ Green Impact – staff participating in the program are provided with the resources and training on waste management practices. ▪ Clear guidance and stories on WorkLife site. ▪ Be open to feedback: — Prepare answers to questions — Match their concern with benefits — Provide examples of where the system has been implemented and is working.
Retailers	▪ Signage displayed at point of sale promoting reuse and indicating packaging is recyclable ▪ Holding inductions and briefings on waste management ▪ Bi-annual sustainability catch-ups ▪ Informal visits to retail tenancy to promote landfill diversion ▪ Container reuse/recycle schemes (discounts) for cost/ environmental savings ▪ Keeping an open dialogue with retailers and empowering retailers to introduce their own ideas.

Cleaning contractor	▪ Appropriate tender and procurement process of cleaning contract by RMIT to ensure sustainability requirements are addressed ▪ Ensuring the cleaning contractor has procedures in place whereby staff are properly trained in waste segregation and disposal ▪ Providing a cleaning contractor with consistent information as to what contamination rates ▪ Cleaners supplying visual (photos) materials that indicate contamination to RMIT ▪ Monthly meetings reviewing recent data and sustainability KPIs.
Waste contractor	▪ Appropriate tender and procurement process of waste contract by RMIT to ensure sustainability requirements are addressed ▪ Provision of the correct bins to RMIT ▪ Ensuring waste contractor has procedures in place whereby staff are properly trained in waste segregation and disposal. Monthly meetings reviewing recent data and sustainability KPIs.

Engagement Channels

There are several engagement methods which can be used to reinforce this plan and help improve waste management initiatives, these include:

- Stakeholder meetings
- Toolbox talks
- Social media
- Sustainability newsletter
- Downloadable materials
- Website
- WorkLife update
- Visual waste displays
- Events
- Signage (physical and digital).

rmit.edu.au/sustainability