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PLYMOUTH

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# WASTE MANAGEMENT POLICY AND ACTION PLAN

2021 - 2025

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## Introduction

The University has a long-standing commitment to sustainable waste management, recycling and protection of the environment, and has ambitious aims to improve upon our already high standing as one of the most sustainable universities in the UK.

This Plan provides information on the strategy for managing recycling and waste recycling at the University, reviews performance and highlights all of the University's waste streams and how they are managed. The plan identifies possible improvements and incentives, and makes recommendations on further reductions and how these can contribute to our targets through the Action Plan.

Any material that we discard or no longer want, may be considered to be a waste stream. Whether the material has a value or can be sold, does not impact on the fact if a material is waste. Our first priority as a University should be to reduce our waste and support a more circular economy.

Waste is classified into two main categories, hazardous and non-hazardous waste. Both hazardous and non-hazardous waste streams have some materials that can and cannot be recycled, and after prevention of waste generation it should be the aim of the University to recycle as much as possible.

## Strategy

The University aims to reduce its scope 3 carbon footprint associated with waste generation, as well as to reduce costs associated with waste management, and to maximise rebates for recycling. Linking with procurement, the University aims to support the transition to a circular economy, focusing on minimising waste generation. To support this the University community needs to ensure it minimises waste generation where possible, and to dispose of waste correctly to ensure we maximise recycling.

For more information on how to comply with University processes for disposing of waste in order to comply with Duty of Care obligations please view our Waste Code of Practice and the Sustainability [SharePoint site waste pages](#). [The Waste Code of Practice](#) also outlines our legal obligations for waste disposal and how we meet them.

## Purpose and Objectives

The purpose of this Energy and Water Plan is to contribute towards the United Nations Sustainable Development Goals, specifically:

- Sustainable Cities and Communities (11)
- Responsible Consumption and Production (12)
- Climate Action (13)
- Life Below Water (14)

The Action Plan follows these objectives:

1. Reduce the amount of waste generated, measured per student to 20kg or less by 2027
2. Increase recycle and reuse such that non-recyclable waste per student is reduced to 6kg or less by 2027
3. Raise awareness of waste and recycling standards and legal responsibilities of staff and students through the deployment of eLearning modules and webpage refresh

## Links to other policies

The action plan directly supports the University's 'Strategy 2030: a future of excellence', particularly in addressing the ambition to achieve resilience, sustainability and effectiveness. Other relevant plans and strategies for sustainability include:

- Biodiversity Plan
- Carbon Management Plan and Strategy
- Environmental Policy
- Estate and Facilities Campus Strategies
- ISO 14001:2015
- Plan for Plastics
- Waste Code of Practice

## Governance

The University Executive Group has overall responsibility for the delivery of the Waste Management Plan. Delegated responsibility for achieving this plan is with the Sustainability Advisory Group (SAG).

This group brings together representatives from across the University including professional services, research and teaching and learning. The SAG reports to UEG and the Board of Governors. The members of SAG have oversight of the programme to encourage delivery and identify, and remove, the barriers to success.

The Waste Management Plan is intended to be implemented from 2021 to 2026 (see Action plan) and will be reviewed annually. We receive monthly waste weight data for reporting and monitoring from our waste contractors, which we can use to measure our performance of the Waste Management Action Plan against the KPIs. Waste and recycling performance reporting is included in the annual sustainability reports, and also used for the Higher Education Statistics Agency (HESA) annual Estate Management Records (EMR).

## Responsibilities

### **Staff and Students**

Engage and support delivery of the plan, and to:

- Consider the packaging and end of life of products prior to purchase and prioritise those that can re-enter the circular economy by being re-used or recycled.
- Separate waste items, including removing paper from folders and plastic sleeves.
- Empty liquid from any containers before putting bottles/cups etc. in the bins.
- Fold down cardboard and put in or near recycling bins.
- Do not over fill bags to prevent manual handling injury and/or spillage.
- Securely tie bags ahead of collection.
- Ensure confidential waste materials are stored securely until collected.
- Deposit glass bottles and jars directly in the bottle bank located outside the Scott Recycling and Waste Yard.

### **Sustainability Advisory Group**

Agree the waste management plan and review actions within annually provided by the Procurement and Waste working Group. Report progress into the University Executive Group.

**Head of Facilities & Student Accommodation**

Management of waste and recycling collection and contracts across the University. Ensuring the waste contractor adheres to the waste service delivery plan.

**Head of Procurement**

Supports the facilitation of waste reduction from purchasing at the University.

**Head of Sustainability**

Lead on delivering actions within the waste management plan not related to grounds maintenance in collaboration with Head of Facilities & Student Accommodation.

**Sustainable Procurement & Waste Working Group**

Report into SAG with actions and improvements. The chair provides an annual update of actions to SAG.

**Estates Trade and Project Teams**

To ensure that contractors and workers on site are dealing with waste appropriately and are taking steps to minimise waste generated.

**Centre for Sustainable Futures**

Help promote and engage in education benefiting this plan.

**Sustainable Earth Institute**

Help promote and engage in research benefiting this plan.

**Waste Contractor**

Assist with engagement materials, searching for new recycling opportunities, and attend events to promote recycling and waste reduction as specified in the waste service delivery plan.

**Other Contractors**

All contractors are required to comply with our [Waste Code of Practice](#). This includes ensuring all waste is stored securely in suitable containers prior to disposal, and that waste transfer notes are supplied for all waste removed from site.

## Scope

This plan covers the waste generated through the University's recycling and waste management contract which applies to the following sites: Cookworthy, Royal William Yard, Marine Station, Emdeck, and John Bull / Derriford Research Facility. However, it is encouraged to be applied to all sites, outside of this management boundary.

## Performance to date

We receive our waste weight data for reporting and monitoring from our waste contractors. We have regular collections of three main different waste streams, and collate this data monthly: general waste, mixed recycling, and food waste. Other types of waste, such as mixed glass and WEEE are not collected as frequently, and we collate these items to give us annual weight totals. Some of the specialist waste, like clinical hazardous and sharps for example, are collected by a third party organised by our primary contractors, and we likewise receive the weight data through in our regular reports.

## Annual waste and recycling performance

The graph below represents the total waste figures and percentage of recycled waste since 2007 – 08 academic year. In 2017, a new waste and recycling contract was put in place. Since then, we have seen the introduction of a new reporting and monitoring system for waste, and new recycling signs for our bins. Additional sites have also been incorporated into the contract resulting in more waste being managed and monitored centrally.

The impact of Covid-19 can be clearly seen in the last two years with a significant reduction in the amount of waste generated, due to the impact of reduced numbers of staff and students physically onsite. Waste generation will inevitably increase as campus population returns, however, changes in behaviour alongside increased communications on waste will hopefully see a continual improvement in waste generation and recycling. Plans for engagement with staff and students to proactively reduce waste production are given in the action plan.



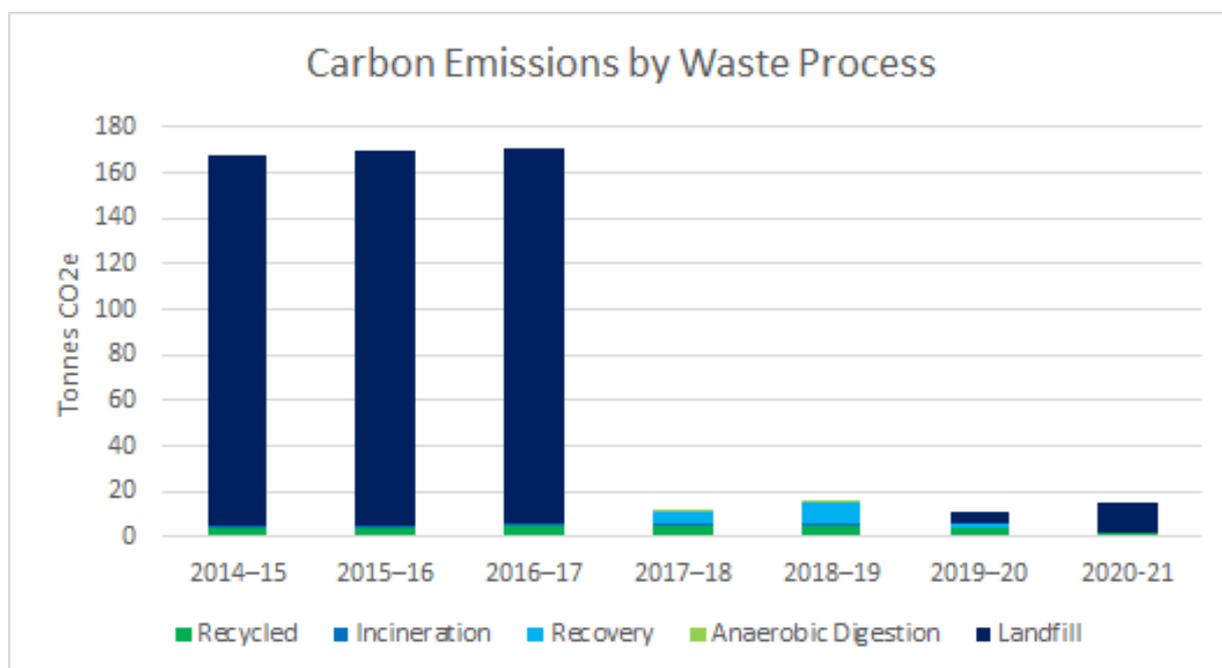
In the academic year of 2017-18 (which represents a typical, recent year) the University generated over 550 tonnes of waste. This resulted in our sites producing 29 kg per student. Tonnage data for specific waste streams are detailed below from 2014 to 2021, with the percentages showing the change on the previous year. The annual change in waste per student number is also given in next table. The waste produced per student dropped below our target of 20kg per student in the years 2019-20 and 2020-21, but this is as a result of the Covid-19 pandemic disrupting campus activity and is likely to rise again once full campus activity resumes.

Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
<b>Total Waste (tonnes)</b>	573.34	595.03	633.23	558.45	697.59	301.35	137.24
<b>Total Waste Change from Previous Year</b>	22%	4%	6%	-12%	25%	-57%	-54%
<b>Waste per Student (kg)</b>	29.0	30.6	32.6	29.4	40.8	18.6	7.2

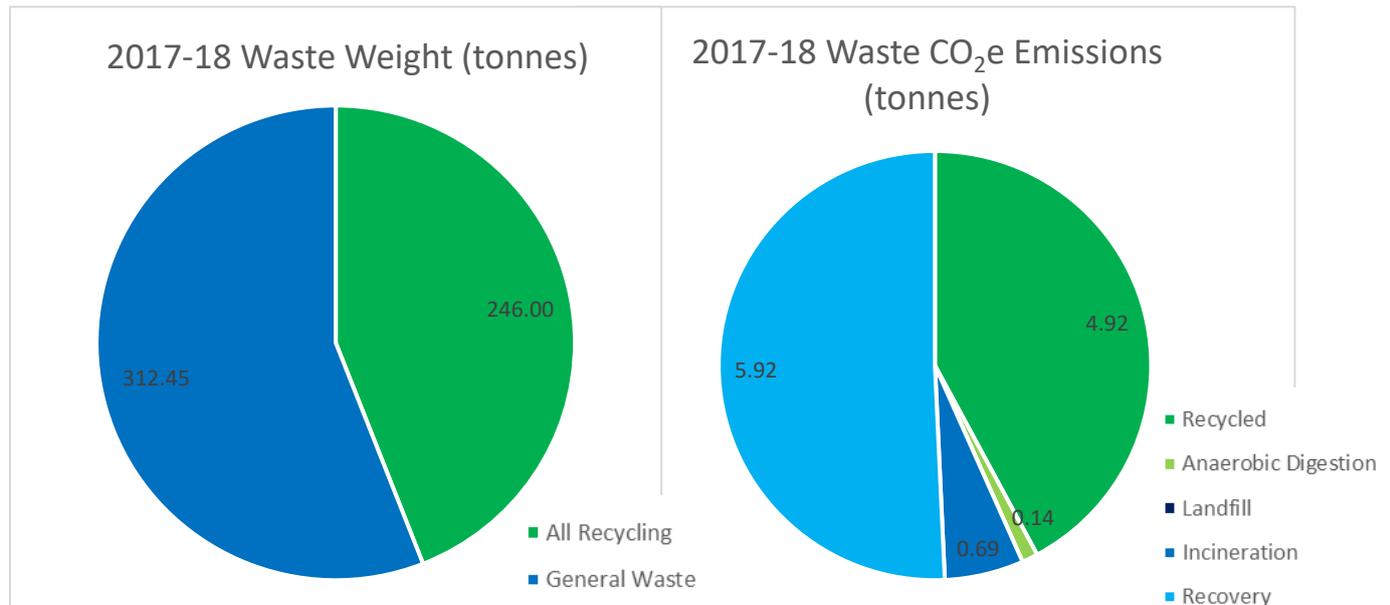
Recycled Waste (tonnes)	199.98	216.46	251.33	246.00	252.39	175.48	81.74
Percentage of Total Waste Recycled	35%	36%	40%	44%	36%	58%	60%
Energy from Waste (tonnes)	0.00	0.00	0.00	266.58	429.98	106.32	21.9
Anaerobic Digestion (tonnes)	-	-	18.00	15.50	13.76	3.84	0.18
Incineration (tonnes)	24.17	24.95	28.15	32.67	15.22	8.99	5.44
Landfill (tonnes)	349.19	353.62	353.75	13.20	0.00	10.56	27.99

### Waste and Recycling carbon performance

The graphs below show our performance in carbon equivalent emissions from the University's waste. It can be clearly seen that by removing most of the waste going to landfill from changing our management contracts in 2017-18 we have had a substantial reduction in waste CO<sub>2</sub>e emissions equating to -89.6% from the previous year.



The two pie charts expand the data for the year 2017-18. The charts highlight that there are currently negligible differences in the carbon estimations based on government conversion factors between our recycling and general waste routes. However, we have made large improvements in the emissions of general waste by avoiding landfill as much as currently possible. Despite our reporting of carbon emissions from waste routes showing little difference between recycling and energy recovery, materials produced from recycling are considered to have a lower embodied carbon footprint (note this is not considered in the University's scope of carbon). There are numerous other environmental benefits to recycling, that we currently do not measure, such as avoidance of the particulate emissions from energy recovery of general waste.



### Bin Surveys

Bin surveys are conducted at chosen, irregular times to assess the effectiveness of certain waste streams. Two surveys were conducted in April and May 2022 on the SU roof external bins to assess contamination of recycling in this area. The contamination here was high, such that only 1/7 recycling bags were appropriate to send to recycling from the April survey, and 0/7 from the May survey. The April survey was conducted as a visual assessment, whereas the May survey was undertaken by utilising weights of each material category. These surveys will be used to inform actions on waste reduction, by identifying target materials. The full results may be found on the Sustainability SharePoint site [waste pages](#).

SU Roof General Waste Bins	April Visual	May Weight	SU Roof Recycling Waste Bins	April Visual	May Weight
Hard Plastic (e.g bottles)	5%	10%	Hard Plastic (e.g bottles)	15%	18%
Food packaging	40%	10%	Food packaging	23%	28%
paper & card	28%	5%	paper & card	21%	12%
Glass	0%	10%	Glass	1%	0%
Paper cups	5%	7%	Paper cups	15%	15%
Cans	4%	2%	Cans	20%	17%
Food Waste	3%	21%	Food Waste	3%	10%
Other non-rec	15%	34%	Other non-rec	2%	0%

General	April	May	Recycling	April	May
non-rec	80%	73%	non-rec	43%	53%
Mixed Recycling	20%	17%	Mixed Recycling	56%	47%
other rec	0%	10%	other rec	1%	0%

### Other Achievements

Action	Year Completed
Began trial of Warp It resource re-use system	2021
Develop a sustainability eLearning module with information on waste and links to further resources	2021
Introduce coffee cup recycling on campus	2021
Launch of the Ditch the Disposables campaign	2018
Joining of major nationwide initiatives, including the WRAP (Waste and Resources Action Programme) and the UK Plastics Pact	2018
Signing of the Phase 1 Plastic Free Plymouth pledge and joining the Ocean City Plastics Task Force, which included removing at least three items of plastic: <ul style="list-style-type: none"> <li>o All takeaway containers from UCSP outlets to be biodegradable</li> <li>o Removal of plastic straws from all UCSP and UPSU outlets</li> <li>o Glass bottles used for hospitality</li> </ul>	2018
Publication of our <a href="#">Plan for Plastics</a>	2018
Create new recycling and waste signage to inform University Staff and Students of what goes where	2018
Simplify recycling on campus by having Dry Mixed Recycling, rather than requiring greater separation	2017
Minimise waste going to landfill with contract specification to send all general waste to the MVV energy from waste site in Devonport.	2017

## Waste Action Plan

Objective	Action	Measurement	SDG	Responsibility	Date
Reduce the amount of waste generated to 20kg per student or less by 2027	Host upcycling and repair workshops.	Events and attendance record.	11, 12	Estates & Facilities, UPSU	2022-23
	Create and share zero waste map to encourage conversations around reducing single use items.	Zero waste map published on SharePoint site and social media.	11, 12	Estates & Facilities	2021-22
	Conduct an audit of disposables with UCSP in the catering outlets to identify opportunities to target single use items.	Minutes from SAG working group.	12	Estates & Facilities, UCSP	2022-23
	Introduce additional metal cutlery in catering outlets for those dining inside the establishments.	Visual change from single use, and reduction in single use cutlery purchased.	12	Estates and Facilities, UCSP	2022-23
	Review the current collection of data on currently re-used Items, such as IT and furniture, to ensure data is captured centrally.	Report of re-use baseline.	11, 12	Estates and Facilities, TIS	2022-23
	Introduce Warp-it platform to allow the distribution of spare materials and furniture around the campus, to prevent good items ending up as waste and to prevent new procurement of items in storage.	Numbers of staff registered with Warp It.	11, 12	Estates & Facilities, Procurement	2021-22
	Engage students and staff through a paper reduction campaign.	Reduced purchase of paper items, and record of events.	11, 12	Estates & Facilities	2022-23
	Work with UCSP to implement an increased single use cup levy and simplify the price difference from current system to be sustainable for the catering sales as well as to adequately incentivise reusable cups.	Publicised re-usable cup incentive consistent across the	11, 12	UCSP	2021-22

		University campus and its sites.			
	Evaluate procurement guidance documentation to include consideration of packaging materials as well as end of life process, and encourage the use of low packaged options and reusing items stored by the University.	Refreshed procurement guidance.	12	Estates & Facilities, Procurement	2022-23

Increase recycle and reuse such that non-recyclable waste per student is reduced to 6kg or less by 2027	Run a social media campaign on waste, particularly utilising Instagram but making sure posts are done across social media, including during freshers week, green week and world recycling day.	Social media posts on these days.	12	Estates & Facilities	2021-22
	Working with marketing to provide additional materials including physical and digital posters on recycling to raise awareness and educate on what goes where.	Commissioned digital and physical content.	12	Estates & Facilities, External Relations	2022-23
	Review opportunities to run relevant waste workshops for student clubs and societies on materials and prevention.	Record of the number of workshop events.	12	Estates & Facilities, UPSU	2022-23
	Visible and informative events including during green week and workshops for open days and other events.	Number of events and attendees.	12	Estates & Facilities	2022-23
	Create a Student Green Champions Network to gamify and encourage recycling behaviours as well as to provide a volunteer forum.	Network establishment.	12, 13	Estates & Facilities	2021-22
	Improvements to be made to the sustainability webpages on waste and recycling, responding to feedback on ease of use.	Visual page changes and data from google analytics.	12	Estates & Facilities	2022-23
	Review options for improving access to glass recycling around the campus to make it more convenient for staff and students.	Review to be discussed in the relevant SAG working group and	11, 12	Estates & Facilities	2023-24

		create new actions. Minutes from SAG working group.			
	Work with our waste contractor to review waste audits and identify additional materials for recycling.	Conduct waste audits with contractor and identify at least 1 target material.	11, 12	Estates & Facilities	2023-24
	Introduce takeaway hot drink cup recycling bins.	Bins established on the main campus.	12, 13	Estates and Facilities, UCSP	2021-22
	Review the number of food bins throughout campus and potential to expand.	Discuss review with relevant SAG working group and create new actions. Minutes from SAG working group.	12, 13	Estates and Facilities, UCSP	2023-24
	Develop a packaging framework with the Marine Institute researchers to create a list of approved packaging methods for purchasing decisions	Creation of framework.	12, 14	Estates & Facilities, Marine Research Institute	2022-23
	Use material that is easier to recycle - for example, waxed or plastic cardboard can sit between the two waste streams, and avoiding them would simplify messaging and limit contamination.	Materials audit report.	12, 13	Procurement, UCSP, UPSU	2022-23
	Review paper specification with External Relations and Procurement, including review of printed marketing materials. Glossy paper can be recycled, but presents a confusing material to sort and would be simplified if promoters used a clear material.	Paper audit report.	12	External Relations, UPSU	2022-23
Raise awareness of waste and recycling standards and legal	Raise awareness of ISO 14001 and compliance requirements.	Sustainability SharePoint, eLearning module.	12	Estates & Facilities	2021-22

responsibilities of staff and students through the deployment of eLearning modules and webpage refresh	Update waste code of practice.	Republished Code of Practice.	12	Estates & Facilities	2022-23
	Ensure legal compliance register with 14001 is up to date.	Compliance register updated.	12	Estates & Facilities	Ongoing
	Create a waste compliance training module for our internal pages.	Training module published on our SharePoint site.	12	Estates & Facilities	2021-22

## Future Projects

Future projects need to continue to support the move towards a circular economy. The circular economy describes a system in opposition to the linear model of production-consumption-waste, whereby resources are put back into the production or consumption part of the cycle after use. This system is far more sustainable, as it cuts the use of raw materials as well as cutting the disposal of items, both of which can have negative environmental and social consequences. We can support this with projects that focus on materials (both consumables and their packaging) that can re-enter the cycle in the form of production (recycling) or consumption (re-using).



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