Heriot-Watt University Waste Prevention & Management Plan

August 2025

Introduction and Context

This plan to prevent, reduce and manage waste at Heriot-Watt University across its global campuses, will support the delivery of the University's 2024 Climate Action Framework. Setting out a categorised action plan, it highlights the pathway that the University endeavours to take to achieve the waste management targets outlined within this document. Delivering this waste reduction and management plan will align with strategic commitments 1, 2 and 5 of the Climate Action Framework:

1. To inform and empower our global community in taking personal and collective action to assist in delivering the SDGs – by creating a better-informed community when it comes to waste reduction, reuse, recycling and disposal
2. To commit to achieving net zero – by reducing the quantity of materials that we waste, we will be enabling upstream and downstream reductions in scope 3 carbon emissions associated with material production and waste disposal
5. To challenge ourselves to achieve progress towards the UN's Sustainable Development Goals (SDGs) – specifically, through delivering the actions outlined in this plan, we will be working toward SDG 12: responsible consumption and production.

The waste plan will be delivered under the Climate Action Framework's Core Themes of Leadership and Governance, Estate and Energy, and Sustainable Procurement and Supply Chain. Successful delivery will require engagement with, and input of, all University departments and schools. The action table sets out who will be involved, and what working together for a successful reduction in University waste will look like. This plan is intended to be a working document, and the action table will be reviewed annually to track progress and identify further actions which could be taken.

Scope of this plan

Any approach to waste reduction needs to be holistic, and as such the plan includes actions relating to reducing waste across the University's entire estate, from cafeterias to labs, offices and halls. In addition, the plan outlines specific strategies to obtain greater oversight of, reduce, and better-manage the waste streams originating from teaching, learning and research. This includes addressing hazardous waste streams such as clinical waste and chemical waste.

Heriot-Watt is a global University, and this plan covers all campuses. While the objectives apply across all campuses, targets are country specific. This is in respect of the difference in availability of waste and recycling data across the campuses and considers the differences in service provision by the international municipalities in which the University operates. For example, much of Dubai's waste is sent to landfill and fewer facilities are available for the recycling of cardboard, aluminium and other packaging materials. Therefore, it is difficult to achieve the same recycling rates as Scotland.

Consultees

In developing this plan, a program of consultation was undertaken to ensure deliverability, identify where the Estates and Global Environmental Sustainability teams could support colleagues and students with waste reduction and management, and to gain greater insight into the waste streams that the University produces. Lab technicians, Health and Safety colleagues, cleaning teams, students, Estates colleagues and researchers were consulted during the drafting of this plan to ensure an institution-wide approach to waste management.

Waste baseline

Scotland Campuses

Based on current data, Heriot-Watt University estimates that it has a 35% recycling rate across all non-hazardous waste streams in Scotland. The baseline has been applied to non-hazardous waste only because it is possible to reduce these waste streams without impacting upon research functions. The below table shows the breakdown of waste and recycling across Scotland campuses (Orkney, Galashiels and Edinburgh). Total non-hazardous waste per head is 60.3 Kg for 13,465 people (11,165 students and 2300 staff, 2023-4) based on a total of 813 tonnes of waste.

Waste breakdown Scotland campuses (2023/4):	**Tonnes (2023-24, actual)**	**% of total waste**	**Primary disposal method**	**Scope**
Household/Municipal/Domestic waste –	528	64.9	Energy From Waste	These figures cover all waste from communal areas, University campus locations (e.g. teaching spaces; staff offices; library) and student halls for Edinburgh, Orkney and Scottish Borders campuses
Organic: food and drink waste	21	2.6	Anaerobic digestion	
Paper and board: mixed	21	2.6	Recycled	
WEEE - mixed	6	0.7	Recycled	
Glass	37	4.6	Recycled	
Mixed dry recyclates	197	24.2	Recycled	
Wood	3	0.4	Recycled	
Total waste Scotland	**813**	**100**		

Dubai and Malaysia Campuses

Available data from our Dubai and Malaysia campuses is presented below. The data provides an insight into the methods of waste management, and the destination of campus waste. However, the picture is incomplete, and contains several estimations. A key component of this plan will involve engaging with colleagues at the Dubai and Malaysia campuses to identify a suitable baseline of similar detail to that identified for Scotland campuses.

Waste breakdown Malaysia (2023/4):	**Tonnes (annual estimate)**	**Primary contractor**	**Primary disposal method**	**Scope**
Household/Municipal/Domestic Waste –	Unknown		Incineration	These recycling figures cover outputs from the Putrajaya campus building only – catering areas, and teaching spaces.
Boxes	1.04	Alam Flora Sdn Bhd	Recycled	
Paper	0.3	Alam Flora Sdn Bhd	Recycled	
Plastic	0.4	Alam Flora Sdn Bhd	Recycled	
Total waste Malaysia	**Unknown**			
Waste breakdown Dubai (2023/4):	**Tonnes (annual estimate)**	**Primary contractor**	**Primary disposal method**	**Scope**
Household/Municipal/Domestic Waste –	8.2	BEAAH	Landfill	Dubai campus building, managed by Landlord – catering areas, and teaching spaces.
Paper	0.3	BEAAH	Recycled	
Plastic	0.36	Renie	Recycled	

Targets and Objectives

To guide its achievement in reducing waste and improving recycling rates across its global campuses, Heriot-Watt University has set the below targets:

Scotland

- A 25% reduction in recycling bin contamination
- An increase from a 35% recycling rate (baseline) to a 45% recycling rate by 2028; and a 65% recycling rate by 2035
- Reduce waste per head from 60.3 Kg per head to 51.3 (15% reduction) by 2028, and 36.2 (40% reduction) by 2035
- Increase food waste recycling rates by 20% by 2028, through the introduction of composting and through greater roll-out of food waste collection services

Dubai

- Identify a comprehensive baseline of recycling rate and waste per head, and set appropriate reduction targets in 2026
- Introduce a food waste recycling system, with food waste collected for recycling accounting for 12% of total waste weight by 2028

Malaysia

- Identify a comprehensive baseline of recycling rate and waste per head, and set appropriate reduction targets in 2026

The Scotland targets are in line with other Scottish and UK Universities' waste reduction targets, which vary between a 60-70% recycling rate by 2035. Such an increase in recycling rate is deemed to be suitably ambitious, yet achievable through a combination of pro-recycling behaviour change interventions and working with suppliers to reduce upstream and downstream non-recyclable waste. Confidence in the total waste per head reduction target is bolstered by new and incoming legislation which supports waste reduction, such as the Extended Producer Responsibility. This gives producers of packaging greater responsibility when it comes to managing their products at end of life, and as such is expected to lead to widespread embedding of more circular economy principles and an overall reduction of waste. The 20% target for increasing the recycling of food waste is based upon anticipation of a greater roll-out of food waste bins in student halls. Targets in Dubai and Malaysia relate to achieving a greater oversight of our waste streams, thus improving the scope for management. The University plans to achieve these targets by working toward the following five objectives:

1. Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle
2. Identify and provide more 'Operational Enablers' to facilitate better recycling and waste reduction
3. Encourage pro-recycling behaviours in students and staff through incentives and prompts
4. Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, to reduce resource waste and encourage financial savings.
5. Centralise the University's recycling function to ensure oversight for reporting and compliance.

Waste Hierarchy

The objectives consider the waste hierarchy, outlined below in order of most preferable to least preferable. In 2023-4, our Scotland campuses did not send any waste to landfill. Sanitary and clinical waste was disposed of via incineration without energy recovery.

Prevent	Avoiding purchase of products which will be wasted; use non-disposables – sustainable procurement
Plan for Reuse	Repurposing products instead of disposing
Refurbish/repurpose	Cleaning, rebuilding, reinventing, repairing items for another use
Recycle	Turning waste into a new substance or product by industrial processes
Dispose	Incineration/landfill (without energy recovery).

Governance

Waste and Recycling is the joint responsibility of Global Environmental Sustainability and Estates. Operational elements of the Waste Reduction & Management Plan – primarily those relating to objectives 2, 4 and 5 – will be delivered by the Estates team. High-level sign-off on targets and financial decisions will be sought from the Global Operations Executive. Communications and engagement, political, and behaviour change elements of this plan, relating to objectives 1, 3, 4 and 5 will be delivered by the Global Environmental Sustainability team and governed by the University Committee for Global Environmental Sustainability.

Financing

No specific finances have been set aside for any of the actions discussed in this plan. Waste management is a significant source of operational expenditure, with general waste collections being more expensive than dry mixed recycling collections. By recycling rates year on year, it is expected that a cost saving can be recuperated.

Waste Management Scotland Campuses

Estates & Facilities oversee general waste and recycling across Edinburgh and Scottish Borders (Jean Muir student Village and High Mill) campuses, except for Borders College and The Robert Rendall Building/ICIT (Orkney) which are managed by the building operators and services recharged to Heriot-Watt depending on occupancy. The Operations Manager – Landscapes & Recycling coordinates waste collections from the Edinburgh campus with the main contractor, currently Biffa. A chargehand is appointed to oversee correct use of the recycling and general waste bins, and liaise with the contractor regarding any waste disposal issues. **Cleaning & Residential Services** employ ad-hoc contractors to manage uplift of bulky items, such as mattresses and bedding which has reached the end of its life. This team also oversee the British Heart Foundation donation bins found on the Edinburgh campus. Lab stores managers oversee uplift of hazardous laboratory waste, with support from the Scientific Safety Officer to ensure compliance with the relevant safety legislation.

Waste Management Dubai

Waste management is the responsibility of the building landlord, who appoint the waste contractor BEEAH. General waste is destined for landfill. Plastic recycling is managed by Heriot-Watt's Facilities Management. Plastic is recycled via the Renie bins, which accept plastic bottle waste

through barcode recognition technology. The University is looking to appoint an organisation to recycle organic waste. Heriot-Watt Dubai is largely a plastic-free campus, minimising the size of this waste stream at the outset. Any surplus paper is recycled, amounting to 0.3 tonnes in 2024-5.

Waste management Malaysia

Waste management at the Malaysia campus is overseen by the Facilities Manager. Waste is collected by Alam Flora Sdn Bhd, one of the leading waste management companies in Malaysia. Waste is separated at source into recycling – comprised of 3 separate streams of plastic, card and paper. General waste reaches an energy-from-waste facility.

Action Plan

The table below outlines actions which have been identified as areas for improvement. The actions will be continually tracked and updated on a corresponding spreadsheet, and the plan will be re-published annually to show progress against the actions, and changes including addition of new and revision of prior actions.

Action	Notes	Objective	What does success look like?	Proposed owner	Timeframe
Improving recycling in public areas					
Install informative signs on all bins in public areas highlighting what can and can't be recycled	Biffa produce some useful graphics which Residential and Cleaning Services are coordinating.	Educate to increase staff and student understanding of recycling and waste reduction best-practice	Install bin signs by October 2025	Estates - FM	By October 2026
Explore options for correct disposal of all PLA cutlery and cups etc, and ensure that staff and students know not to recycle them	PLA (bioplastic) is not compatible with usual food-grade waste disposal procedures, such as anaerobic digestion and composting (with or without heat). It must be broken down in a specialist facility. We do not currently collect it and send it to such a facility.	1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	Interim: PLA placed in general waste bin, instead of the recycling bin, by December 2025. Longer-term: Subject to budget, establish a partnership with an organisation that can dispose of this waste correctly. Subject to the financial commitments involved, this could be 2027.	Hospitality Services	By December 2026
Install pure food waste composting facilities for food waste derived from Hugh Nisbet kitchens, for use by Landscape Services (Edinburgh campus)	IntelliDigest, a HWU Alumna-run start-up based on campus, would be a suitable partner for this pilot.	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Compost generated in kitchens which is then utilised by the Landscapes team in their day to day operations	Hospitality Services	September 2025 – May 2026

Install organic waste bins in public-facing catering areas	These would be destined for anaerobic digestion facilities.	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Organic waste bins installed and successfully utilised in Edinburgh, Scottish Borders and Dubai campuses	Hospitality Services/ Dubai Facilities Management	September 2025 – May 2026
Obtain recycling banks for main central catering area	These would include a "Binformation" board on where to deposit canteen disposables e.g. PLA – general waste; bottles – recycling	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Recycling banks installed and successfully utilised	Estates	September 2025 – May 2026
Engagement					
Collaborate with the student body to co-create student communications which support better recycling	For example, communications which help new students understand recycling during Welcome Week	1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	With support from the University, students are able to create initiatives to help their peers reduce waste and recycle.	GES	October 2026
Produce guidance notes for waste disposal	To be hosted on Estates and GES Sharepoints, with QR code links around campus e.g. on bins themselves.	1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	Guidance notes live on sharepoint by June 2025	GES	By October 2025
Improve on-campus recycling through educational campaigns	Residential & Cleaning Services/GES suggested "Binsights" - a sticker-labelling campaign which places labels on packaging in accordance with which bin it should go in. A waste audit before, during, and after the campaign can track behaviour change.	1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	Campaign operates 2026. Increases in recycling rate driven by informed behaviour change	GES/Comms	By July 2026

Install food waste bins in large offices across all global campuses where food waste is recycled separately.	This will enable colleagues to recycle teabags, coffee grinds, and lunch leftovers	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	A notable increase in the amount of organic waste collected by our waste carrier	Residential & Cleaning Services	August 2026-May 2027
Install food waste bins in halls (Edinburgh campus and Jean Muir Student Village, Galashiels)	To ensure correct usage, we will produce guidance on food waste disposal. Initially, we will roll-out food waste caddies which are currently in stock. Further roll-out will be subject to budget.	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Food waste rolled out in all halls and successfully operational; bins regularly cleaned by students	Residential & Cleaning Services	August 2025-May 2026
Produce new posters for the tops of green and black recycling bins, to disseminate among schools and buildings.	Encourage schools to take responsibility for recycling	1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	Increases in recycling rate, measured across various schools/departments, driven by informed behaviour change	GES/Comms	By May 2026
Operational improvements to recycling functions: a whole-institution approach					
Identify a suitable waste baseline for Dubai and Malaysia	Liaise with local teams to identify a suitable baseline, ideally waste per head and, if possible, recycling rate.	Centralise the University's recycling function to ensure oversight for reporting and compliance.	Set appropriate reduction targets in the 2026 iteration of this waste plan	GES	September 2026
Create a template salvage plan for potential waste materials	This would then be implemented by project leads, for example of research projects involving high levels of waste disposal, or the end-of-term halls clearout	4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money/resources.	Salvage plan created	All schools/departments	August 2027-May 2028

Review the food, beverages and other items that we, and our subcontractors, sell across our global campuses to identify problematic packaging	For example that which is recyclable but only under specific conditions cannot be met by the University (e.g. Vegware; PLA)	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Items which have packaging that cannot be recycled on campus are either a) phased out or b) a system to facilitate recycling them externally is implemented	Hospitality Services	December 2025 – July 2026
Use BREEAM/SKA to reduce demolition/construction waste from new buildings/refurbs	A separate construction plan, which will emphasise waste reduction, is in early discussions.	4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	Construction waste mitigated where possible	Capital projects	Ongoing
Continue to use Edinburgh Remakery for IT equipment collections	IT equipment passed on to the Remakery is refurbished if possible, or stripped for parts, contributing to a circular economy.	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Continued donation of all end-of-life tech items year-on-year	Information Services	Ongoing
Ensure furniture is retained, reused and repaired and if it cannot be, then given away	Logistics ensure furniture reuse across the campus. However, this relies on different departments being aware that they can use Logistics Services	4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used	Zero furniture to skips	Logistics services	Ongoing
Embed requirement to recycle of lab plastics into 2026 waste contractor re-tender		5 Centralise the University's recycling function to ensure oversight of reporting and compliance	Contractor able - and contractually obliged - to collect this type of waste plastic for recycling	Technical Services	April 2026
Ensure that a helpdesk system for recycling queries is embedded into the Digital Transformation Team's work to improve the University's service desk	Helpdesk link leads to a recycling inbox managed by Estates. People can contact with their recycling questions/issues to address	5 Centralise the University's recycling function to ensure oversight of reporting and compliance	Helpdesk requests received instead of assumptions being made around waste disposal	Estates/GES	TBC, depending on IS helpdesk development timescales

Strategically review locations of external recycling bins to ensure placement of recycling bins beyond general waste bins	This will mitigate the issue of general waste being placed in the closest bin, which may be the recycling bin	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Increases in recycling rate driven by prompted behaviour change	Estates - Recycling	April 2026
Provide more brush-holed glass bins in strategic locations across campuses	Important to note the H&S implications of additional glass bins - must not be located more than a reasonable walk away from building doors to reduce the risk of dropped glass	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Addition of bins outside each Halls of Residence, and proximal to car parks of Robotarium and Hugh Nisbett	Estates	April 2026
Ensure waste is correctly and sustainably dealt with by contractor following collection	Visiting sites provides an opportunity for students to see waste processing	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Yearly visits to waste sorting and processing sites	Estates	Ongoing
Ensure that regular waste audits of internal and external bins are carried out to better understand current and potential recycle rates	This should be managed through the appointed contractor	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	bi-annual waste audits conducted by new waste contractor (2026)	Estates	Bi-annually
Draw up tender scoring criteria for April 2026 Edinburgh Campus contractor retender in accordance with these actions		5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Appointment of a contractor who can fulfil all expected obligations - April 2026	Estates	April 2026
Continue to work across departments to identify and support ad-hoc waste re-use initiatives		1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle		GES	Ongoing
Use the Renie platform in Dubai to track plastic recycling rates across the campus		5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	A clear view of recycling rates in Dubai, providing a baseline for future improvement	Estates - Dubai	Ongoing
Actively seek out and work with suppliers who facilitate a	For example, Oriam's astroturf comes from a	4 Encourage all staff to take future waste into account at	Multiple departments have re-use schemes in place for the	Estates/all departments	Ongoing

circular approach	supplier who collect and recycle the old astroturf.	inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	products or equipment that they use		
Governance					
Approval of this waste management plan and all actions by University Committee for Global Environmental Sustainability		5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Approval obtained	GES	May 2025
Set up a waste working group, involving representatives from Labs, departments, schools, Residential & Cleaning Services	The group will function as a forum for identifying waste streams and inefficiencies across departments, ensuring that waste reduction initiatives are cohesive, sharing knowledge and insight, and engaging across departments	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Group meeting quarterly; representatives from global campuses	Estates	By October 2025
Tighter oversight of purchased assets by procurement	To include an asset register of pieces of equipment and materials purchased, with a projected lifespan and end-of-life plan	4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	Asset register complete	Procurement	2027
Initiatives					
Provide repair workshops for staff and students, in partnership with HWU EcoSoc		1.Engage with and educate staff and students, empowering and collaborating with them to reduce waste and recycle	Good attendance of repair workshops	Student Sustainability Forum, student societies, GES	Ongoing
Explore Ring-fencing disposable cup surcharge money for subsidised reusable cups and wash/water stations	Funding	3 Encourage pro-recycling behaviours in students and staff through incentives and prompts;	All disposable cup surcharge drawdown ring-fenced and spent on sustainable initiatives	Hospitality Services	Proposed

Support student-led initiatives through the Student Sustainability Fund	The Global Environmental Sustainability team will continue to seek opportunities to support student-led initiatives.	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	One waste reduction initiative per year	GES, Student Sustainability Forum	Proposed
Establish a free Shop, to be stocked with items collected at end of term for collection by new students in the new term	Operational enablers (University)	2 Identify and provide more 'Operational Enablers' to facilitate behaviour change toward better recycling, and waste reduction, by students and staff	Free Shop operates annually	Unirecycle group: GES/ Logistics/ Residential & Cleaning Services	Proposed
Identify, actively seek, and support colleagues with innovative waste management practices		4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	Colleagues approaching the sustainability team with a question about how to manage a certain type of waste are assisted effectively	GES	Ongoing
Recycling lab waste (inc. hazardous waste)					
Continue to engage with the LEAF framework to enable waste reduction activities in labs to count towards this accreditation.		3 Encourage pro-recycling behaviours in students and staff through incentives and prompts	All schools achieving at least Bronze in LEAF	GES	Ongoing
Promote use of the likes of Richmond Scientific or Uni Green Scheme for both purchasing and passing on second-hand equipment and assets	These initiatives have the functionality to save, and make, the University money	4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	Small income generated from selling equipment to these initiatives	GES	May 2027
Work with lab managers and our newly-appointed waste contractor (April 2026) to standardise sterilisation procedures to an acceptable standard for recyclability	Current guidance in IB3 labs is the most comprehensive for sterilising lab plastics lightly contaminated	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Standard set of guidance for sterilisation/autoclaving of ALL lab waste across all schools, by April 2026	Estates	March 2026 – July 2026

Introduce separate collection of sterilised lab plastics, polystyrene and autoclaved plastics	Either through retendered contractor (2026) or additional supplier	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Higher rates of recycling from schools containing wet labs	Estates	Proposed
Ensure that all lab technician leads who process hazardous waste are familiar with protocols and legislation relating to that waste stream		5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Continued compliance	Estates/Labs	Ongoing
Ensure consistent and accurate records are kept pertaining to all uplift of hazardous waste (e.g. lab chemicals), and sent to Estates for compliance, reporting and safekeeping	Waste Transfer Notes should be requested by the relevant labs and sent to Estates.	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	All WTNs received; WTNs match weights/quantities recorded in storage logbooks	Estates/Labs	Ongoing
Investigate the University's use of autoclaves, aiming to reduce energy whilst ensuring sterilisation of plastics which have come into contact with biological waste.	- Explore the capacity at which autoclaves are often used, and identify any opportunities for sharing autoclaves - Assess whether there is an energy use tradeoff for using autoclaves to sterilise non-legally-required lab plastics for the sake of recycling. Using the autoclave could use more energy than could be saved through recycling.	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Autoclaves always operated at at least 80% capacity thanks to an autoclave sharing scheme	Estates/Labs	May 2026-february 2027
Pilot the use of autoclavable re-usable glass containers to replace single-use plastics for some projects		4 Encourage all staff to take future waste into account at inception of projects, evaluating whether materials will be discarded, unused, or inefficiently used, thus being a waste of money and resources.	Output of a pilot to include summary of impact on staff workload, practicality of using glass, and cost savings/implications		Proposed

Conduct an audit to establish what waste streams and contractors are used by each school		5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Establishment of a document highlighting the individual waste streams	Estates	August 2025-May 2026
Put a process in place for all School and health and safety leads to report on their hazardous and other laboratory waste disposal for environmental compliance, through sharing waste transfer notices and logs with Estates	Total waste disposal must be recorded and submitted for Public Bodies Climate Change Duties reporting. Establishing this process will also ensure greater oversight of waste disposal activity and help spot operational inefficiencies.	5 Centralise the University's recycling function to ensure oversight of reporting and compliance and reduce operational inefficiencies	Waste streams from all schools accounted for in Public Bodies Climate Change Duties reporting.	Estates/Safeguarding	By October 2025

Sustainable and circular resource management practices already in place

It is important to recognise the actions already being taken at Heriot-Watt to reduce waste and protect the planet. Two case studies have been included, exploring areas where staff across the University are carefully managing material wastage to ensure that all resources are reused to give them a new lease of life. By including these case studies, it is hoped that colleagues and students will find inspiration which can be applied to materials that they are working with in their individual work, research or study circumstance. These case studies are by no means exhaustive, and there are plenty of examples of proactive and circular waste management across our University – for example, the donation of tech items in Edinburgh and Malaysia; the clear labelling of bins encouraging pro-recycling behaviours in Malaysia and Dubai, and the repurposing of plastic waste from 3D printing in the National Robotarium.

1 Renie bottle recycling point on the Dubai Campus

2 E-waste recycling box on the Malaysia Campus

***3** Astro-turf at Oriam, Edinburgh Campus*

4 Machinery separating upholstery from mattress frames at Hamilton Waste and Recycling East Lothian, where much of the household waste from the Edinburgh Campus is processed

Case Study: Recycling the astro-turf at Oriam, Scotland's Sports Performance Centre

Astro-turf surfaces in the sports fields must be replaced after 8 years. Sportex are an organisation who both supply the new surface, and collect the old one for recycling. They are the UK's first 360 degree sports surfacing company to recycle 100% of end-of-life synthetic sports pitches. Sportex have a plant in Grangemouth that separates the sand and rubber out from the synthetic material and recycles all components. Recently around 20,000sqm of synthetic turf from Oriam was recycled in this way.

By actively seeking out suppliers who can close the loop on their own products, and prioritising this important environmental consideration in purchasing decisions, we can help achieve waste plan objective 4: Encourage all staff to take future waste into account at inception of projects.

Case Study: Heriot-Watt University Residential & Cleaning Services

There are several circular economy initiatives that Residential & Cleaning Services are involved in, including departure collections of left property at the end of student tenancies, appointment of a contractor for appliance repair and maintenance, and an annual mattress replacement programme which covers at least 1 building per year. The new mattresses are delivered direct to the hall and the old mattress removed for responsible disposal. These are then taken to a specialist recycling centre where they are disassembled into their individual components, such as foam, metal springs, and fabric, ensuring maximum recyclability. These materials are then sent to appropriate recycling channels, reducing waste and minimising environmental impact. In 2024, we recycled 373 mattresses diverting over 13 tonnes from landfill. We are investigating how we might recycle duvets in this way too.