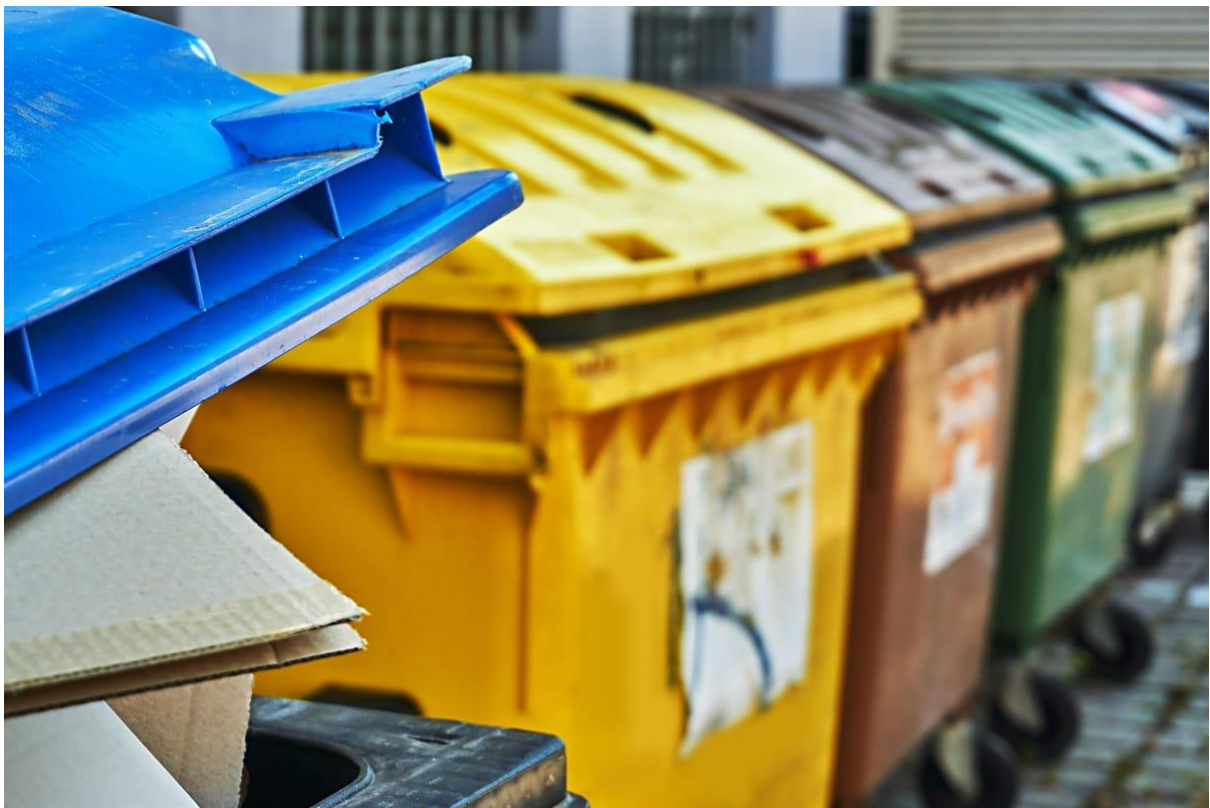


WASTE AND RESOURCE MANAGEMENT PLAN

2022 - 2027



CONTENTS

1. INTRODUCTION	3
1.1 BACKGROUND	3
1.2 STRATEGIC AND ENVIRONMENTAL COMMITMENTS	3
1.2.1 Environmental sustainability framework	4
1.2.2 The Sustainable Development Goals	5
2. Waste, resource management and the EMS	6
2.1 SCOPE & INTERESTED PARTIES	6
2.2. ROLES AND RESPONSIBILITIES	7
2.3 GOVERNANCE	8
2.4 INFLUENCING FACTORS	8
2.5 LEGAL COMPLIANCE.....	9
2.6. ASPECTS AND IMPACTS.....	9
3. UH WASTE AND RESOURCE MANAGEMENT	11
3.1 SUSTAINABLE WASTE MANAGEMENT	11
3.2 UH WASTE STREAMS.....	12
3.3 AIMS AND OBJECTIVES.....	12
3.4 ACTION TO DATE.....	13
3.5 PERFORMANCE TO DATE.....	14
3.6 ACTION PLAN.....	14
3.7 MONITORING AND REPORTING.....	17
3.8 FORWARD LOOK	18
7. APPENDIX.....	19

Document Control

Owner	Thomas Andrews / Nanna Blomquist		
Consultation	E&S working group		
Approval	Tracey Russell / Monica Kanwar		
Date of Implementation	Mar 2022	Date Valid until	Feb 2027

Revisions

Version No.	Date of Issue	Details of changes
2	05.01.22	Addition of sustainability framework

1. INTRODUCTION

The University of Hertfordshire Waste and Resource Management Plan sets out our approach to waste and resource management through to 2027. It considers the various internal and external risks and impacts associated with waste and resource management, and details how we manage these in line with our broader sustainability and legal commitments, and how the process is governed, monitored, and reported to ensure continual improvement.

1.1 BACKGROUND

Waste is a global problem, and when not managed properly can cause significant harm to the environment, our health, and even our prosperity. Each year, the world generates more than 2 billion tonnes of municipal solid waste, and it is estimated that as the global population and living standards continue to rise, this figure will increase by 70% over the next 30 years¹. In 2018, 222.2 million tonnes of waste was generated in the UK alone², and while recycling levels are gradually increasing, growing rates of overall waste are continuing to put pressure on our limited disposal capabilities and threaten our environmental sustainability.

According to a recent survey, Hertfordshire has the fourth highest number of toxic landfills in the country.³ As one of the largest employers in the region with almost 2,600 staff, over 30,000 students, and a site covering 94 hectares, the University of Hertfordshire has a duty of care to manage its waste as sustainably as possible, mitigating its impact on the local community, wider region, and global environment.

1.2 STRATEGIC AND ENVIRONMENTAL COMMITMENTS

Sustainability is a recurring green thread through the themes and pillars of the University's [Strategic Plan 2020-2025](#), and the University's Environmental Policy sets the foundations for its sustainability approach, which makes the following commitments relating to waste and resource management:

- Meeting, and wherever possible, exceeding environmental legislation, regulations, and other requirements
- Promoting resource efficiency through preventing and minimising waste production and diverting waste from landfill through increasing re-use, recycling, and recovery; and
- Promoting environmental awareness and responsibility amongst staff and students.

¹ Silpa, K. et al., (2018) *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*

² DEFRA (2021) *UK Statistics on Waste*

³ Uswitch.com

1.2.1 ENVIRONMENTAL SUSTAINABILITY FRAMEWORK

The strategic plan for Sustainability is structured through the University' Environment and Sustainability Framework which sets out our approach for embedding environmental sustainability holistically across all activity areas. The framework identifies our main environmental impact areas and defines our four pathways through which our commitments will be delivered:



Fig 3. The Environmental aspects and impacts of the university's estate, activities, and operations.

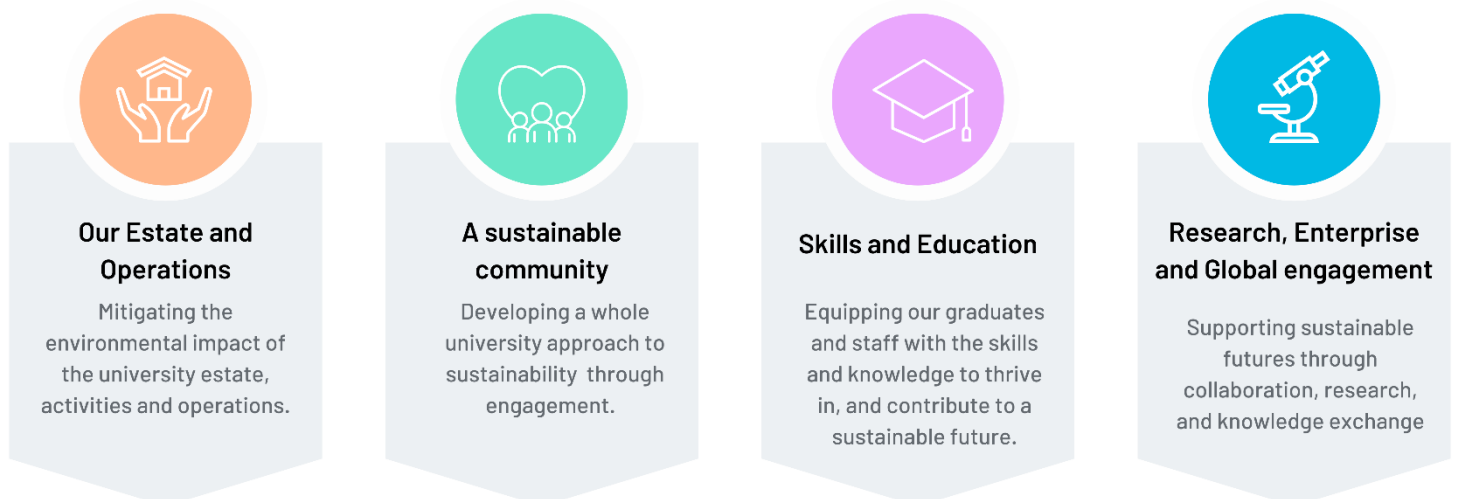


Fig 4. The University of Hertfordshire's four Pathways through which the Environmental Sustainability commitments will be delivered.

1.2.2 THE SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals⁴ offer another framework to help institutions embed Sustainability across their operations. While this and the other UH environmental management plans fall under the Environmental Pillar of the framework, it provides context for the interconnected nature of the wider sustainability considerations which also include economic and social aspirations. The five Sustainable Development Goals linked with this management plan are:



⁴ See Appendix 2

2. WASTE, RESOURCE MANAGEMENT AND THE EMS

The University of Hertfordshire operates an externally certified Environmental Management System (EMS) to manage its environmental risks and drive continual improvement. The EMS is certified against the ISO:14001 standards, and currently holds Eco Campus Platinum status. The EMS provides the plan, do, check, act framework which enables the University to not only manage its environmental risks, but to also strive for continual improvement. The EMS is implemented through its relevant management plans, including the Waste and Resource Management Plan. This section explains how the Waste and Resource Management Plan is held to account through our EMS.

2.1 SCOPE & INTERESTED PARTIES

The management of waste at the University is the responsibility of the Department of Estates. This department manages all streams of waste from across the University through approved partners, with the exception of hazardous, laboratory and clinical waste generated within certain academic schools. This is managed by approved specialist partners through the schools themselves.

The sites covered by this Strategy include:

- College Lane including academic, professional, catering, and the Students Union
- de Havilland (academic only)
- MacLaurin
- Uno Bus Depot
- Fielder Centre
- Meridian House
- Bayfordbury

Waste generated at the de Havilland halls of residence, restaurant, and sports village is managed through the University's PFI contract with Ellenbrook Developments by Pinnacle, and is therefore not covered by this Strategy; however, the University does work closely with these partners on environmental and waste strategies to improve recycling rates. This is the same for the College Lane halls of residence that are managed by ULiving and operated by Derwent.

The Waste and Resource Management Plan is closely linked with the Sustainable Procurement strategy under the Circular Economy banner, and it also forms part of the Carbon Management Plan, all of which are key enablers for the Climate Vision.

2.2. ROLES AND RESPONSIBILITIES

Department / Title	Duty
Department of Estates	<ul style="list-style-type: none"> • Ensure Legal compliance for the waste managed by Estates • Responsible for the management of the Estates waste • To provide accurate and timely reporting • To support the wider University on awareness, training, and educational projects • To support with implementing the waste strategy • To ensure information on waste procedures is accessible and up to date
Environment & Sustainability Team	<ul style="list-style-type: none"> • Organise internal and external audits • Work with Estates to set objectives and targets • Ensure waste and resource documentation is up to date within the EMS.
Academic Schools	<ul style="list-style-type: none"> • Manage and dispose of hazardous and specialist waste according to policy and legal requirements including record keeping / waste transfer notes • To ensure staff awareness and training within their SBU and identify training needs
Environment & Sustainability Working Group	<ul style="list-style-type: none"> • To maintain momentum on operational procedures that the EMS holds. • Look at trends and patterns from data and monitor environmental targets and programmes. • Draft-the UH environmental performance report • Look at Environmental awareness opportunities. • Identify areas where the Health, Safety and Sustainability (HSS) Team can advise and support.
Environment and Sustainability Steering Group	<ul style="list-style-type: none"> • Agree objectives and targets for the EMS • Identify resources required to maintain EMS • Ensure the EMS is implemented and maintained • Monitor the performance of the EMS against the targets and objectives set • Review and revise the Institution's Environment, associated policies, strategies and Action Plans. • Approve the Environmental Performance Report

2.3 GOVERNANCE

The EMS, Climate Vision, and any associated objectives, including waste, are governed by stakeholders across the University through our Environment and Sustainability (E&S) working and steering groups⁵. The responsibility of waste management at UH sits with Estates, who work closely with the E&S team, contractors, and other relevant stakeholders across the university to implement the waste and management plan.

2.4 INFLUENCING FACTORS

There are many external and internal factors that influence the generation and management of waste which need to be considered when planning and implementing the waste strategy. Some examples are outlined in this PESTEL analysis chart.

	External	Internal
Political	<ul style="list-style-type: none">- Union influence- Changes in green taxes / levies- Environmental league tables potentially impacting reputation- Brexit changes impact on policy	<ul style="list-style-type: none">- Strategic plan- Governance structure- Staffing- Changes in waste generated at different times of the year / periods e.g. holidays and Covid
Economic	<ul style="list-style-type: none">- Changes to taxes / incentives- Sub-contractor costs- Funding dependant on waste criteria	<ul style="list-style-type: none">- Budgets- Cost of sub-contracting
Social	<ul style="list-style-type: none">- NGO, community, and media pressures and expectations- Societal pressures	<ul style="list-style-type: none">- Staff and student expectation- Stakeholder and partner expectation
Technological	<ul style="list-style-type: none">- Technological advancements in waste management- Funding opportunities for waste innovation	<ul style="list-style-type: none">- Training- Access to innovation
Legal	<ul style="list-style-type: none">- Lack of knowledge, understanding and accountability of legal- Resistance to comply due to extra resources required requirements can lead to non-compliance	<ul style="list-style-type: none">- Prosecution for non-compliance- Costs associated with tax, levies, and fines- Increased costs of compliance may detract funding from other areas- Lack of enforcement from regulatory bodies can make it difficult to demonstrate the need to comply

⁵ See governance chart in Appendix 1

Environmental	<ul style="list-style-type: none"> - Regulations and laws - Weather and climate - Advancements in technology / renewable energy 	<ul style="list-style-type: none"> - Land use / local biodiversity - Local weather - Local waste disposal facilities - Construction
----------------------	--	---

2.5 LEGAL COMPLIANCE

A core component of this Management Plan is ensuring the University's waste management practices meet all the relevant legal requirements. There are a number of pieces of legislation which the University must comply with, which are listed below and detailed further in Appendix 3. as well as in the University's EcoCampus Legal Register:

- Environmental Protection Act 1990
- Waste (England and Wales) Regulations 2011
- Environmental Permitting Regulations 2010
- Hazardous Waste Regulations 2005
- List of Wastes Regulations 2005
- Animal By-products Regulations 2011
- Control of Asbestos Regulations 2012
- Waste Electrical and Electronic Equipment (WEEE) Regulations 2006
- Waste Batteries and Accumulators Regulations 2009
- End of Life Vehicles Regulations 2009
- The Environment Act 2021
- Control of Substances Hazardous to Health Regulations 2002

The University has a legal obligation to demonstrate that it knows how it's waste is being managed. A compliance system is in place at the University to ensure the required regulatory standards are met. Procedures for each of the different waste streams have been developed as part of the Environmental Management System. The most recent version of the procedures are available on [HertsHub](#), and provide the most current information on:

- Procedure and guidance for hazardous waste management
- Procedure and guidance for non-hazardous waste management
- Procedure and guidance for waste batteries management
- Procedure and guidance for waste electrical equipment (WEEE) management
- Procedure and guidance for waste toner and printer cartridges management

2.6. ASPECTS AND IMPACTS

Activities that interact, or have a potential to interact with the environment are considered to be environmental aspects. How the aspect alters the environment, whether positively or negatively, is considered an impact, and it is the duty of the university to put measures in place to eliminate or mitigate these risks as much as possible. With numerous academic schools, three interdisciplinary

research institutes, over 50 labs, and extensive catering facilities, the University has a broad spectrum of activities on its campuses that generate waste.

The main aspects associated with waste and resource management are:

- The generation of general waste from university activities including professional, academic, and catering activities.
- The generation of hazardous and clinical waste from laboratories, schools and some SBUs.
- The generation of waste from electrical and electronic equipment
- The generation of waste from the maintenance and management of the grounds on campus.

The main impacts associated with these activities are:

- Emissions to air: GHG emissions from landfill, transportation, waste management, and recycling process) leading to climate change
- Emissions to air: from hazardous substances causing potential harm to health
- Emissions to land and water: pollution and litter from improper handling and disposal of hazardous and non-hazardous waste, leading to the potential harm of people, plants, and animals.
- Depletion of natural resources from inadequate maintenance, repair, and reuse / repurpose of equipment.

The main consequences from these impacts are:

- Damage to the environment
- Contribution to global warming and climate change
- Damage to health
- Breach of legal / non-legal obligations
- Financial cost to the organisation
- Reputational cost

The aspects and impacts register of Waste and Resource Management at UH as well as the ongoing mitigation controls in places to minimise / eliminate the associated risks can be found in the Appendix 4.

3. UH WASTE AND RESOURCE MANAGEMENT

This waste and resource management plan builds upon and enhances the previous strategy and seeks to set out how the specific targets set out within the Environmental Policy can be met. These are:

- Meeting, and wherever possible, exceeding environmental legislation, regulations, and other requirements
- Promoting resource efficiency through preventing and minimising waste production and diverting waste from landfill through increasing re-use, recycling, and recovery; and
- Promoting environmental awareness and responsibility amongst staff and students.

Progress will primarily be measured in terms of Key Performance Indicators (KPIs), which are defined as:

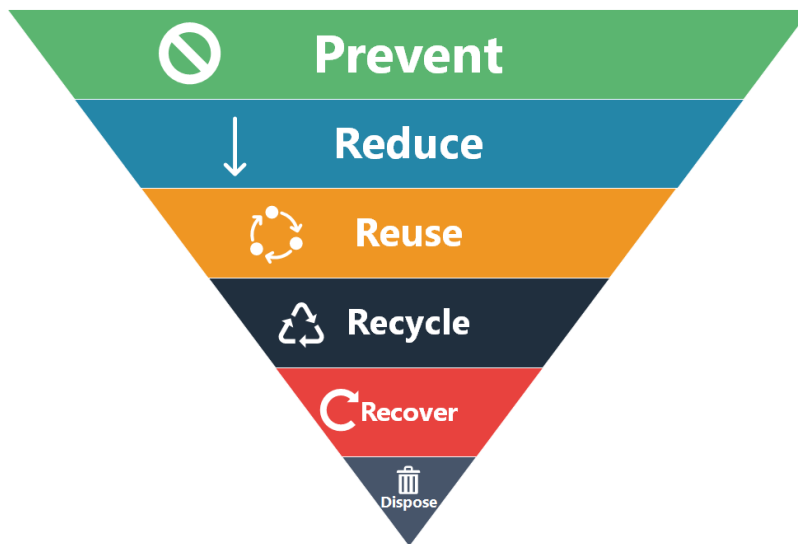
- Waste sent to landfill (tonnes).
- Waste sent to landfill (%).
- Waste mass generated per FTE staff and students (kg/FTE).
- Percentage of waste generated that is recycled or composted (non-construction waste) (%).

3.1 SUSTAINABLE WASTE MANAGEMENT

Waste management and the implementation of a circular economy play vital roles in promoting sustainability and responsible resource usage. Efficient waste management systems ensure the proper disposal, recycling, and most importantly reduction of waste generated within the university premises. By adopting a circular economy approach, whereby the reuse, repurposing, and recycling of materials extends a products life-cycle, waste can be considerably reduced. This involves implementing practices such as composting organic waste, encouraging the use of reusable products, and promoting responsible consumption among students and staff. Embracing the principles of a circular economy not only helps reduce environmental impact but also presents valuable opportunities for innovation, cost savings, and the development of a greener and more sustainable university estate.

The University's Waste and Resource Management Strategy is based on the principles of waste hierarchy which sets out the order in which waste management measures should be prioritised based on environmental impact.

In the first instance, waste should be prevented and minimised; if waste can be avoided then there is no need to look at recycling or disposal options. Where waste cannot be prevented, the University's next aim is to share, lease, reuse, repair, refurbish and recycle existing materials and products as long as possible, thereby creating a circular model of production and consumption, instead of a linear take – make – waste one. Waste that cannot be managed in this way will be processed for energy recovery, or as a last resort, sent to landfill.



3.2 UH WASTE STREAMS

Estates Managed Waste Streams

- General Waste
- Mixed Recycling
- Battery and Toner Recycling
- Food waste
- Green Waste
- WEEE waste
- Metal, and Wood
- Confidential waste
- Offensive waste
- Miscellaneous

Waste streams managed by SBU's:

- Biological waste
- Hazardous waste
- Clinical waste

3.3 AIMS AND OBJECTIVES

The aim of the Waste and Resource Management strategy is to minimise the impact of waste generated at UH as set out in the Aspects and Impact.

The UH Waste and Resource Management objectives are:

S1. To provide appropriate infrastructure and systems

This means providing the waste and recycling infrastructure and systems which make it easier for university staff, students and visitors to minimise the waste they produce and recycle it correctly.

S2. To ensure compliance with legal and other requirements

This means improving understanding of the University's current compliance with legal requirements and obligations, and best practice, addressing areas of poor performance, and checking progress on an ongoing basis.

S3. To communicate with key stakeholders to raise awareness and inspire behaviour change

This means ensuring that staff are aware firstly of the importance of waste management, and secondly that they are aware of their individual contribution to improving performance, for instance through awareness and adoption of correct recycling procedures. To quote one of the underpinning principles of the University's Environmental Policy Framework, the aim should be to create 'a culture where the University community is engaged, empowered, and supported in improving their personal and collective environmental sustainability practices'.

S4. To collect and report on data and information

This means collecting data to understand performance on waste management, analysing this to determine areas where performance is poor or could be improved, and reporting this to staff and to wider audiences to encourage feedback and accountability.

S5. To Provide training and support

This means identifying where members of staff lack the knowledge or capacity to act on waste management issues, and providing training, guidance or support which will address this.

3.4 ACTION TO DATE

The University of Hertfordshire has already taken action in each of these strands through a number of initiatives and activities. These include:

S1. To provide appropriate infrastructure and systems

- Re-tendering the main operational waste contract with quality and environmental management as a priority.
- Furniture reuse scheme
- Vegware compostable cups

S2. To ensure compliance with legal and other requirements

- The University's Environmental Management System details a Compliance Register, which is updated regularly and any changes to waste legislation cascaded to relevant staff.

S3. To communicate with key stakeholders to raise awareness and inspire behaviour change

- Dedicated waste pages on HertsHub

- Creation of a waste A-Z guide

S4. To collect and report on data and information

- The weighing of individual external bins was a condition of the University’s main waste contract, and will allow for monitoring of waste disposal on a site-by-site basis across the University.
- Production of Annual Performance Report
- The production of a ‘waste and recycling guidance document’, setting out a checklist and step-by-step improvements that can be made to improve recycling practices within a department. The guidance was developed by collating best practice from a range of departments, and has been publicised widely.

3.5 PERFORMANCE TO DATE

The university has consistently seen declining levels of waste generation and increasing levels of recycling over the last few years, and this strategy aims to maintain or improve this trend even further. The table below provides an indication of performance to date against the aforementioned KPIs. This plan does not seek to provide an explanation of the trends, however commentary on performance to date is to be provided within the Annual Environmental Performance Report.

	Waste Output (tonnes)	Waste per head (kg)	Waste to landfill (tonnes)	Waste to landfill %	Waste Recycled %*	Waste to Energy %
2016 - 17	1142.46	52.5	n/a	n/a	71.9%	28.1%
2017 - 18	851.45	38.5	14.61	1.7%	76%	22.3%
2018 - 19	656.39	29.8	13.55	2.1%	71.1%	26.8%
2019 - 20	502.94	21.9	9.86	2%	72.4%	25.5%
2020 - 21	350.03	14.1	7.34	2%	70.2%	25.5%

** total recycling rate includes source segregated recycling, Mixed Recycling Facility (MRF) recovery, composting and anaerobic digestion.*

The significant successes for waste management at UH include a 69% reduction in total waste generation between the period 2016 - 2021, and a continued decrease in waste per head, from 53.3 kg in 2016 – 17, to 14.4 in 2020 – 21, equating to a 73% reduction. UH has also maintained a recycling rate of around 70%.

3.6 ACTION PLAN

This plan sets out actions which will be carried out as part of this Waste and Resource Management Plan, as well as the KPIs proposed to measure progress against each action. All planned activities and scope of these activities are subject to feasibility and modification, subject to: legislation, best

practice and guidance changes, facility and technology developments, and financial and demand fluctuations.

Objective	Action	Date	Who	KPI
S1. Providing appropriate infrastructure and systems				
Manage resources more efficiently	To embed a furniture re-use scheme into the office move / procurement process	April 2022	Estates	Number of items advertised
	To produce a paper that explores the possibility to embed circular economy principles	April 2023	Estates / Procurement	Publication of paper
Reduce construction waste	To engage with contractors on major builds to ensure waste is minimised when construction is undertaken to campus	April 2022 for SPECS	Estates / Construction	Waste section included is sustainable construction policy
Management of green waste	Understand what happens to green waste and compost, ensuring that the system is efficient and sustainable	April 2022	Estates / contractors	Case study from contractors
Reduce single use items	Work with contractors, caterers, procurement to reduce the sale of single use items	July 2023	Estates / Contractors / Procurement	Case study from procurement / catering audit
Work with non-typical materials and establish disposal routes	Disposal routes and/or guidance on 3 problem materials (e.g. common lab waste) produced and added to 'Waste A-Z'. Solutions should focus on 'take back' and closed loop solutions	Sept 2022	Estates / E&S	Number of materials for which disposal routes and guidance have been developed
S2. Ensuring compliance with legal and other requirements				
Internal waste audits	Carry out at least 1 internal waste audit every year, and an external audit once every audit cycle.	Annually	E&S	Number of audits
Compliance Obligations	Review and update legal compliance obligations relating to waste.	Annually	Estates / E&S	Frequency
S3. Communications & behaviour change				
Publish waste and recycling-related news articles or web pages	This could include promotion of initiatives such as Vegware, Furniture reuse scheme	Ongoing	Estates / E&S / MarComms	Number of news items per year
Web and printed resources promoting good recycling practices	Including waste & recycling awareness posters, bin labels, and an interactive online 'Waste A-Z'	Ongoing	Estates / E&S / SU / MarComms	Number of initiatives
Carry out at least 2 sustainable waste / circular economy events per year	Suggested activities include 'Spotlight on Waste' roadshow events and WEEE collection events, end of year re-use campaign, also litter picks	Ongoing	Estates / E&S / SU	Number of events
Waste & recycling integrated within	Ensure waste & recycling issues are included within online staff and student training / part of sustainability training	April 2023	Estates / E&S	Number of sessions

staff and student inductions	Ensure waste & recycling is included within template student induction presentations / sustainability training	Sept 2023	Estates / E&S	Number of inductions
Embed waste awareness into Green Impact programme	Ensure waste & recycling criteria within Green Impact workbook are reviewed annually, and support is provided to teams in how to complete these.	Annually	Estates / E&S	Number of actions on waste completed in the workbook
S4. Collecting and reporting data and information				
Provide and share waste & recycling related data	Consider sending out annual reports on waste disposal, publicising waste data on HertsHub, or sending departments and sites regular reports on their waste production	Annually	Estates / E&S	Report published and shared
Carbon footprint calculation of waste	To understand and measure the carbon footprint of our waste activity	Annually	Estates / Loreus	CO2 emissions from waste per year
Recycling audits	Carry out recycling audits as part of the UH Sustainability Advocate scheme.	Annually	E&S / relevant stakeholders	Number of audit events
S5. Providing training and support				
Carry out at least one training session per year relating to waste duty of care and other legal compliance issues	Training could include: <ul style="list-style-type: none"> • Training for building managers / facilities staff / cleaners (or cleaning contractors) on responsibilities relating to waste, in particular duty of care • Workshop/training/webinar/promotion of the recycling guide for Green Impact teams 	Annually	Estates / E&S	Number of training sessions booked
				Number of attendees
Encourage consideration of waste minimisation through procurement	Investigate ways of incorporating waste & recycling considerations within the University's procurement guidance.	July 2023	Estates / E&S / procurement	Waste / circular economy principles section within the procurement plan
Encourage consideration of waste minimisation through food policy	Work with food contractors to reduce the quantity of single use items sold, and ensure others are readily available	July 2023	Estates / E&S	Waste section in sustainable food policy

3.7 MONITORING AND REPORTING

This Waste and Resource Management Plan sets out a range of actions to be taken on waste and recycling which will also be tracked via the KPIs annually as set out below. At the end of the Plan period, Estates will report progress back to the Environmental and Sustainability Working Group in order to inform a decision on what action is required to meet the overarching targets, and to ensure we always strive for continual improvement. Progress on main KPIs will be reported on in the Environment and Sustainability annual performance report.

Key Performance Indicator	2020 - 21
Total waste Output (tonnes)	350.03
Waste to landfill (tonnes)	7.34
Waste to landfill (%)	2.1%
Waste per head (kg)	14.1
Waste recycled (%)	70.2%
Waste to energy (%)	27.7%
Number of items re-used via furniture reuse scheme	0
Number of departments receiving waste and recycling audits (including as part of wider Environmental Management System audits)	0
Total weight of food waste disposed of by composting or anaerobic digestion per year	47.42
Food waste disposal as a proportion of total waste disposal (%).	13.6%
Number of Green Impact 'waste and recycling' actions completed by participating teams	0
Number of staff engaged by waste and recycling-related events and other communications (measured through attendance at events and readership of articles)	49
Number of materials for which disposal routes and guidance have been developed for waste produced and added to 'Waste A-Z'.	
Number of places annual reporting on waste data is shared e.g individual schools, HertsHub etc.	1
Number of waste and recycling-related news articles or web pages per year	0
Number of web and printed resources promoting good recycling practices	10
Number of waste & recycling events per year	3
Number of waste & recycling training sessions integrated within staff and student inductions	0
Number of staff receiving training on waste & recycling issues	0
Carbon emissions arising from waste activities	N/A

Each of the actions will be listed as objectives in a waste working document and will be reviewed annually by relevant stakeholders and fed back to the wider EMS working group at regular intervals.

The University reports on recycling rates to various audiences through a number of methods including:

- The Estates Management Return (EMR) which require detailed information on the amounts of waste disposed through various means on an annual basis, reported to HESA
- Monthly reports to the relevant Board Meetings, which identify performance
- Monthly meetings and progress reports with the central waste contractor and Facilities
- Termly reports to the Environment and Sustainability Working Group which summarise performance and identify any support required
- Environment and Sustainability Annual Report to the Chief Executive's Group, which details progress against objectives, and is made publicly available on the University's website
- Updates on recycling rates internally for the University as a whole and/or areas which are performing well/poorly through Green Impact, Herts Hub, Staff Qs, StudyNet and on the white boards located on the waste compounds

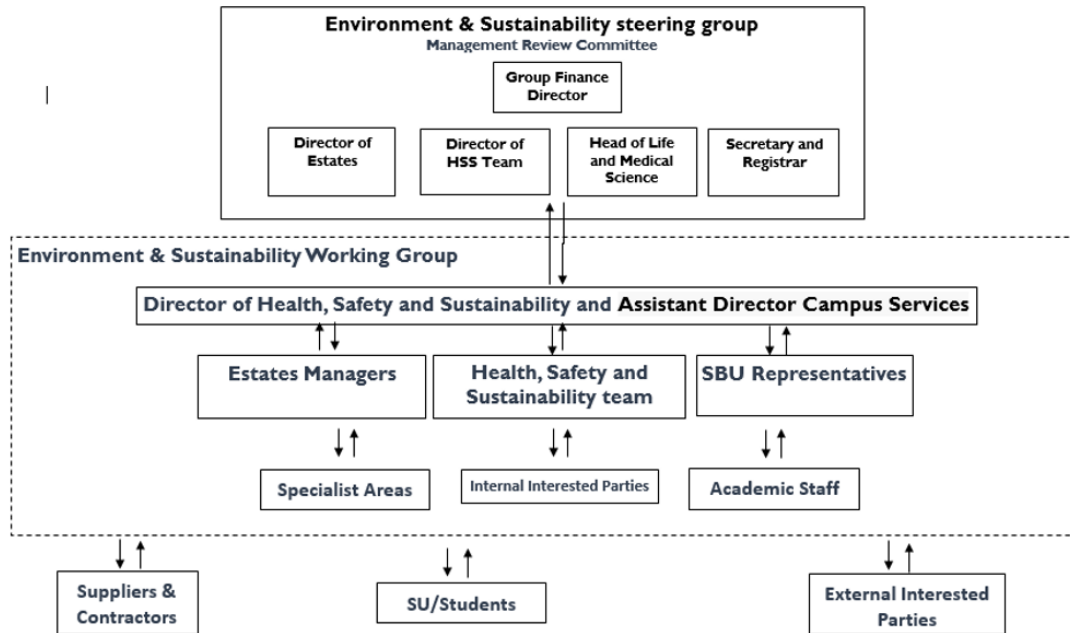
3.8 FORWARD LOOK

Looking beyond this action plan, our ambitions are to work with other SBUs to firmly embed the principles of a circular economy into our purchasing, utilisation, and disposal framework. As well as reducing the amount of waste produced, this could also bring social and financial benefits to the university and its community.

7. APPENDIX

1. Governance structure

Environment & Sustainability Governance Structure.



2. Sustainable Development Goals

Economic Pillar



Environmental Pillar



Social Pillar



3. Legal compliance register

Legislation	Summary and relevance
Environmental Protection Act 1990	<p>The Act defines waste and places a 'Duty of Care' on anyone who imports, produces, carries, keeps, treats or disposes of controlled waste. Controlled waste includes household, industrial or commercial waste. The 'duty of care' places responsibility on producers of waste to store, transport and dispose of waste legally and in a way that doesn't harm the environment. The Act requires that measures are taken to:</p> <ul style="list-style-type: none"> - prevent another person illegally treating, keeping or disposing of waste on the University's land, - prevent the escape of waste, - ensure the transfer of waste only occurs to an authorised person.
Waste (England and Wales) Regulations 2011	<p>The regulations make it an offence not to apply the waste hierarchy duty, collection of waste duty or collected waste duty. Part 5 requires businesses produce, collect, transport, recover or dispose of waste to apply the waste hierarchy. Part 8 requires waste brokers and/or dealers to register with the Environment Agency (EA). It also requires carriers of controlled waste to register with the EA unless they are a specified person under the regulations. Part 9 requires anyone importing, producing, carrying, storing, treating or disposing of controlled waste to take measures to ensure that waste is only transferred to an authorised person and that all waste transfers are accompanied by a waste transfer note. Waste transfer notes must:</p> <ul style="list-style-type: none"> - identify the waste to which it relates by reference to the appropriate EWC codes; - describe the waste; - state the quantity of waste; - state whether it is loose or what type of container it is stored in; - state the time and place of transfer, - state the SIC code of the transferor; - state the waste carriers licence number, environmental permit holders number or exemption number - confirm that the transferor has carried out the waste hierarchy duty. <p>In Jan 2015, the regulations require that collections authorities collect paper, plastics, metal and glass separately where doing so is:</p> <ol style="list-style-type: none"> 1) "necessary to ensure that waste undergoes recovery operations and to facilitate or improve recovery" (Necessity Test); and 2) "technically, environmentally and economically practicable"(TEEP Test).
Environmental Permitting Regulations 2010	<p>The Regulations aim to create a standardised environmental permitting system to protect human health and the environment. The permits aim to reduce and simplify the administration of industrial facilities, waste management operations, water discharge consenting, groundwater authorisations and radioactive substance authorisations. The Regulations introduce the regime of waste exemptions.</p> <p>Requirements for waste activities:</p> <p>An environmental permits are required to operate the following waste activities, except where the activity is exempt:</p> <ul style="list-style-type: none"> - Keeping/transfer of waste

	<ul style="list-style-type: none"> - Biological treatment of waste - Metal recovery/scrap metal - Materials recovery/recycling - Recovery or use of waste on land - Treatment to produce aggregate or construction materials - Incineration. <p>Requirements for radioactive substances:</p> <p>An environmental permit will be required if an institution uses quantities of radioactive materials or accumulated radioactive waste above the quantities listed in the regulations. Schedule 23, Section 9, table 4 of the regulations lists the maximum quantities of radioactive material or accumulated radioactive waste required before an environmental permit is required. Organisations that use or store quantities below the thresholds will not need an Environmental Permit, however organisations will need to register an exemption with the Environment Agency.</p>
<p>Hazardous Waste (England and Wales) Regulations 2005</p>	<p>The Hazardous Waste Regulations, which came into force in July 2005, set out the regime for the control and tracking of hazardous waste in England and Wales . Under these Regulations, a process of registration of hazardous waste producers and a new system for recording the movement of waste was introduced. All industrial and commercial premises producing more than 500kg of hazardous waste have to notify their existence to the Environment Agency. Additionally:</p> <ul style="list-style-type: none"> • No hazardous waste can be collected from any unregistered site • Waste producers who do not register their premises will be committing an offence • Waste contractors who move waste from a non-registered site will be committing an offence • Waste producers will need to provide proof to waste contractors (via a unique code number) that they are registered • Registrations must be renewed annually <p>Movement of Hazardous Waste</p> <p>Under the Regulations, the movement of wastes is controlled by a documentation system which has to be completed whenever waste is removed from premises. From the waste producer's perspective the most important form is the Consignment Note. This has to be completed before waste can be removed and detailed information has to be provided including:</p> <ul style="list-style-type: none"> • a description of the Waste detailing: • the process giving rise to the waste, • the quantity, • the chemical (and/or biological) components and their concentrations, • the hazard codes, the LoW code (click here for the List of Wastes) • and the container type, size and number. • identify where the waste is going and • give the Consignment Note a unique Code number.

List of Wastes 2005	<p>The List of Wastes replaced the European Waste Catalogue in 2005 and brought into law the 800 codes for all hazardous and non-hazardous waste. The List of Wastes specifies what kinds of waste different facilities can accept under the terms of their environmental permits and in relation to exemptions.</p>
Animal By-products Regulations 2011	<p>These regulations place strict rules on the treatment and disposal of Animal by-products (ABPs). ABPs are entire animal bodies, parts of animals, products of animal origin or other products obtained from animals that are not fit or intended for human consumption. ABPs are classified into three categories (1 - 3) - based on their potential risk to animals, the public and the environment.</p> <p>ABPs must be disposed of using one of the appropriate methods listed below:</p> <ul style="list-style-type: none"> - rendering or incineration - landfill - e.g. for catering waste and certain former foodstuffs - composting - biogas generation. <p>Food manufacturers or retailers who generate small quantities of ABP waste (i.e. less than 20kg per week of low-risk Category 3 food waste such as raw meat and fish) can dispose of this outside of ABP controls.</p> <p>Premises that receive, handle, use, treat or destroy ABPs must be registered or approved under the ABP Regulations.</p> <p>ABPs must be collected and carried in leak-proof, covered containers or vehicles, or sealed new packaging, and kept separately from other categories of by-product.</p>
Control of Asbestos Regulations 2012	<p>The regulation aims to protect anyone becoming exposed to asbestos fibres. Those responsible for the maintenance of non-domestic premises have a 'duty to manage' the asbestos in them, to protect anyone using or working in the premises from the risks to health that exposure to asbestos causes. Risk assessments must be conducted where any building or maintenance work in premises, or on plant or equipment that might contain asbestos, is conducted. This includes identifying where asbestos is and its type and condition; assessing the risks, and managing and controlling these risks. If asbestos is identified then a plan of control measures must be developed before any work on the premises commences. Training is mandatory for anyone liable to be exposed to asbestos fibres at work. This includes maintenance workers and others who may come into contact with or disturb asbestos, as well as those involved in asbestos removal work.</p>
Equipment (WEEE) Regulations 2006	<p>The Regulations replace the Waste Electrical and Electronic Equipment Regulations SI 2006/3289.</p> <p>They aim to:</p> <ul style="list-style-type: none"> - minimise the disposal of WEEE as unsorted municipal waste by creating a network of designated collection facilities; - ensure that all WEEE from private households that is collected at those facilities is sent for treatment, recovery or recycling to an approved authorised treatment facility; - achieve the recovery targets in Directive 2012/19/EU; - provide that those who produce EEE are registered with the Member State authorities and are responsible for financing the costs of managing WEEE arising from electrical and electronic equipment (EEE) in each compliance period.

	<p>The regulation place obligations on producers, distributor and users of EEE:</p> <p>The categories of EEE and indicative list of types of EEE which fall under these categories, between the period Jan 2014 to December 2018, are covered by the regulations is detailed in Part 2.</p> <p>Part 3 places obligations on EEE producers to finance the cost of collection, treatment, recovery and environmental sound disposal of EEE from private households and requires certain producers, in the UK, to join a producer compliance scheme.</p> <p>Part 4 & 5 cover the requirements for compliance scheme's and distributor obligations.</p> <p>Part 6 covers miscellaneous including the requirement that anyone who collects or transports WEEE in connection with any obligation to optimise reuse and recycling of that equipment or its components;</p> <p>Part 8 sets the procedure for applying for approval as an authorised treatment facility or an exporter.</p> <p>The WEEE amendment regulation SI 2018/1214 came into force on 1 January 2019. Implements the "open scope" principle to bring all electrical and electronic equipment (EEE) into the scope of the regulations. This means that all EEE is considered WEEE unless exempt or excluded.</p>
<p>Waste Batteries and Accumulators Regulations 2009</p>	<p>These Regulations implement part of the Batteries Directive 2006 – the first part, which addressed the market provisions of the Directive was implemented via the Batteries and Accumulators Marketing and Use Regulations 2008.</p> <p>They apply to every producer (manufacturer or importer) of portable batteries that places such batteries on the market in the UK. Producers have to register with the Environment Agency and report their sales of batteries annually. In addition 'large' producers (those marketing more than 3 tonnes of portable batteries per year), or a third party – a compliance scheme – acting on their behalf, must finance the net costs arising from the collection, treatment and recycling of their share of all waste portable batteries collected in the United Kingdom. Other organisations likely to have obligations under these regulations include importers and manufacturers of equipment containing batteries, distributors and retailers of batteries.</p> <p>How to Comply</p> <p>Producers who place less than one tonne of portable batteries per year on the market must register with the National Packaging Waste Database. This can be done on-line and costs £30 per year. You must provide information on the total amount of portable batteries you have placed on the market by the end of January following the year for which you are reporting. This includes the weight of batteries (including those on printed circuit boards) inside products if you have imported the products or the batteries. If you have sourced the batteries or products in the UK, then you have no obligation for these.</p> <p>Producers who place more than one tonne of portable batteries per year on the UK market must join a battery Producer Compliance Scheme. The Scheme will carry out registration, collection, treatment and recycling responsibilities on your behalf and charge you according to your obligation, which is determined by the government from your market share. You must provide data on sales of batteries to your</p>

	Compliance Scheme on an annual basis for them to submit to the Environment Agency.
End-of-life Vehicles Regulations 2009	<p>Vehicles are regulated to limit the environmental impact of their disposal, by reducing the amount of waste created when they are scrapped. This is done through various measures to encourage the recovery, reuse and recycling of metals, plastics and rubber.</p> <p>The provisions extend to:</p> <ul style="list-style-type: none"> producer registration materials and components free vehicle take-back recovery and recycling targets <p>Responsibility for enforcing the regulations is shared by the Department for the Environment, Food and Rural Affairs (Defra) and the Office for Product Safety and Standards (OPSS).</p> <p>The End-of-life Vehicles Regulations 2003 (as amended) and the End-of-life Vehicles (Producer Responsibility) Regulations 2005 (as amended) are the underpinning legislation.</p>
The Environment Act 2021	<p>This Environment Act 2021 has two main functions:</p> <ol style="list-style-type: none"> 1. To give a legal framework for environmental governance in the UK. 2. To bring in measures for improvement of the environment in relation to waste, resource efficiency, air quality, water, nature and biodiversity, and conservation. <p>The vast majority of this Act does not make any immediate changes for organisations other than regulators. Changes to duties for businesses and other organisations are expected in subsequent legislation made under this Act.</p>
Control of Substances Hazardous to Health Regulations SI 2002/2677	<p>These Regulations aim to control substances that are hazardous to health, including chemicals, products containing chemicals, fumes, dusts, vapours, mists, gases, and biological agents. Employers must always try to prevent exposure at source and if this is not possible it must be controlled adequately by applying the principles of good control practice. Control is adequate when the risk of harm is 'as low as is reasonably practicable'.</p>

4. Aspects and Impacts Register

Aspect	Impact	Risk Owner	Mitigation controls
Generation of general waste	GHG emissions from landfill leading to climate change	Estates / SBUs / E&S	Reduce the amount of waste that is sent to landfill through engagement activities and incentives
	Particulate air pollution from waste management	Estates	Ensure waste management is following correct procedures through training, communication, and monitoring
	Single use plastic and other item pollution to land and water	Estates / SBUs / E&S / Contractors	Ensure clearly labelled recycling facilities are available and accessible across campus. Engagement activities Financial incentives e.g. take away tax
	Local litter posing risk to biodiversity, reputation, and image	Estates / E&S	Ensure clearly labelled recycling facilities are available and accessible across campus. Embed sustainability across estate. Litter reduction engagement and education activities
	Financial burden as cost of disposal becomes more expensive.	Estates	Reduce the amount of waste that is sent to landfill Engagement activities Financial incentives e.g. take away tax Reduce costs by reducing quantity of waste
Generation of hazardous / clinical / chemical waste	Pollution to air, water or land from spills / accidents harming living things	SBUs / Estates / HSS	Ensure hazardous waste training has been delivered to relevant persons. Safety contacts / responsible persons within each area to be named. Internal audits to monitor
	Danger to health from incorrect handling or storage	SBUs / HSS	Ensure hazardous waste training has been delivered to relevant persons. Safety contacts / responsible persons within each area to be named. Ensure all hazardous substances are labelled correctly. Internal audits to monitor.
	Breach of compliance obligation if correct disposal procedure not followed	Estates / SBUs / HSS	Responsible persons to ensure waste transfer notes and documentation is being completed and stored correctly, and that training has been provided to those that need it.
Generation of electrical equipment waste	Pollution to land if incorrectly disposed of in landfill	Estates	Reduce electrical waste where possible by repairing or repurposing. If needs to be disposed, ensure WEEE procedure is being followed

	Depletion of resources arising from not recycling	Estates / Procurement	Encourage the reuse, service, and repair of electrical equipment. Consider purchasing sustainable products if necessary.
	Breach of compliance obligation if correct disposal procedure not followed	Estates / SBUs / HSS	Internal audits carried out regularly. Training organised. Communication of new regulation to relevant parties.