

UNIVERSITY OF BATH HEALTH AND SAFETY STANDARD

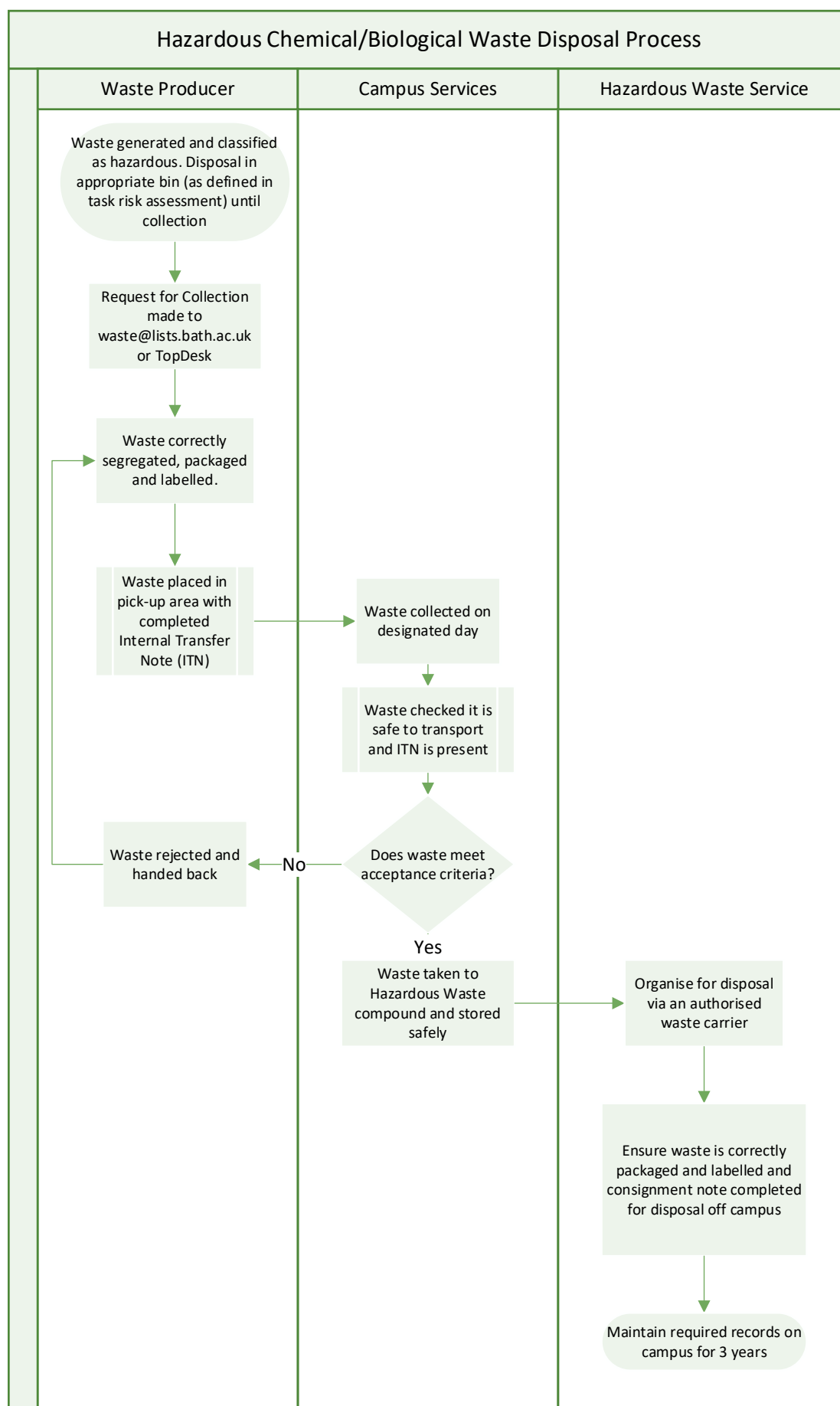
Hazardous Chemical/Biological Waste

Version Number	2023-Version 3b	Date of Approval	June 2023	Review Date	Three years from acceptance by UHSC – June 2026
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Aims	<p>The University is committed to ensuring the health, safety and welfare of all staff, students and visitors.</p> <p>It has a duty of care to take all reasonable steps to ensure that hazardous waste produced by its activities is managed correctly throughout its complete journey to disposal or recovery and when the waste is transferred to another waste holder.</p>				
Scope	<p>The requirements of this standard apply to all employees of the University of Bath while undertaking work activities which generate hazardous waste.</p> <p>This standard only applies to chemical/biological (clinical) hazardous waste whose disposal is managed by the SHEW Hazardous Waste Service.</p> <p>Human Tissue Act requirements to ensure relevant waste is disposed of ethically and sensitively are outside the scope of this document. However, clinical waste requirements for the handling and disposal of this waste is covered under this standard.</p> <p>It excludes hazardous waste such as Waste Electrical and Electronic Equipment (WEEE), fluorescent tubes and asbestos managed by Campus Services. It also does not cover radioactive waste.</p>				
Relevant Legislation	<ul style="list-style-type: none"> • The Environmental Protection Act 1990 • The Waste (England and Wales) Regulations 2011 • The Hazardous Waste (England and Wales) Regulations 2005 • List of Wastes (England) Regulations 2005 • Trade Effluent Consent No. 51514 				
Definitions	<p>Hazardous Waste</p> <p>Any waste with hazardous properties that may make it harmful to human health and the environment. In the context of this document this includes laboratory chemicals and waste products, non-edible oils, paints, resins, clinical/biological waste and cleaning chemicals such as detergents. These are identified in the List of Wastes which provides classification and coding of different types of hazardous waste.</p>				
	<p>Waste Producer</p> <p>The person/department whose activities generate hazardous waste.</p>				
	<p>SHEW Hazardous Waste Service</p> <p>University department which acts as the waste holder and consignor to manage the transfer of hazardous waste (within its remit) off campus for disposal or recovery.</p>				
	<p>Duty of Care</p> <p>Producers of hazardous waste must take all reasonable steps to:</p> <ul style="list-style-type: none"> • prevent unauthorised or harmful deposit, treatment or disposal of waste 				

	<ul style="list-style-type: none"> • prevent the escape of waste from your control • ensure that any person you transfer the waste to has the correct authorisation • provide an accurate description of the waste when it is transferred to another person 	
	<p>Waste Hierarchy</p> <p>An establishment or undertaking which imports, produces, collects, transports, recovers or disposes of waste, shall take all such measures available to it as are reasonable in the circumstances to apply the following waste hierarchy as a priority order:</p> <p>(a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery (for example energy recovery); (e) disposal</p>	
	<p>Re-Use</p> <p>Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.</p>	
	<p>Re-cycling</p> <p>Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. Includes the reprocessing of organic material but not energy recovery or reprocessing into materials that are to be used as fuels or for backfilling operations.</p>	
	<p>Recovery</p> <p>Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.</p>	
	<p>Mixing of Hazardous Waste</p> <p>Hazardous waste of any description shall be considered to have been mixed if it has been mixed with:</p> <p>(a) a different category of hazardous waste; (b) a non-hazardous waste; or (c) any other substance or material</p>	
	<p>Consignment Note</p> <p>The identification form which is required to accompany the hazardous waste when it is transferred for disposal off campus.</p>	
	<p>Waste Holder</p> <p>The person who is in possession of the hazardous waste.</p>	
	<p>Registered Carrier</p> <p>A person who takes one or more of the following actions; collects the consignment from the premises at which it was produced or premises at which it is being held, delivers it to the consignee, or transports it in the course of its transfer from those premises to the consignee.</p>	
Responsibility for implementation	<p>Faculty Deans Heads of Departments Supervisors/Managers Technical Support Staff Waste Producers</p>	
Training availability:	<p>Induction Training by Supervisors/Department or Area Safety Co-ordinators</p>	
Standard to meet:		<p>Accountability</p> <p>Reference documents and more information</p>

1.	Implement local management arrangements to minimise the amount of hazardous waste generated within department responsibility.	Head of Department	https://www.gov.uk/dispose-hazardous-waste/overview
2.	Ensure Risk/COSHH Assessments include the consideration of waste generated. This should consider risk of exposure to waste in the laboratory (safe storage within appropriate bins or facilities in the workplace) and the subsequent requirements for safe disposal and handling, applying the waste hierarchy where reasonable to do so.	Waste Producers	http://www.hse.gov.uk/chemicals/dispose.htm
3.	Clinical waste that is also "Relevant Waste" must be segregated from all other waste types and disposed of in dedicated bins. Waste producers are required to identify all relevant waste and must agree a waste disposal route with the SHEW Hazardous Waste Service before any work generating this waste is carried out.	Waste Producers	
4.	Classify and identify waste correctly to determine if the waste is hazardous and provide required information for onward transportation and disposal.	Waste Producers	https://www.gov.uk/government/publications/waste-classification-technical-guidance
5.	Segregate waste appropriately <ul style="list-style-type: none"> - No mixing of types of waste (this is illegal) - Clinical waste that is "relevant waste" as defined in the Human Tissue Act must be segregated from all other forms of waste. - Ensure incompatible wastes are separated - Segregate solid and liquid waste 	Waste Producers	https://www.gov.uk/guidance/hazardous-waste-segregation-and-mixing
6.	Package and Store hazardous waste safely <ul style="list-style-type: none"> - In appropriate labelled containers; if stored outside or contain liquids these containers may need to be water/leak proof - Suitable packaging; consider form of materials to be stored to prevent leakage - Suitable storage area; if outside may require canopy/roof - Sufficient Information to be provided on type of waste - Hazard warning sign to be affixed to package 	Waste Producers	https://www.gov.uk/managing-your-waste-an-overview/sorting-storing-waste
7.	Arrange for collection of hazardous waste Routine Waste: <ul style="list-style-type: none"> - contact waste@lists.bath.ac.uk or fill out Topdesk form - request to be made by 12pm on a Monday to guarantee (as far as possible) collection following Wednesday for routine waste only <p>For routine waste, a simple description of waste; type and no. of containers, and collection point is sufficient. A waste transfer note should be completed for this waste.</p> <p>It is a legal requirement to provide details of the individual components of cytotoxic waste, this must be supplied in the email request.</p>	Waste Producers/ Technical Staff	<p>A container is defined as the individual bottle etc, not the package such as a plastic box that multiple containers will be put in for transport.</p> <p>For more information refer to Hazardous chemical and biological waste guidance doc</p> <p>List of non-routine waste to also be attached to waste package</p> <p>Waste Request Form provided at end of document</p>

	<p>Non-routine waste, e.g., lab smalls from clear outs - contact waste@lists.bath.ac.uk or fill out Topdesk form</p> <p>An Excel spreadsheet (Waste Request Form) must be submitted with the request, which provides sufficient information for each individual container of waste:</p> <ul style="list-style-type: none"> • Name of waste/chemical name • Description of waste, e.g. powder, liquid • Amount/volume of waste • Type of container, e.g. glass bottle • Classification/Hazard warning of waste <p>Wastes which are not fully identified cannot be accepted as they cannot be transported on public highways and will not be accepted by waste disposal companies.</p> <p>The hazardous waste service needs to check that the submission meets requirements for safe transfer, storage and disposal. Once the check is complete and request approved, a collection date will be provided.</p>		
8.	Not dispose of any prohibited substances or substances exceeding threshold values to drain, as defined in University of Bath Trade Effluent Consent and SHEW Waste Guidance.	Waste Producers	https://www.bath.ac.uk/publications/liquid-disposal-of-prohibited-materials/
9.	<p>Collect hazardous waste and deposit safely in hazardous waste storage compound.</p> <p>Reject (do not collect) any waste that does not comply with University guidance (see points 3, 4, 5 and 6)</p>	Campus Services	
10.	Ensure hazardous waste is appropriately stored and monitored for damage/leaks in hazardous waste compound.	SHEW Hazardous Waste Service	
11.	<p>Arrange for collection of hazardous waste for recovery or disposal by an authorised waste carrier.</p> <p>Ensure hazardous waste is in an appropriate form (correct packaging, labelling etc.) for collection.</p>	SHEW Hazardous Waste Service	
12.	<p>Ensure consignment notes are completed for all hazardous waste transfers within remit including:</p> <ul style="list-style-type: none"> - waste classification code - waste details - declaration that waste hierarchy has been applied 	SHEW Hazardous Waste Service	
13.	<p>Keep records for 3 years at the premises that produced or stored the waste</p> <ul style="list-style-type: none"> -consignment notes - consignee returns - records of rejected loads 	SHEW Hazardous Waste Service	



Waste Request Form

Chemical Name	Description of waste	Hazard	Volume/Mass (L/g) of waste	No. of waste containers

Description of waste: please provide as much information as possible regarding the form of the waste. Do not use general statements like solid or liquid, e.g. dry powder in a glass bottle

Volume/Mass: if not known exactly please provide an estimate

No. of containers : this refers to each individual container e.g. bottle, not the number in a package/box.

The above spreadsheet must be used to request the disposal of non-routine waste (unless otherwise agreed by the hazardous waste manager).

Generic Risk Assessment

Risk Assessment Title: Management of Hazardous Waste	Date Reviewed: June 2023	Review Date: June 2026
Overview/Description of Activity: Disposal of hazardous waste within departments as produced into local containers, movement of containers to local storage location. Collection/transport from department to hazardous waste compound.	Duration/Frequency of Activity: Activities carried out frequently every day	
Location of Activity: All University premises where hazardous waste is generated	Generic or Specific Assessment: Generic assessment to be used as a basis for department specific risk assessments	

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
1	Mixing of hazardous waste with “other” wastes such as non-hazardous	Waste could be treated as non-hazardous potentially exposing persons to hazardous properties as correct precautions not taken. Potential action from EA.	<ul style="list-style-type: none"> University H&S policy/standard and guidance Department training on local rules for waste management Risk/COSHH assessment should identify correct disposal route Waste containers should be clearly labelled in departments 	2	4	8	

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
2	Mixing of “incompatible” wastes, such as mixing chemically incompatible wastes (acid and base) resulting in a chemical reaction or mixing different categories of waste.	Potential for release of harmful gas and exposure of persons in the vicinity. Potential action from EA.	<ul style="list-style-type: none"> University H&S policy/standard and guidance Department training on local rules for waste management Risk/COSHH assessment should identify correct disposal route Waste containers should be clearly labelled in departments 	3	2	6	
3	Waste incorrectly identified as non-hazardous and put into incorrect waste bin (general waste to landfill).	Potential exposure of waste collectors to hazardous material, e.g. toxic chemical resulting in acute health condition + potential action from EA.	<ul style="list-style-type: none"> University H&S policy/standard and guidance Department training on local rules for waste management Risk/COSHH assessment should identify correct disposal route 	3	3	9	Requires active monitoring and reminders

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
4	Sharps such as needles incorrectly disposed of, e.g. into autoclave or landfill waste plastic bags	Potential for needle stick injury to waste collector with exposure to biological material resulting in infection/illness	<ul style="list-style-type: none"> University H&S policy/standard and guidance Department training on local rules for waste management Risk/COSHH assessment should identify correct disposal route Appropriately labelled sharps bins provided where sharps are used No highly infectious biological material used at UoB Autoclave bags should be transparent and contents checked prior to handling 	3	3	9	Requires active monitoring and reminders
5	Waste incorrectly packaged resulting in a leak of liquid, e.g. lids not secured	Potential exposure of waste collectors to hazardous material, e.g. toxic/corrosive chemical resulting in acute health condition, burn to skin	<ul style="list-style-type: none"> University H&S policy/standard and guidance Department training on local rules for waste management Risk/COSHH assessment should identify correct disposal route Waste should be stored in appropriate lidded containers Waste handlers should wear gloves when handling/collecting waste packages 	3	2	6	

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
6	Waste stored in non-waterproof containers, e.g. cardboard boxes and left outdoors or leak inside resulting in loss of integrity of packaging and subsequent leak.	Potential exposure of waste collectors to hazardous material, e.g. toxic/corrosive chemical resulting in acute health condition, burn to skin	<ul style="list-style-type: none"> • University H&S policy/standard and guidance • Department training on local rules for waste management • Risk/COSHH assessment should identify correct disposal route • Waste should be stored in appropriate containers • Where possible waste should be in lidded plastic containers/packages; cardboard boxes should be avoided • Waste handlers should wear gloves when handling/collecting waste packages 	3	2	6	

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
7	Waste packages being lifted and transported to storage area by staff. Packages heavy and bulky resulting in drop leading to spill of contents.	Potential exposure of waste collectors to hazardous material, e.g. toxic/corrosive chemical resulting in acute health condition, burn to skin	<ul style="list-style-type: none"> Waste containers should not be over-filled Only recommended waste containers (by Hazardous Waste Service) to be used to prevent over-sized containers being used Heavy/bulky items should be moved by trolley, or if not feasible: two-man lift Waste handlers should be aware of what to do in the event of a spill and where nearest spill kit is located 	3	2	6	
8	Waste packages being lifted and transported to storage area by staff. Packages heavy and bulky, (largest individual container is 60l bin)	Physical injury to persons lifting packages such as back pain	<ul style="list-style-type: none"> Persons who regularly collect waste containers, e.g. Campus Services Staff, should attend manual handling training Heavy/bulky items should be moved by trolley, or if not feasible: two-man lift 	4	1	4	

#	Hazard(s) identified	Who might be affected and how	Existing controls & measures	Severity (a)	Likelihood (b)	Risk Rating (a x b)	Additional control/action required
9	Waste container falls from vehicle during collection round leading to breakage and spill of contents	Potential exposure of waste collectors to hazardous material, e.g. toxic/corrosive chemical resulting in acute health condition, burn to skin, during clean-up	<ul style="list-style-type: none"> Majority of waste containers designed to road transport standards and therefore unlikely to lose integrity Waste containers should be secured on vehicle An enclosed transit van is used for some waste collections Speed limit on campus roads Waste handlers should be aware of what to do in the event of a spill and where nearest spill kit is located 	3	1	3	