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**UNIVERSITY OF BATH HEALTH AND SAFETY STANDARD**

**Hazardous Chemical/Biological Waste**

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| Version Number | Version 1 | Date of Approval  | March 2017 | Review Date | Three years from acceptance by UHSC |
| Author and Lead | Debbie Robarts; Scientific Safety Advisor  |
| Aims | The University is committed to ensuring the health, safety and welfare of all staff, students and visitors.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. |
| Scope | The requirements of this standard apply to all employees of the University of Bath while undertaking work activities which generate hazardous waste. This standard only applies to chemical/biological (clinical) hazardous waste whose disposal is managed by the UHSE Hazardous Waste Service. It excludes hazardous waste such as Waste Electrical and Electronic Equipment (WEEE), fluorescent tubes and asbestos managed by the Estates Department. It also does not cover radioactive waste. |
| Relevant Legislation  | * The Environmental Protection Act 1990
* The Waste (England and Wales) Regulations 2011
* The Hazardous Waste Regulations 2005
* List of Wastes (England) Regulations 2005
* Trade Effluent Consent No. 51514
 |
| Definitions  | Hazardous WasteAny 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. |
|  | Waste ProducerThe person/department whose activities generate hazardous waste. |
|  | UHSE Hazardous Waste ServiceUniversity 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. |
|  | Duty of CareProducers of hazardous waste must take all reasonable steps to:* prevent unauthorised or harmful deposit, treatment or disposal of waste
* 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
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|  | Waste HierarchyAn 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:(a) prevention;(b) preparing for re-use;(c) recycling;(d) other recovery (for example energy recovery);(e) disposal |
|  | Re-UseAny operation by which products or components that are not waste are used again for the same purpose for which they were conceived. |
|  | Re-cyclingAny 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. |
|  | RecoveryAny 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. |
|  | Mixing of Hazardous WasteHazardous waste of any description shall be considered to have been mixed if it has been mixed with:(a)a different category of hazardous waste;(b)a non-hazardous waste; or(c)any other substance or material |
|  | Consignment NoteThe identification form which is required to accompany the hazardous waste when it is transferred for disposal off campus. |
|  | Waste HolderThe person who is in possession of the hazardous waste. |
|  | Registered CarrierA 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. |
| Responsibility for implementation | Faculty DeansHeads of DepartmentsSupervisors/ManagersTechnical Support StaffWaste Producers |
| Training availability:  | Induction Training by Supervisors/Department Safety Co-ordinators |
| **Standard to meet:**  | **Accountability** | **Reference documents and more information**  |
| 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 and subsequent disposal, applying the waste hierarchy where reasonable to do so. | Waste Producers | <http://www.hse.gov.uk/chemicals/dispose.htm> |
| 3. | Classify waste correctly to determine if the waste is hazardous. | Waste Producers |  <https://www.gov.uk/government/publications/waste-classification-technical-guidance> |
| 4. | Segregate waste appropriately- No mixing of types of waste (this is illegal)- Ensure incompatible wastes are separated | Waste Producers | <https://www.gov.uk/guidance/hazardous-waste-segregation-and-mixing> |
| 5. | Store hazardous waste safely- In appropriate containers; if stored outside or contain liquids 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> |
| 6. | Arrange for collection of hazardous waste - contact waste@lists.bath.ac.uk- request to be made by 12pm on Friday to guarantee collection following Monday- Provide sufficient information:* Name/Type of waste
* Amount of waste
* Type of packaging/container
* Classification/Hazard warning of waste
* Collection point
 | Waste Producers |  |
| 7. | Not dispose of any prohibited substances or substances exceeding threshold values to drain, as defined in University of Bath Trade Effluent Consent and UHSE Waste Guidance. | Waste Producers | Link to waste guidance doc |
| 8. | Collect hazardous waste and deposit safely in hazardous waste storage compound.Reject any waste that does not comply with University guidance (see points 5 and 6)  | Estates Management |  |
| 9. | Ensure hazardous waste is appropriately stored and monitored for damage/leaks in hazardous waste compound. | UHSE Hazardous Waste Service |  |
| 10. | Arrange for collection of hazardous waste for recovery or disposal by an authorised waste carrier.Ensure hazardous waste is in an appropriate form (correct packaging, labelling etc.) for collection. | UHSE Hazardous Waste Service |  |
| 11. | Ensure consignment notes are completed for all hazardous waste transfers within remit including:- waste classification code- waste details- declaration that waste hierarchy has been applied | UHSE Hazardous Waste Service |  |
| 12. | Keep records for 3 years at the premises that produced or stored the waste-consignment notes- consignee returns- records of rejected loads | UHSE Hazardous Waste Service |  |
| Standard Monitoring and Measurement Criteria  |
| Monitoring of the effective implementation of this standard will be carried out by routine inspections and waste audits.This will be carried out predominantly by Department Safety Co-ordinators supported by UHSE during routine safety inspections. |
| 1. | Waste packages will be inspected at the collection point for compliance with University requirements. Any that do not meet the criteria will be rejected. |
| 2. | Waste segregation included in safety inspections to check for non-compliant mixing of types of wastes, e.g. hazardous and non-hazardous. |
| 3. | Duty of care audits of authorised waste carriers will be carried out periodically on companies utilised by the University. |



Waste Request Form



The above provides an example of the types of information that would need to be included in the waste request form.

Generic Risk Assessment

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| --- | --- | --- |
| Risk Assessment Title: Management of Hazardous Waste | Date Produced: December 2016 | Review Date: December 2019 |
| 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 affectedand 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. | * 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 |  |
| 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. | * 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. | * 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 |
| 4 | Sharps such as needles incorrectly disposed of, e.g. into autoclave plastic bags | Potential for needle stick injury to waste collector with exposure to biological material resulting in infection/illness | * 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  | * 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 |  |
| 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 | * 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 plastic containers/packages; cardboard boxes should be avoided
* Waste handlers should wear gloves when handling/collecting waste packages
 | 3 | 2 | 6 |  |
| 7 | Waste packages being lifted and transported to storage area by staff/estates. 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 | * 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/estates. Packages heavy and bulky, (largest individual container is 60l bin) | Physical injury to persons lifting packages such as back pain | * Persons who regularly collect waste containers, e.g. Estates Staff, should attend manual handling training
* Heavy/bulky items should be moved by trolley, or if not feasible: two-man lift
 | 4 | 1 | 4 |  |
| 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 | * 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 |  |