SWITCH WASTE MANAGEMENT PROCEDURES

THIS DOCUMENT CONTAINS THE FOLLOWING INFORMATION:

Waste Management Guidance Note WMGN20 Chemical Waste Classification Guidance

Waste Management Guidance Note WMGN21 Chemically Contaminated Solid Waste (Red Bag)

Environmental Management System 8.1.5 Chemical Waste Store User Procedure

Waste Management Action Plan 2021 - 2025

Swansea University
Prifysgol Abertawe

Swansea University

Waste Management Guidance Note WMGN20 Chemical Waste Classification Guidance

Author:	Fiona Wheatley
Approved by:	Fiona Abbott
Creation date:	09/11/2018

Waste Management Guidance Note WMGN20 Chemical Waste Classification and Storage Guidance	
Location Generated	University-wide
EWC	Various
Type	Chemical and Hazardous Wastes
Disposal Method	Specialist contractor
Receptacle type	Various

Duty Of Care

To ensure the that the University complies with its Duty of Care, as set out in section 34 of the Environment Protection Act 1990, the University must ensure that all waste is stored in such a way as to prevent escape or leakage whilst on site or in storage.

- Waste is only kept, treated, deposited or disposed of in accordance with a waste management licence or other authorisation
- Waste does not escape from the control of the holder
- Waste is only transferred to authorised persons such as registered waste carriers or licensed disposal operations permitted to accept that type of waste
- All transfers / movements of the waste are accompanied by an adequate written description of the waste which will allow waste to be identified and subsequently handled correctly

The University must act to keep stored waste safe against:

- corrosion or wear of waste containers;
- accidental spilling or leaking or inadvertent leaching from waste unprotected from rainfall;
- accident or weather breaking contained waste open and allowing it to escape;
- waste blowing away or falling while stored or transported; and
- scavenging of waste by vandals, thieves, children, trespassers or animals

This Duty of Care begins with the person/s who produced the waste and it cannot be delegated to others. This duty is legally enforceable and breaches can lead to criminal prosecution of individuals and the University. As a result, the University (its staff and students) must make every effort to categorise, segregate and contain waste according to standards imposed by current legislation.

Responsibilities

PSUs/Faculties:

- Must ensure they have a system in place for **Chemical Risk Assessment** of hazardous substances and that assessments identify the correct means of disposal.
- Must ensure that chemicals are stored in suitable containers and are correctly and fully labelled for collection.
- Take chemical waste to the appropriate chemical waste store for disposal
- Must send fully completed chemical waste disposal request forms to Sustainability prior to taking chemical waste to the storage area. A paper copy of the form should be provided when taking the chemical waste to the store.

University Staff and Students are responsible for:

- Minimising raw material consumption and waste production when working, through careful work planning
- Reusing and recycling materials wherever practicable
- Identifying the intrinsic hazards of the waste produced, identifying the appropriate waste disposal route and disposing of waste accordingly
- Segregating, containing and appropriately labelling waste in order to avoid problems of mixing incompatible wastes and to avoid spreading hazards in the work area
- Bringing to the attention of the Faculty/PSU Health & Safety Lead and/or Environmental Officer or other nominated person(s) any non-conformance in relation to this policy / departmental waste management procedures
- Ensuring that ALL unwanted chemicals, samples, accumulations of materials etc, including those in cupboards, fridges and freezers, are disposed of correctly at the end of their studies, project(s) or employment with the University

Sustainability;

- Providing guidance on waste classification
- Management of chemical waste disposal on behalf of the University via an authorised contractor(s)
- Maintain central copies of WTN and HWCN
- Keeping abreast of developments in UK and EU waste and environmental management legislation
- Timely and appropriate communication of classification and storage advice and requirements

Waste Classification for disposal

To dispose of chemical waste via the University Chemical Waste Store, the wastes' primary Hazardous Property (HP) must be identified on the University's Chemical Waste Disposal Form which can be found **here** under the 'Waste Management Guidance Note' section.

To aid with the assessment and classification of waste to determine its Hazardous Property (HP) the following steps should be taken;

1. Determine the chemical composition of the waste

Information on the composition of waste can be found on the manufacturers Safety Data Sheet (SDS) or held on the appropriate Chemical Risk Assessment / COSHH Assessments

A record **must** be kept of the content of all experiment chemical solutions as unknown chemicals may pose a risk and are costly to dispose of as they must be tested to determine composition to enable classification.

2. Assess the Hazardous Properties (HP) of the waste

Numbered HP1 to HP15 there are 3 methods in which to calculate if a waste displays a hazardous property;

a. Calculation: Referring to a concentration limit for a **hazard statement code (s)**,
b. Testing: To prove whether a particular hazardous property is present or not (typically used for the physical properties – explosive, oxidising, and flammable), or
c. The safety data sheet: If the waste is a manufactured product whose composition **has not changed**, the SDS for that specific product can be used

If the composition has not changed and a SDS can be used, the following steps can be taken to complete the Chemical Waste Disposal Form.

1. Identify the Hazardous Statement on the SDS

Safety Data Sheet

Product name : PETROSOL D 24/27 — Date of issue: 28/03/2012.
Cod. CEPSA : 32272 — Version: 3

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : UVCB

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Asp. Tox. 1, H304

Classification according to Directive 67/548/EEC [DSD]
Xn; R65
R66

See Section 16 for the full text of the R phrases or H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger
Hazard statements : H304 May be fatal if swallowed and enters airways.
Precautionary statements
General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention :
Response : IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage : Store locked up.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients : Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics
Supplemental label elements : Repeated exposure may cause skin dryness or cracking.

2. Convert the Hazardous Statement into the Hazardous Property HP [1]

Hazard statement	Description	Hazard Class and Category In Table 3.1 of CLP		Threshold[2]	Hazardous Property
	Heating may cause a fire.	Self-react.	C, D, E, F	See Appendix C3	
		Org. Perox.	C, D, E, F		
H250	Catches fire spontaneously if exposed to air.	Pyr. Liq.	1	See Appendix C3	HP 3
		Pyr. Sol.	1		
H251	Self-heating; may catch fire.	Self-heat.	1	See Appendix C3	HP 3
H252	Self-heating in large quantities; may catch fire.	Self-heat.	2	See Appendix C3	HP 3
H260	In contact with water releases flammable gases which may ignite spontaneously.	Water-react.	1	See Appendix C3	HP 3
H261	In contact with water releases flammable gases.	Water-react.	2	See Appendix C3	HP 3
H270	May cause or intensify fire; oxidiser.	Ox. Gas	1	See Appendix C2	HP 2
H271	May cause fire or explosion; strong oxidiser.	Ox. Sol.	1	See Appendix C2	HP 2
H272	May intensify fire; oxidiser.	Ox. Sol.	2, 3	See Appendix C2	HP 2
H280	Contains gas under pressure; may explode if heated.	n/a	n/a	n/a	n/a
H281	Contains refrigerated gas; may cause cryogenic burns or injury.	n/a	n/a	n/a	n/a
H290	May be corrosive to metals.	Met. Corr.	1	n/a	n/a
H300	Fatal if swallowed.	Acute Tox.	1	Sum (0.1%)	HP 6
		Acute Tox.	2	Sum (0.25%)	HP 6
H301	Toxic if swallowed.	Acute Tox.	3	Sum (5%)	HP 6
H302	Harmful if swallowed.	Acute Tox.	4	Sum (25%)	HP 6
H304	May be fatal if swallowed and enters airways.	Asp. Tox.	1	Sum (10%)	HP 5

[1] WM3 Waste Technical Guidance P13

Hazard Statement

These are standardised phrases and alpha-numerical codes used to describe particular hazards (similar to Risk Phrases). The coding relates to a primary hazard, followed by a two digit sequential code and descriptive text.

Hazardous Statement	Hazardous Property	WM3 Appendix C - HP Assessment
Physical Hazards: **H2** ## e.g. H221 Flammable gas.	HP1 Explosive HP2 Oxidiser HP3 Flammable	Page C3 Page C7 Page C9
Health Hazards: **H3** ## e.g. H312 Harmful in contact with skin	HP4 Irritant HP5 Specific Target Organ/ Aspiration Toxicity HP6 Acute Toxicity HP7 Carcinogenic HP8 Corrosive HP9 Infectious (Clinical Waste) HP10 Toxic for reproduction HP11 Mutagenic HP12 Acute Toxic Gas HP13 Sensitising	Page C15 Page C19 Page C23 Page C27 Page C29 Page C33 (Not accepted in Chemical waste store) Page C33 Page C37 Page 41 (Not accepted in Chemical waste store) Page C45
Environmental: **H4** ## e.g. H401 Toxic to aquatic life	HP14 Ecotoxic	Page C47

The system also includes two signal words, which appear on chemical labels to relate the severity of the hazards to the user.

- Warning: indicates a less severe hazard
- Danger: indicates a more severe hazard

3. Record the Hazardous Property (HP) of the Waste on the Chemical Waste Disposal Form

CHEMICAL WASTE DISPOSAL REQUEST FORM
ONCE COMPLETE PLEASE SEND TO ESTATES-WASTE@SWANSEA.AC.UK

Prifysgol Abertawe Swansea University

Faculty: _____ **Faculty / Dept:** _____
Contact name: _____ **Ext No:** _____
Date: _____ **Laboratory:** _____

Substance Name (mandatory filed)	**CAS number** *(if applicable)*	**Quartzy ID number**	**Description of container** e.g. winchester bottle (mandatory field)	**State** (Liquid, solid, powder etc.) (mandatory field)	**Weight/ Volume** (kg/ ml) (mandatory field)	**Quantity / number of item** (mandatory field)	**Laboratory/ Location disposing of** (Building & room no) (mandatory field)	**Hazard Property (s) (HP1-HP15) e.g. HP3 - Flammable See SDS Safety Data Sheet** (mandatory field)	**Is the container fully labelled?** (mandatory field)	**Have you provided the SDS for the substance** (if appropriate)	**Storage requirements (from SDS Safety Data Sheet)**	**Date of disposal**

To ensure safe storage, if the waste's Hazardous Property is HP4 or HP8 (Category 1A 1B 1C) it must be identified on the Chemical Waste Disposal form in the 'Substance Name' section if the waste is;

- Corrosive; Acid – Mineral Inorganic
- Corrosive; Acid – organic
- Corrosive; Acid – organic base

Once the Chemical Waste Disposal Form has been completed, with all mandatory fields complete, it must be emailed to estates-waste@swansea.ac.uk along with a copy of all the listed wastes' SDS for assessment. An example of a correctly completed form is in Appendix A.

If the composition of the waste is unknown then WM3 Waste Classification Technical Guidance, under the guidance of the Sustainability team, must be consulted. If the HP cannot be identified wastes must be tested at cost to the Faculty/PSU.

It is the producers responsibility to classify their chemical waste, however guidance will be provided by contacting estates-waste@swansea.ac.uk

If a European Waste Code (EWC) for waste disposal is required by any Faculties or PSUs, please consult estates-waste@swansea.ac.uk.

Waste Segregation and Safe Storage According to Hazard Classification

Poor or incorrect chemical storage practices can lead to inadvertent reactions between incompatible materials with the potential to cause harm, fire or even explosions. All chemicals should be stored in such a manner as to prevent incompatible materials from being accidentally mixed together in the event of the breakage of one or more containers in the storage area, or to prevent the formation and build-up of reactive vapours.

Chemicals should not be stored alphabetically unless they have first been separated into their hazard classes. There are no absolute rules on how many classes of chemicals should be segregated as the degree of segregation will depend upon the risk. However, isolation of chemicals into the basic hazard classes will eliminate most accidental adverse reactions that may occur due to breakages or leakages in storage areas.

The table Chemical Storage By Hazard Category[2] acts as a reference guide for chemical compatibility. However always consult the SDS (with relevant storage information transposed onto the Chemical Waste Disposal Form) and chemical risk assessment.

Chemical Storage By Hazard Category

Principle Container symbol		Flammable liquids	Halogenated Solvents	Acids – Mineral (inorganic)	Acids - Organic	Acids - Oxidising	Alkalis (bases)	Oxidisers	Highly toxic - inorganic	Organic bases	Water / Air reactive
	Flammable liquids	Methanol Toluene THF, Acetone									
	Halogenated Solvents		Chloroform Dichloromethane								
	Acids – Mineral (inorganic)			Hydrochloric acid Phosphoric acid Sulphuric acid							
	Acids - organic				Acetic acid Benzoic acid Formic acid						
	Acids - oxidising					Nitric acid [1] Sulphuric acid Perchloric acid					
	Alkalis (bases)						Sodium hydroxide Sodium carbonate				
	Oxidisers							Permanganates Perchlorates Selenium dioxide			
	Highly toxic - inorganic								Fluorine Chorine		
	Organic Bases[2]									Triethylamine Diethylamine triethanolamine	
	Water / Air reactive										Alkyl lithium LiAlH4

Key

	Can be stored together in same cabinet		The ideal is to store in a separate cabinet. If deviating from this, there is a requirement to justify why and add additional controls. These may be to store on a different shelf within the cabinet or utilise a secondary container as appropriate. **Consult the safety data sheet (SDS).**		Must not be stored together. **Check the safety data sheet.**

Further guidance on chemical storage please consult the Faculty H&S Lead/Environmental Officer.

[22] Table Chemical Storage by Hazard Category (Warwick.ac.uk)

Guidance on Waste Organic Solvent Classification

Organic solvents can be bulked up for waste disposal. However, some are incompatible with one another so it is necessary to collect in two separate categories**: Halogenated and Nonhalogenated.** This segregation is also necessary because halogenated substances require more extensive treatment in order to minimise environmental pollution during waste disposal.

All efforts should be made to record the composition of Halogenated and Non-halogenated waste to aid disposal. Composition should be captured as best as possible on the chemical waste disposal label placed on the external surface of the Winchesters, and on the Chemicals Waste Disposal Form for disposal.

Aqueous Solvent Waste

All efforts should be made to record the composition of aqueous waste to aid disposal. Composition should be captured as best as possible on the chemical waste disposal label placed on the Winchester, and on the Chemical Waste Disposal Form for disposal.

Chemical Waste Containers

Winchesters must be suitable for the type of waste being stored within, therefore the following guidelines should be followed:

- Glass Winchesters: may be used for most chemicals, but **not** hydrofluoric acid waste.
- Plastic Winchesters: suitable for acids and alkalis. However, do **not** use for aggressive solvents, or mixtures containing aggressive solvents.
- Containers/bottles designed for solids must **not** be used for liquids wastes.

The condition of all Winchesters and containers must be checked (responsibility of the waste producer) before disposal. Winchesters must **not** be overfilled. Winchesters should be filled only filled to the shoulder and **no** higher. Caps should not be over tightened, with Winchesters containing a highly or extremely flammable liquid (HP3) not being filled above 3/4 full.

Figure 1 – Example of an incorrectly used Winchester and guide fill point

Disposal Once the wastes primary hazardous property has been identified, please see **8.1.5 WMP Chemical Waste Store User Procedure** which can be found **here**.
For further guidance please contact Estates-Waste@Swansea.ac.uk
Forms & Labelling All relevant forms, labels and further waste guidance can be found **here.**

Swansea University
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Appendix A
Example – Completed Chemical Waste Disposal Form

CHEMICAL WASTE DISPOSAL REQUEST FORM

ONCE COMPLETE PLEASE SEND TO ESTATES-WASTE@SWANSEA.AC.UK

Prifysgol Abertawe Swansea University

Faculty:		**Faculty / Dept:**	
Contact name:		**Ext No:**	
Date:		**Laboratory:**	

Substance Name (mandatory filed)	**CAS number** *(if applicable)*	**Quartzy ID number**	**Description of container** e.g. winchester bottle (mandatory field)	**State** (Liquid, solid, powder etc.) (mandatory field)	**Weight/ Volume** (kg/ ml) (mandatory field)	**Quantity / number of item** (mandatory field)	**Laboratory/ Location disposing of** (Building & room no) (mandatory field)	**Hazard Property (s) (HP1-HP15) e.g. HP3 - Flammable See SDS Safety Data Sheet** (mandatory field)	**Is the container fully labelled?** (mandatory field)	**Have you provided the SDS for the substance** (if appropriate)	**Storage requirements (from SDS Safety Data Sheet)**	**Date of disposal**
Halogenated waste			Glass winchester bottle	liquid	2.5l	1	C06	H3-B, HP4, HP5, HP6	Yes	Yes		
Gloves/Foil/Wipes/Blue roll contaminated with IPA/Acetone/AZ photoresist			Red plastic bag	solids	3kg	3	ILS2 B06	HP3, HP4	Yes	Yes		

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Waste Management Guidance Note WMGN21 Chemically Contaminated Solid Waste (Red Bag)

Author:	Fiona Wheatley
Approved by:	Fiona Abbott
Creation date:	09/11/2018

Waste Management Guidance Note WMGN21 Chemical Contaminated Solid Waste (Red Bag)	
Location Generated	Any laboratory or workshop
EWC	15 02 02*
Type	Controlled – Hazardous waste
Disposal Method	Segregated for incineration
Bin/ Bag Type	Metal Fire Proof Bin / **Red bag only**

Duty of Care Requirements

EWC 15 02 02* "Absorbents, filter materials, wiping cloths, protective clothing contaminated by dangerous substances"

It is a legal requirement under the Hazardous Waste Regulations to segregate hazardous wastes from non-hazardous wastes. Incorrectly disposing of hazardous waste via a non-hazardous waste stream can lead to legal and financial penalties dependent upon the severity of the noncompliance.

Chemical and solvent-contaminated solids produced in the University's laboratories and workshops are highly flammable and must be dealt with diligently.

The University has an appointed hazardous waste contractor whom supplies a collection service to both Singleton and Bay chemical waste stores.

Items

All of the following chemically contaminated solid waste produced by laboratories and workshops must be placed into **red bags** for disposal;

- **Solvent and chemical powers contaminated cloths**
- **Blue paper towels**
- **PPE (masks/aprons/gloves)**

If it is not clear whether any of the items listed above are contaminated with chemicals, the item **must** be segregated from other wastes and placed into a red bag for disposal via the chemical waste store.

Figure 1: Red bag and appropriate bin

Disposal Instructions

Internal Storage

All laboratories and workshops producing chemically contained waste must install compliant waste bins; a standard specification has been developed, which is available **here.**

Under **no** circumstances should any sharps be placed into red bags, or items that may affect the integrity of the bag, including tips. Glass pierces the bags and has health and safety implications for waste service providers (see WMGN23 Broken and Contaminated Laboratory Glass).

Please note it is an offence to place a red bag with chemically contaminated waste into any of the University's external waste and recycling bins.

External Storage prior to disposal - Chemical Store

Red bags **must** be disposed of via the chemicals stores. Red bags **cannot** be placed in the non-recycling or recycling wheelie bins. Each red bag brought to the chemical waste stores **must** have a chemical waste label (see WMP 8.1.5 Chemical Waste Store User Guide).

Disposal Cost

Currently the disposal cost is factored into the University's waste management service provision; therefore there is no direct cost to individuals/Faculties/PSUs.

For further guidance please contact Estates-Waste@Swansea.ac.uk

Forms, Labelling and further guidance

- Labels for internal red bag bins can be found below.
- All relevant forms, labels and further waste guidance can be found here

WARNING HAZARDOUS WASTE

CHEMICALLY CONTAMINATED SOLIDS ONLY

METAL FLIP TOP BIN ONLY - RED BAG ONLY - EWC 15 02 02 *

ITEMS

CLOTHS / PAPER TOWELS / PLASTIC FILM AND PACKAGING/ GLOVES / MASKS/ SMALL NON-SHARP CONTAMINATED PLASTICS

NO BIOLOGICALS / NO GLASS OF ANY TYPE – WINCHESTERS / BROKEN LAB GLASS / NO SHARPS INCLUDING TIPS OR ITEMS WHICH WILL RIP THE BAG

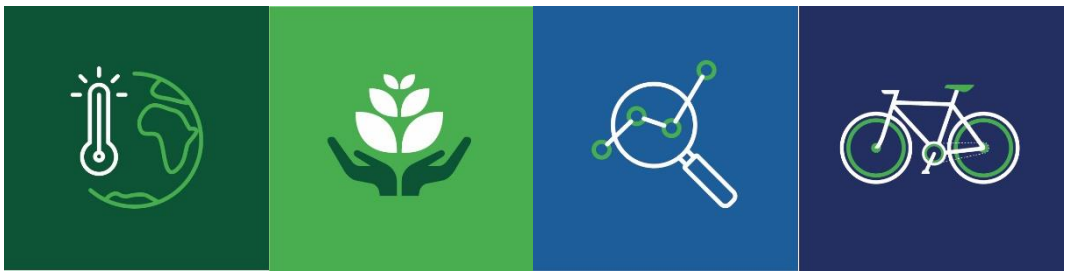
RED BAGS MUST BE DISPOSED OF VIA THE CHEMICAL WASTE STORE / RED BAG BINS MUST BE EMPTIED OUT DAILY OR EMPTIED IMMEDIATELY WHEN FULL / SATURATED CLOTHS AND PAPER TOWELS USED FOR SPILLS AND CLEANING MUST BE BAGGED SEPARATELY FOR DISPOSAL

Swansea University Prifysgol Abertawe | Sustainability Cynaliadwyedd

Environmental Management System
8.1.5 Chemical Waste Store User Procedure

Issued: January 2018

Author:	Fiona Wheatley
Approved by:	Fiona Abbott
Review date:	04/08/2024
Clause Ref:	Ecocampus and ISO 14001 (2015)
DO NOT PRINT THIS PROCEDURE UNLESS NECESSARY	



8.1.5 Chemical Waste Store User Procedure

1 Purpose

To define Swansea University's legal obligations and procedures associated with the storage, collection and disposal of used chemicals, solvents and other hazardous chemical substances. This procedure applies to waste chemicals, solvents and other hazardous chemical substances generated by the University.

2 Responsibilities

All staff	Ensure all hazardous chemical waste is packaged, labelled and disposed of correctly.
Waste & Recycling Officer	Provide support to ensure that all depts. take waste chemicals, solvents and other hazardous substances to the relevant chemical waste store; And arrange the subsequent packing and disposal of the chemicals and ensure legal compliance and compliance with this procedure.
Chemcycle & Waste care	Provide a competent chemist to pack chemicals, and following this, the collection and transportation of chemical waste for disposal. Ensure consignment notes are completed, signed and sent to the Waste & Recycling Officer.
Mitie (main waste contractor)	Provide a competent chemist to pack chemicals, and following this, the collection and transportation of chemical waste for disposal. Ensure consignment notes are completed, signed and sent to Waste & Recycling Officer.

3 Legal Duty of Care and Responsibility

To ensure the that the University complies with its Duty of Care, as set out in Section 34 of the Environment Protection Act 1990, the University must ensure that all waste is stored in such a way as to prevent escape or leakage whilst on site or in storage.

- Waste is only kept, treated, deposited or disposed of in accordance with a waste management licence or other authorisation
- Waste does not escape from the control of the holder

- Waste is only transferred to authorised persons such as registered waste carriers or licensed disposal operations permitted to accept that type of waste
- All transfers / movements of the waste are accompanied by an adequate written description of the waste which will allow waste to be identified and subsequently handled correctly

The University must act to keep stored waste safe against:

- corrosion or wear of waste containers;
- accidental spilling or leaking or inadvertent leaching from waste unprotected from rainfall;
- accident or weather breaking contained waste open and allowing it to escape;
- waste blowing away or falling while stored or transported; and
- scavenging of waste by vandals, thieves, children, trespassers or animals

This Duty of Care begins with the person/s who produced the waste and it cannot be delegated to others. This duty is legally enforceable and breaches can lead to criminal prosecution of individuals and the University. As a result, the University (its staff and students) must make every effort to categorise, segregate and contain waste according to standards imposed by current legislation.

Prior to collection chemical wastes must be segregated and stored in accordance with compatibility in the University's Chemical stores in order to minimise risk and to prevent chemical reactions. Further guidance on chemical waste classification and storage is provided by WMGN20 Chemical Waste Classification and Storage Guidance and the UK Government's "Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste".

4 Process

4.1 Key Activities

Sustainability team:

- Appointing and managing the licensed Waste Disposal Contractor(s).
- Co-ordinating the collection and subsequent disposal of chemical waste.
- Carrying out Duty of Care checks.
- Managing chemical waste documentation.
- Notification and registration to the relevant authorities.
- Provides the appropriate EWC for disposal (where applicable)

- Ownership of the Grove Chemical Waste Store and responsible for the approvals process for the disposal of chemical waste to the Bay Chemical Waste Store and opening of the store.

Faculties:

- Must ensure they have a system in place for **Chemical Risk Assessment**[1] of hazardous substances and that assessments identify the correct means of disposal.
- Must ensure that chemicals are stored in suitable containers and are correctly labelled for collection.
- Take chemical waste to the appropriate chemical waste store for disposal (NB except high risk chemicals – covered in point 2)
- Must send correctly completed chemical waste disposal request forms to estates-waste@swansea.ac.uk (see "Section Chemical Waste Approvals" and have had approval granted prior to taking chemical waste to the storage area. A paper copy of the approved form should be provided when taking the chemical waste to the store.

4.2 Disposal Instructions

A quick reference step by step guide is provided below on the procedure required to dispose of chemical waste via the University's Chemical Waste Store;

1. Identify each waste item primary Hazardous Property
2. Correctly complete the Chemical Waste Disposal Form
3. Email form to estates-waste@swansea.ac.uk for assessment and approval
4. Ensure waste is securely, packaged and labelled
5. Wait for approval
6. Transportation of waste to store
    - For Bay Campus – bring out to store wearing PPE
    - For Singleton Campus – bring to store on allotted open days, wearing PPE

A paper copy of the complete Chemical Waste Disposal Form **must** be brought with the waste out to the store.

The University's appointed chemical waste contractor's chemist will identify and apply the correct European Waste Code (EWC) to the wastes prior the removal of the consignment from site.

[1] See local Health & Safety Lead for further information

4.2.1 Step 1 - Identify the each waste item primary Hazardous Property

Further information is provided in WMGN20. If there are any queries contact the Sustainability team for further support.

4.2.2 Step 2 – Completion of the Chemical Waste Form

Any chemical waste that needs to be disposed must be itemised on the **Chemical Waste Disposal Form**[2]

REACH-compliant Safety data sheets (SDS) provide information relating to the Hazardous Property (HP) of a substance and outline the recommended handling, disposal and storage measures. This information must be captured on the Chemical Waste Disposal Form.

Further detailed guidance on hazardous waste classification and threshold limits for the different hazard classifications can be found within 's Technical Guidance WM3: Waste Classification and the University's WMGN20 Chemical Waste Classification and Storage Guidance. For further support please contact estates-waste@swansea.ac.uk

4.2.3 Step 3 - Email form for assessment and approval

The completed form should be emailed to estates-waste@swansea.ac.uk for assessment and approval by the Sustainability team. There are mandatory fields highlighted on the form, failure to accurately complete these fields will lead to delays in gaining approval for disposal. The Sustainability team may request further information to support the assessment. The Sustainability Team will review each consignment to ensure all chemical wastes listed are compatible to be accepted into the store.

4.2.4 Step 4 - Ensure waste is securely and appropriate packaged

All wastes brought to the store **must** be clearly labelled with the Hazardous Property (**HP)** identified. **No items** will be accepted into the store without a completed University **Chemical Waste Label**[3]

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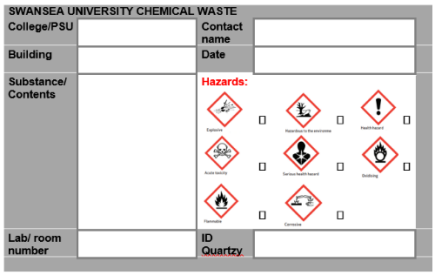
[2] Found at the staff pages from https://www.swansea.ac.uk/sustainability/sustainability-minimal-waste/

[3] Found at https://www.swansea.ac.uk/sustainability/sustainability-minimal-waste/


SWANSEA UNIVERSITY CHEMICAL WASTE

College/PSU		Contact name	
Building		Date	
Substance/ Contents		Hazards:	
Lab/ room number		ID Quartzy	

Figure 1 – Example of the Chemical Waste Label

4.2.4.1 4.a Containment of liquid wastes

Winchesters must be suitable for the type of waste, therefore the following guidelines should be followed:

- Glass Winchesters: may be used for most chemicals, but not hydrofluoric acid waste
- Plastic Winchesters: suitable for acids and alkalis. However do use for aggressive solvents, or mixtures containing aggressive solvents,

Containers/bottles designed for solids **must not** be used for liquids wastes.

It is the responsibility of the waste producer to check the condition of all Winchesters and containers prior to disposal. Colleges/PSUs/Research groups are required to source their own bottle or Winchesters for waste disposal.

Winchesters must not be overfilled. They should be **filled only** to the shoulder and caps should be secure, with no holes. Winchesters containing a highly or extremely flammable liquid (HP3) must not be more than 3/4 full. Failure to adhere to this requirements will result in the Winchesters not being accepted at the store.

Supplier guidance with respect to suitable containment and packaging to be used when appropriate as outlined within SDS.

Figure 2 – Maximum fill height of a Winchester and the consequences of overfilling and incorrect use

4.2.4.2 4.b Solid waste (other than red bag)

All solid chemical waste e.g. powders, must be appropriately, and securely packaged in accordance with SDS and user guidelines. This is to ensure safe transportation to the chemical waste store, and during transport for disposal.

4.2.4.3 4.c Chemically Contaminated Solid Waste Red Bags

See **WMGN21 Chemically Contaminated Laboratory Solids** for further guidance. All red bags should contain chemically contaminated solids such as PPE and blue paper towels **only**. No sharps or other items[4] likely to compromise the integrity of the bag should be placed into the red bag. Bags must be integrally sound, with no rips, when brought to the store. If necessary, double bag the red bags to prevent waste escaping. Each bag must have a completed Chemical Waste Label.

Figure 3 – Example of acceptable red bag (prior to label addition)

[4] See WMGN22 and WMGN23

4.2.5 Step 5 – Transfer to the Chemical Waste Store

Any chemicals with the following **primary** Hazardous Property must be directly collected from laboratories;

- HP-1 (Explosive) e.g. Picric Acid
- HP-6 (Toxic, in particular toxic on inhalation) e.g. Hydrofluoric Acid

However, each consignment will be review by the Sustainability Team on a case-by-case basis dependent on concentration.

There are two chemical waste stores located on University premises, the locations of which are shown in Appendix A.

- The **Singleton Campus Grove Chemical Waste Store** is located between Grove (Building 12) and Glyn Dwr (Building 11.1). The Store is opened by the Waste & Recycling Officer weekly, every Thursday 10am until 10.30 **by appointment.**

  All visitors, tenants', contractors utilising the stores (without Sustainability accompaniment) will need to undertake the Chemical Store induction prior to use.

- The **Bay Campus Chemical Waste Store** is located in the Engineering Service Yard. The Store is opened by the Waste & Recycling Officer weekly, every Tuesday 11am until 11.30am and Friday 12pm until 12.30pm **by appointment.**

Please see Appendix A for mapped locations of the Chemical Waste Stores.

To gain access to both campuses stores, a Chemical Waste Disposal Form and corresponding MSDS **must** be sent to Estates-Waste@swansea.ac.uk for approval before a timeslot can be provided for the chemical waste can be taken to the store.

4.2.6 Chemical waste transport requirements

Individuals bringing waste to the Singleton and Bay Chemical Waste Stores **must** wear appropriate PPE including a lab coat, gloves, closed shoes.

All waste items must be transported in a safe and secure manner, in a winchester carrier, or bunded trolley.

If you do not have access to a Winchester carrier, or bunded trolley one can be booked out from the Chemicals Waste Store on each campus when requesting a disposal slot.

A paper copy of the Chemical Waste Disposal Form must be brought with the consignment.

5 Processing & Collection of Wastes for Offsite Disposal

The University chemical waste is collected by a registered hazardous waste contractor, which hold all necessary permits and licences with both Natural Resources Wales (NRW) and the Environment Agency (EA).

The University waste is taken to a registered hazardous waste transfer station before transportation to specialised facilities, which neutralise, incinerate, or prepare the chemical waste for reuse in industry.

6 Disposal Cost

Charges apply for the disposal of chemical waste to University tenants. Tenants who wish to dispose of chemical waste must fill out the **Chemical Waste Disposal Form** and email **estates-waste@swansea.ac.uk** to discuss arrangements and indicative costs.

Colleges and PSUs requiring the mass disposal (i.e. laboratory clear-out) of chemicals, including direct collect for high volumes of HP1 and HP6 chemicals, will be required to supply a cost code for services.

For further guidance please contact **Estates-Waste@Swansea.ac.uk**

7 Effects and Actions on Non Conformance

Failure to comply with this procedure may result in:

- Non-conformance with the requirements of EcoCampus and the ISO 14001:2015 standard.

Departure from this procedure is addressed in the procedure **10.1 Nonconformity and Corrective Action**

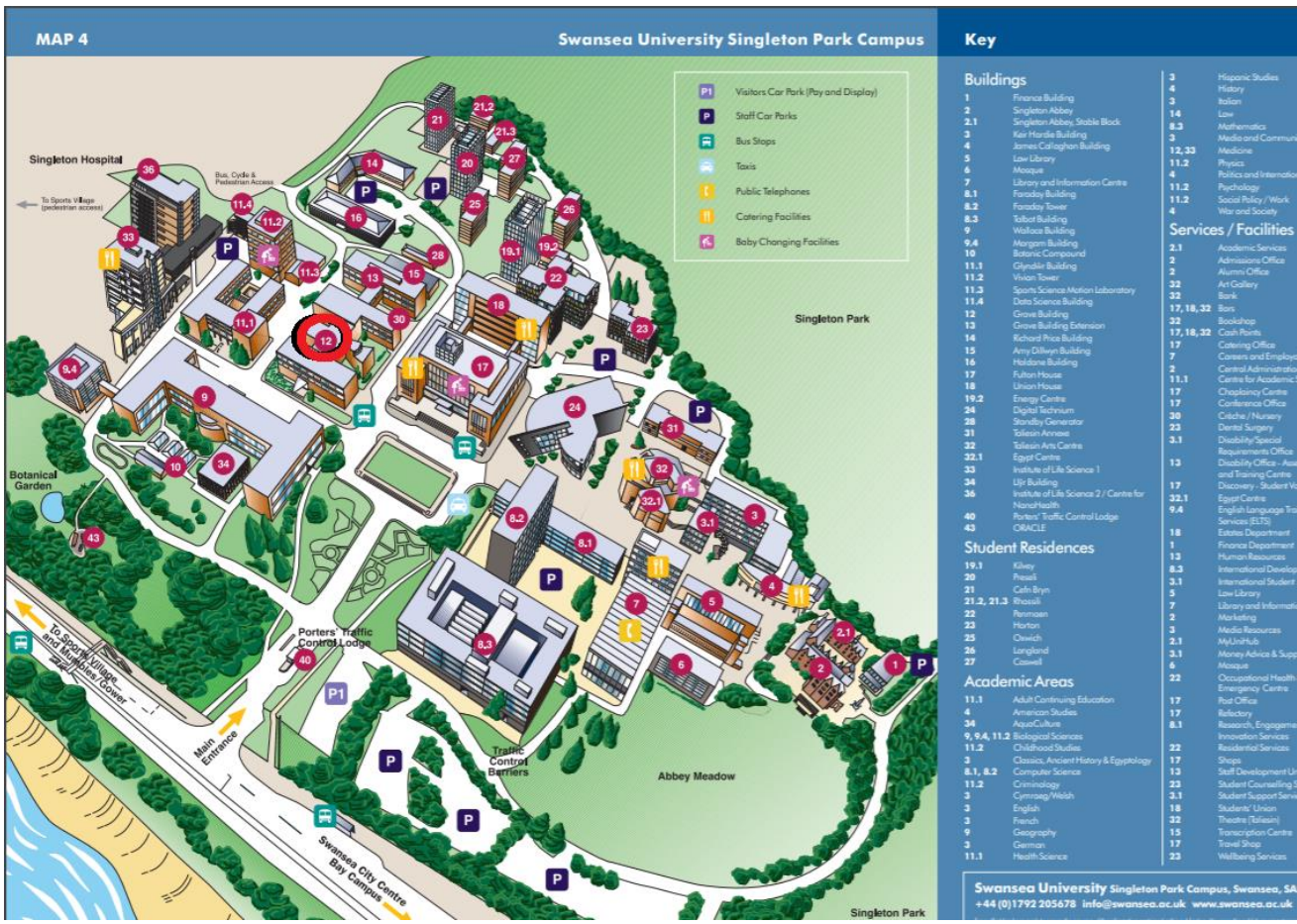
8 Version Control

Date	Version	Update
XX/XX/XX	1	Original document
XX/XX/XX	2	- Updated template - Reviewed, updated and expanded information

26.01.2021	3	- Various hyperlink updates and insert to changes in store opening times
04.08.2023	4	- Veolia is no longer the primary contractor, Mitie is now the service provider - Opening times updated - Further detail added regarding transportation, creation of 4.2.6

Appendix A - Chemical Waste Store Location Map

Singleton Campus Grove Chemical Waste Store is located between Grove (Building 12) and Glyn Dwr (Building 11.1)



8.1 Bay Campus

Engineering Yard Chemical Waste Store; Location 3.1 in the Engineering Service Yard

MAP 4
Swansea University Bay Campus
Key
1 Energy Safety Research Institute (ESRI)
1.1 ORACLE II
2 Institute of Structural Materials (ISM)
3 Engineering East
3.1 Service Goods Yard
4 Engineering Central
5 Bay Library
6 Great Hall
7 School of Management
8 Student Residences
8 Students' Union
9 Tower Information Centre (TIC)
9 Estates and Facilities Reception
9 St Modwen Student Living Reception
9 My Uni Hub
10 Computational Foundry (Opening September 2018)
Black Rock Point
Beach Access
Gower Square
Margam Square
Tennant Place
Severn Way
Afan Way
Crymlyn Way
Swansea City Singleton Park Campus
Main Entrance
Port Talbot M4
Student residents area east to west view – Severn Way
Car Parking
Disabled Parking Bays
Bus Stops
Taxis
Cycle Park
Santander
Shop
Food Court
Bar/Café
Café
Vending
Showers
Defibrillator
Sports Reception/ Hall/Gym
Baby Changing Facilities
Crèche
Multi-Faith Centre
Launderette
Outdoor Sports Facilities
Music Practice Rooms
Site of Special Scientific Interest
Site of Special Scientific Interest Parking
TIC Entrance
Swansea University Prifysgol Abertaw
Swansea University Bay Campus, Swansea, SA1 8EN
+44 (0)1792 205678 info@swansea.ac.uk www.swansea.ac.uk

9 Appendix B

Bay Campus Engineering Yard Office Chemical Waste Store Safety Check List

Check List	Tick
Consignee name Lab/Room Number Date	
Are all chemicals labelled?	
Are all hazardous identified?	
Are all winchers and containers integrally sound? (visual check)	
Are all Winchesters appropriately filled? (only to the base of the neck)	
All red bags are labelled?	
All red bags are integrally sound? (visual check)	
The Service Yard Officer has signed initialled and dated all chemical waste labels before accepting waste into the store?	

Waste Management Action Plan 2021 - 2025

This WMAP has been developed to deliver on the key waste management commitments as set out in the University's 2021-2025 Sustainability and Climate Change Emergency Strategy

Key Commitment WE18; To Retain the Carbon Trust Waste standard accreditation for the University throughout the strategy period						
Action number	**Action**	**Campus**	**Target date**	**Strategy year**	**Progress**	**Lead contact**
1.1	Collect and collate waste management data to analyse trends and monitor waste generation to actively target specific waste streams to ensure year on year reduction of waste.	NA	30 July 2021	2020/21	On going	Fiona Wheatley
1.2	To report waste data quarterly to the head of E&FM	NA	30 July 2021	2020/21	On going	Fiona Wheatley
1.3	Run all waste data reporting through the new soft FM contract provider Quemis system		30 July 2021	2021/22	On going	Fiona Wheatley
1.4	Replace current Carbon Trust Waste Standard based on year-on-year reduction of waste with a new **Carbon Trust Zero Wate to Landfill accreditation** from September 2022 until August 2024	Singleton and Bay	30-Sep-22	2022/23 - 2023/24	Completed August 2022	Fiona Wheatley

Key Commitment WE19; Continue to reduce the waste mass generated per full time equivalent (FTE) staff and students per year						
Action number	**Action**	**Campus**	**Target date**	**Strategy year**	**Progress**	**Lead contact**
2.1	Engage in WRAP Be Mighty Wales National Recycling Campaign (EXPAND)	NA	Complete phase 3 by 24/03/21	2020/21	Complete	Rhia Cullen / Fiona Wheatley
2.2	Engage in WRAP Love Food Hate Waste UK wide food waste campaign (EXPAND)	NA	Run 1 - 7 March 2020	2020/21	Complete	Rhia Cullen / Fiona Wheatley
2.3	Run a week long recycling campaign focused on reducing single use plastic use	NA	Complete	2021/22	Complete	Rhia Cullen / Fiona Wheatley
2.4	Run a week long food waste reduction campaign	NA	Complete	2021/22	Complete	Rhia Cullen / Fiona Wheatley
2.5						

Key Commitment W20; Where waste cannot be prevented, progressively increase reuse, and recycling year on year						
Action number	**Action**	**Campus**	**Target date**	**Strategy year**	**Progress**	**Lead contact**
3.1	Roll out of new and replacement internal and external recycling quad bins purchased through Welsh Government Circular Economy Grant Funding	Singleton and Bay	28/05/2021	2020/21	On going	Fiona Wheatley
3.2	Initiate 'Recycling On the Edge' initiative to increase the capture of waste and recycling on the periphery of our two main campuses. Install new quad recycling bins funded by WG CE fund and look to develop partnerships with the council and local businesses to support servicing of the bins, possible donation of old units to local businesses to improve capture of local litter in adjoining singleton Park, and Oystermouth Road. Work with newly appointed Community Officer Cerys Curtis.	Singleton and Bay	28/05/2021	2020/21	On going	Fiona Wheatley
3.3	Establish WARP-It platform for university staff to use to recirculate redundant furniture throughout the University rather than buying new. 3rd party charities can also partner and use the platform to procure no longer wanted items of furniture, to ensure reuse.	Singleton and Bay	30/01/2022	2021/22	On going	Fiona Wheatley
3.4	With the closure of the University's Student Village, ensure as much as possible is sent for reuse, and recycling. Project to be completed July 2023	Student Village	02/07/2023	2022/23	Complete	Fiona Wheatley

Key Commitment W21; Increase the recycling, as well as reduction, of single use laboratory plastics						
Action	**Action**	**Campus**	**Target date**	**Strategy year**	**Progress**	**Lead contact**
4.1	Introduction of new lab recycling plastic PP5 programme. Rolled out to all laboratories on singleton and Bay campuses	Singleton and Bay	Complete	2020/21	Complete	Fiona Wheatley

4.2	Develop WMGN to assist co-working with lab groups to identify potential new lab plastic waste recycling programmes	Singleton and Bay	Complete	2020/21	Complete	Fiona Wheatley / Hayley Beharrell
4.3	Work with procurement and suppliers to develop a catalogue of sustainable alternatives for our top 70 lab consumables to circulate to our LEAF Labs.	Singleton and Bay	30.09.23	2022/23	On going	Fiona Wheatley / Victoria Lewis/ Emily Ingram

Key Commitment W22; Continue to increase the number and type of 'hard to recycle' waste items through new and existing recycling programmes

Action number	Action	Campus	Target date	Strategy year	Progress	Lead contact
5.1	A Hard Hat Recycling programme was established in March 2021 for the College of Engineering, and other colleges to utilise	Singleton and Bay	Complete	2020/21	Complete	Fiona Wheatley
5.2	Our TerraCycle Programmes will resume in the 2021/22 academic year for stationary and Tassimo pod recycling	Singleton and Bay	30/07/2021	2021/22	To being Aug 21	Rhia Cullen / Fiona Wheatley
5.3	Install Tetra Pak recycling system through our new Soft FM provider Mitie for our Catering supplier Chartwells and Halls of residence to use to recycle Tetra Pak	Singleton and Bay	31/08/2022	2022/22	On going	Fiona Wheatley
5.4	Instate vape recycling	Singleton and Bay	2022/23	2022/23	Complete	Fiona Wheatley

Key Commitment W23; Waste contract renewal in 2021 - implement new practices and new goals, alongside innovative waste and recycling solutions

Action number	Action	Campus	Target date	Strategy year	Progress	Lead contact
6.1	Through the implementation of the new Soft FM Waste and Cleaning Contract changes have will be made to reduce the volume of plastic generated by the confidential waste service by converting to paper bags and locked console bins. Saving will be calculated and posted on the Sustainability web pages.	Singleton and Bay	01/12/2021	2021/22	Complete	Fiona Wheatley
6.2	The new Soft FM service Provider MITIE will work with the University to ensure all MITIE staff uniforms are sent for reuse, and all disposable gloves will be recycled.	Singleton and Bay	01/09/2022	2022/23	Ongoing	Fiona Wheatley / Isobel McGlason MITIE FM
6.3	Through driving set sustainability KPIs set by the University ensure that the new Soft FM contract reduce single use plastic through moving to use bio cleaning produces used through a dosing system. Focus on implementation in Academic cleaning, and then integration in residential cleaning.	Singleton and Bay	01/09/2022	2022/23	Complete	Fiona Wheatley / Christine Winstone

Key Commitment W24; Continue to build on existing waste and recycling training available and to include specialised wastes

Action number	Action	Campus	Target date	Strategy year	Progress	Lead contact
7.1	Develop downloadable waste specific training slides	NA	30/07/2021	2020/21	TBC	Fiona Wheatley
7.2	Develop new ABW training material for Clinical and Chemical waste streams to deliver quarterly throughout the academic year from November 2021	NA	Complete	2020/21	Complete	Fiona Wheatley

Key Commitment W25; Continue to apply for applicable funding to ensure continual improvement in waste and recycling infrastructure

Action number	Action	Campus	Target date	Strategy year	Progress	Lead contact
8.1	Funding secured from the Welsh Government Circular Economy Fund to purchase additional internal and external quad bins and coffee cup recycling bins	Singleton and Bay	Complete	2020/21	Complete / Ongoing	Fiona Wheatley
8.2	Look to establish partner/ stakeholder financial support to proceed with Single use coffee cup - replacement programme scheme trial	Singleton and Bay	Complete	2022/23	On going	Fiona Wheatley