

Environmental Management System 8.1.3 External Spill Management

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Spill Management

1 Purpose

The University is committed to ensuring that all activities undertaken on its premises follow the highest possible standards of health, safety and environment.

This document outlines the University’s standard response to external spill management. This procedure ensures Swansea University staff, students, tenants, contractors and suppliers have clear information and guidance to enable them to respond effectively to, and recover from, an environmental incident.

This document **does not cover laboratory-based spills or any other internal incidents.**

2 Definitions

External spill: A spill that occurs outside of a building on university campuses or associated facilities.

Incident Management Plan: Outlines the University’s procedures for managing major incidents that may threaten the health and safety of the University community, disrupt its teaching, research and administration, and damage its infrastructure, systems or reputation.

Spill: When a substance (hazardous or non-hazardous) escapes its primary/original container (or other containment unit) and has the potential to cause a negative environmental impact. Within the University a spill could include the escape of oils (including heating and cooking), solid/liquid waste and chemicals. Firewater pollution entering the drainage system is also classified as a spill.

- **Minor Spill** – Small spill (<5 litres or <1m diameter), which can be contained and dealt with locally
- **Significant Spill** – Larger spill (>5 litres), which requires support to be contained
- **Major Spill** – A spill of over >50 litres **and** where the substance spilled has or could enter a drainage system, surface waters or unmade ground

3 Responsibilities

<p>Corporate Responsibility team</p>	<ul style="list-style-type: none"> • Working with Faculties/PSUs to identify potential pollution risks and corresponding prevention plans • Provision of information and guidance to Faculties/PSUs and external parties (e.g. tenants, contractors and suppliers) on spill prevention and response • Arranging training and periodically testing spill procedures • Offering members of staff and students support, as required
<p>Executive Dean PVC Faculty & Head of</p>	<ul style="list-style-type: none"> • Ensuring staff and students within the Faculty/PSU are aware of local and University spill management

<p>Operations /Director PSU</p>	<p>arrangements, pollution prevention measures are implemented (as identified)</p> <ul style="list-style-type: none"> • Adequate resources (including budget) for spill response equipment/material being available within the Faculty/PSU
<p>Faculty /PSU Departmental Managers</p>	<ul style="list-style-type: none"> • Assessing and developing (where appropriate) Faculty/PSU Incident Management Plan (IMP), which include spill management • Ensuring adequate and appropriate spill kits and PPE are available e.g. for oils, chemicals, biological etc. • Ensuring there are sufficient spill responders available in the Faculty/PSU • Establishing the training needs of staff and postgraduate research students working with hazardous chemicals and oil/fuel are identified in coordination with the Environment Officer and H&S Lead • Ensuring staff are trained and COSHH assessments including spill response are completed • Ensuring trained spill response teams in the Faculty/PSU are in place to deal with local spills
<p>Resilience & Business Continuity Team</p>	<ul style="list-style-type: none"> • Development of the resilience of the University to disruption • Protection of the ability to deliver key outputs and objectives, embedding processes and resources to ensure stakeholder safety and to deliver the planning, prevention and response to emergency situations • Co-ordination of the external spill response contract
<p>Security Services Manager</p>	<ul style="list-style-type: none"> • Ensuring the Security Team are trained and able to respond to spills that may require additional support to the local (Faculty/PSU) response
<p>Security Team</p>	<ul style="list-style-type: none"> • Ensuring adequate and appropriate spill kits and PPE are available and stocked • Dealing with spills on university grounds caused by staff or visitors' vehicles, in conjunction with the Grounds Team • Coordinating the incident escalation process as outlined in the IMP
<p>Grounds Team (E&FM)</p>	<ul style="list-style-type: none"> • Dealing with spills on university grounds caused by staff or visitors' vehicles, in conjunction with the Security Team • Ensuring adequate and appropriate spill kits and PPE are available and stocked

<p>Head of Projects & Technical Services (E&FM)</p>	<ul style="list-style-type: none"> As per the 'PSU Departmental Managers', pollution prevention measures are implemented (as identified in local IMP) including but not limited to adequate spill response equipment/materials are available for heating oil storage
<p>Projects & Technical Services Team (E&FM)</p>	<ul style="list-style-type: none"> Ensuring adequate and appropriate spill kits are available and stocked for all activities Support spill response related to projects (with associated contractor) and/or operations Notifying all contractors on university campuses of spill response requirements Ensure access to drainage maps for those responding to spills
<p>Contractors¹</p>	<ul style="list-style-type: none"> Responsibility for avoiding spills and managing them according to the University's spill management procedure (this document) Ensuring they have appropriate spill kits/PPE and are trained to respond to spills caused by their activities Manage any waste generated from the spill clean-up, in-line with regulations Contact their University contact (e.g. Project Officer, Technical Services, or Faculty member) to inform them of a spill
<p>All staff and students</p>	<ul style="list-style-type: none"> Actively participate in training Submit Adverse Events Report form when a spill event occurs Risk assess activities including whether there is a potential for a spill and how this would be responded to in line with the University's spill management procedure (this document) Request any additional support from the Faculty /PSU Departmental Managers where a risk is identified and local spill provision is insufficient

4 Related documents

- Aspects and Impacts Register:** Relevant environmental aspects and associated environmental impacts are detailed within the University register.

¹ This includes external parties brought in to provide services at events e.g. food vendors

- **Incident Management Plan (IMP):** A framework outlining the University’s response to a myriad of situations, its application through an Incident Response Team (IRT) and Incident Management Team (IMT).
- **Local Spill Management Procedures:** Faculties/PSUs hold dedicated spill management procedures for Faculty/PSU-related identified pollution events. These may be subsumed into a Faculty/PSU IMP.

5 Process

5.1 Prevention

The primary focus should be on the prevention of spills and the implementation of control measures to reduce the likelihood of a spill occurring. Whilst undertaking project planning and risk assessment you should consider spillages resulting from abnormal/emergency situations, including but not limited to:

- Damage to storage containers
- Fire
- Overfilling of containers (particularly tanks or IBCs)
- Equipment/pipework failure
- Human error
- Malicious/purposeful act
- Climate or weather episodes e.g. flooding, gale-force wind
- Correct transportation for moving chemical waste to the store e.g. a suitable and safe trolley that is able to carry the material safely

Risk assessments for use of substances and/or equipment with the potential to lead to a spillage are to be undertaken and recorded. Support and guidance can be sought from the Corporate Responsibility Team.

All risk assessments must consider the source, pathway and receptors pollution linkage model², Figure 1.



Figure 1: Model

Where identified as required, spill kits should be prepared, kept in a secure but suitable location and replenished as required. Periodic inspections should be undertaken to ensure the contents is suitable and complete, with appropriate PPE available in the same area. Contents of a spill kit (i.e. type and quantity of spill materials) will be dependent on the type, quantity and location of the substance/material that could be spilt.

² In most cases, there will be more than one possibility for each stage. Further information on this model can be provided by the Sustainability team.

Findings of the risk assessment should be communicated to all those involved in the works/project.

5.2 Spill response

On discovery of a spill the immediate response should be aligned to the following:

STOP → CONTAIN → NOTIFY → CLEAN-UP

- 1. Identify the spill/hazards:** The material that has been spilt must be identified through:
 - Risk assessment and/or Safety Data Sheets (SDS), which must be available via Quartz, the Faculty/PSU representatives or external party e.g. heating oil supplier. This will allow any specific requirements for cleaning the spill safely, to be determined and retrieved (e.g. spill kit, PPE etc.).
 - Confirmation from responsible person in the area e.g. Principal Investigator or Contractor Lead
 - If the spill is hazardous (see risk assessment/SDS) contact the Faculty Spill Response Team and Security immediately
- 2. Prevent secondary incidents:**
 - If there is a risk of ignition shut off all known sources of ignition, if safe to do so
 - Take measures to protect life, including your own. If possible, remove injured persons from danger and if you have first aid skills then render them if safe to do so
 - If possible, isolate the area – request Security to cordon off the contaminated area, keep people at least 5 metres from the spill
 - Do not leave the spill site - someone should be present continuously until the spill is cleaned up and potential danger removed
- 3. Stop the spill/leak at source:** Try to stem or stop the spill/leak (examples below, if and where safe to do so) and make other responders aware what actions have been taken³
 - closing off valves
 - using secondary containment e.g. drip tray, a larger container
 - sealing the leak e.g. plugging a hole with gaffer tape
 - moving a container e.g. turning it 90° or angling it so the substance can no longer escape
- 4. Seek help if required:** If you do not have the appropriate materials and resources to respond effectively. For Faculty related spills contact the Faculty spill response team, for other external spills contact Security.

³ As part of the clean-up/post-incident management, more permanent fixes may be required

- Inform Security on 333 (or from a mobile - 01792 604271 in Singleton campus, and 01792 606010 for the Bay. Outside of working hours security can be contacted on 01792 205678) and give the following information:
 - i. The location of the spill
 - ii. Substance spilt (if known or suspected)
 - iii. Scale of spill (approximate quantity)
 - iv. Scope of spill e.g. has the substance has entered the drainage system?
 - If university resources are deemed insufficient Security are to contact external support provider (Ambipar) on 01202 653558.
 - Take all reasonable measures to prevent access to the area (cordon off the area) and wait for help to arrive
5. **Contain the spill:** Utilising the appropriate spill kits and PPE (if safe to do so), place spill materials around the spilled substance to soak up and/or stop further spreading of the spill
- Stand upwind to reduce the likelihood of inhalation
 - Spill pads and granules should be placed on and around the spilled material
 - Add more material if the spilled substance appears to be soaking through the deployed sorbent products
 - If possible and safe to do so, transfer the substance from the leaking/broken container into another container
 - Bag the absorbent material and label for safe disposal (see point 9)
- The spill should be contained as early as possible ideally at source, close to the source or on the surface. Preventing discharge to drain or local watercourses should be a priority to prevent a pathway being formed and potential impact on wider sources.
6. **Prevent loss to drains & watercourses:** Assess if there has been or there is potential for the spilled substance to be lost to nearby drains (if/when safe to do so)
- Already lost to drain: Assessment to be made on the options to mitigate further contamination of the watercourse and drain network. Drain mats/covers should still be placed on drains to prevent further loss.
 - Potential to be lost to the drains: Deploy drain mats/covers onto nearby drain openings. Utilise spill socks to divert spilled material away from or block the substance flow
 - Potential to be lost to a watercourse: Deploy booms onto open watercourses e.g. the Botanical Garden pond. Utilise spill socks to divert spilled material away from or block the substance flow
7. **Notify:** If there has been a loss of the spilled substance into an external drain/ watercourse then further notification will be required:
- Security are to notify the external support provider (Ambipar) on 01202 653558 to carry out any remedial works, as required
 - Notification of the incident to external authorities will be required (see Table 1). In office hours the Sustainability Team (Head of Sustainability) will notify

the authorities and co-ordinate liaison. Outside of these hours, Security will co-ordinate as per the guidance from the IMP.

Table 1: Interested parties

External Party	Contact	Comment
Welsh Water	0800 085 3968 (0800 052 0130)	Corporate Responsibility to contact if there is a risk the foul effluent
Natural Resources Wales (NRW)	0300 065 3000	Corporate Responsibility to contact in all cases where there is potential for damage to the natural environment
Swansea Council	01792 635600 Out of hours: 01792 636595	Corporate Responsibility to contact when there is the risk of the spilled substance entering the pond in Singleton Park (Pub-On-The-Pond side of campus)
Neath Port Talbot Council	01639 686868	Corporate Responsibility to contact when there is the risk of the spilled substance entering the marine environment or SSSI

8. **Clean-up:** There is potential for both liquid and solid material spills including powders to occur at the University.
 - The clean-up should be carried out in accordance with the risk assessment, with the relevant PPE worn and correct spill kit selected by trained personnel
 - Do not walk through the spill if you can avoid it and keep the contaminated area as small as possible.
 - Prevent wash water or sweepings from reaching drains or unmade ground
 - Further cleaning of the area may be required. Security will provide and/or organise further support as required.
9. **Waste disposal of spill material:** The University is responsible for handling and disposing of hazardous waste in-line with legal requirements.
 - Place the material generated in the bags provided in the spill kit, this may include initial spilled substances, used sorbents, used PPE etc.
 - Transfer these to a suitable container for storage e.g. clip top drums⁴
 - Use the '[Chemical Waste Store Users Procedure](https://www.swansea.ac.uk/media/8.1.5-chemical-waste-store-user-procedure-v2.pdf)⁵' to dispose of the waste, this includes contacting estates-waste@swansea.ac.uk to notify of the spill materials requiring storage in the chemical waste store (located on

⁴ Unless advised by Sustainability to undertake other waste management practices e.g. other suitable tight fitting, leak proof containers

⁵Link: <https://www.swansea.ac.uk/media/8.1.5-chemical-waste-store-user-procedure-v2.pdf>

both campuses). Disposal will be at a cost to the relevant Faculties/PSUs and internally recharged.

- If the volume is too large or material not sufficiently contained specialist waste collection may be required and managed by the Waste and Recycling Officer.

5.3 Incident review

Once the incident has been dealt with and the area remediated to a point where there is no longer an immediate risk to the environment or health and safety, the spill should be recorded on the adverse event system (Report It!⁶). As a result, an investigation will be carried out by the Corporate Responsibility Team with mitigative measures determined, responsibility and time scales for the actions will be included. Measures will address problems associated with the incident and how to prevent future recurrences.

6 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 Non Conformance, Corrective and Preventive Action**.

7 Version control

Date	Version	Update
May-2021	4	Responsibilities expanded, external service provider altered, spill prevention referenced, structural changes

⁶Link: <https://www.swansea.ac.uk/about-us/safety-and-security/health-and-safety/report-it/>