

## Briefing note: Storage of oil

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This note has been compiled by the Sustainability Unit to outline legislation and best practice in storing oil

### 1.0 Scope:

This briefing note is relevant to all departments who store or use oil. The University of Bristol has a legal responsibility when storing oil and a duty to ensure where possible that an oil spill does not contribute to a pollution incident.

Oil in this case includes:

- Petrol
- Diesel
- Central-heating oil
- Lubricating oil
- Mineral oil
- Vegetable oil
- Plant oil
- Heavy oils such as bitumen
- Oils used as solvent, such as paraffin or kerosene
- Waste oil.

Spillages have the potential to cause significant environmental harm, threaten water supplies and public health. Oil accounts for one quarter of all pollution incidents in the UK. In many cases, major pollution incidents can be prevented, if appropriate pollution prevention measures are in place or immediately available. **It is the duty of all members of the University to ensure that they do not contribute to such an incident.** This includes ensuring that contractors are briefed on how to store oil and deal with spills on site.

Incorrect storage of oil or a spillage may breach environmental legislation and in doing so, it could lead to possible court costs, clean up costs and fines if prosecuted by the Environment Agency. Spillages may remain undetected or untreated for some time with effects being substantial, but not immediately evident. A spillage that occurs and spreads beyond the University property may attract unwanted adverse publicity to the University, especially as the cost of remediating any contaminated land or water is extremely high.

## 2.0 Legislation

2.1 **The Control of Pollution Oil (Oil Storage) (England) Regulations 2001 SI2954** set practical standards for storing oil. These regulations apply if your department stores more than 200 litres (44 gallons) of oil above ground (in one or more containers). This applies to the maximum volume of the container(s), not the volume of oil in the container(s). All types of oil, with the exception of waste mineral oil, are covered by these regulations, including petrol, diesel, vegetable, synthetic and mineral oil. They apply to generators where the oil is being stored, rather than used. All existing oil stores must comply by 1 September 2005.

2.2 **The Control of Pollution (Silage, slurry, and Agricultural Fuel Oil) Regulations 2001 Amendment Regulations 2007** sets out requirements and conditions for the storage of, amongst other areas, fuel oil.

2.3 **Under the Water Resources Act 1991** it is an offence to deliberately or accidentally cause or knowingly permit any poisonous, noxious or polluting substances to enter controlled waters.

2.4 **The Environmental Damage Regulations 2009** implement the European Directive on Environmental Liability meaning that the 'polluter pays' i.e. those responsible for environmental damage from an incident are responsible for prevention and remedy.

## 3.0 How to store oil

This section explains best practice for storing oil. It is recommended that all departments storing oil, even if the volume is below the requirements to be covered by legislation, follow these best practice guidelines. Under the Control of Pollution Oil Storage (England) Regulations 2001 the standards are as follows:

- Tanks, drums or other containers must be strong enough to hold the oil without leaking or bursting.
- If possible, the oil container must be positioned away from any vehicle traffic to avoid damage from collision.
- A bund or drip tray must be provided to catch any oil leaks from the container or its ancillary pipe work and equipment. Drip trays may only be used for drum storage and must be capable of containing 25% of the volume of the container.
- The bund must be sufficient to contain 110% of the maximum contents of the oil container. Where more than one container is stored, the bund should be capable of storing 110% of the largest tank or 25% of the total storage capacity, whichever is the greater.
- The bund base and walls must be impermeable to water and oil and checked regularly for leaks.
- Any valve, filter, sight gauge, vent pipe or other ancillary equipment must be kept within the bund when not in use.
- No drainage valve may be fitted to the bund for the purpose of draining out rainwater.
- Aboveground pipe work should be properly supported.
- Underground pipe work should be protected from physical damage and have adequate leakage detection. If mechanical joints must be used, they should be readily accessible for inspection.

- A number of other detailed requirements are included in the regulations, such as the positioning of sight gauges, fill points, vent pipes and other ancillary equipment.

## **4.0 Oil spillages**

### **4.1 Common causes**

4.1.1 Pollution incidents tend to result from the combination of causes, which include:

- Inadequate storage tanks, bunds, valves and pipe work.
- Lack of means of containment and appropriately intercepted drainage systems where products and vehicles are stored and handled, and where vehicles are washed down.
- Unforeseen equipment or installation failures
- Inadequate procedures and non-compliance with procedures, including overfilling of tanks and other containers and accidental spillage during delivery/transfer and transport of products
- Leaks due to vandalism, sabotage and fire.
- Lack of awareness or deliberate illegal disposal leading to misuse of surface waters for disposal.
- Inappropriate use of soakaways.
- Road traffic accidents where fuel or oil tanks are ruptured.
- Lack of briefing and supervision of contractors working on site.

### **4.2 Types of spillage**

Some minor spillages will be within the capability of the University to deal with and clear up. Departments who use or store oil should hold appropriate pollution prevention equipment, such as a spill kit, and staff should be trained in its use. Major spills, which are outside the capabilities of the University to clean up, will require the assistance of a specialist contractor.

### **4.3 Prevention**

Good management practices and common sense will reduce the risk of spillages. Departments should hold appropriate pollution prevention equipment and staff must be trained what to do in the event of a spill - both minor and major.

## **5.0 General Health and Safety Precautions**

- 5.1 The main risks to health and safety of personnel involved in the spillage/pollution operation are:
- Fire/explosion

- Inhalation of toxic fumes
- Contamination of skin/body surfaces

5.2 All members of the University should be aware of the risk, and should consider the following guidelines when dealing with a spillage:

- Approach the spillage from an upwind direction whenever possible
- Wear the appropriate protective clothing
- Remove the contaminated clothing as soon as possible
- Seek medical advice if ill effects are experienced
- Do not smoke
- Do not operate electrical or battery powered equipment, unless told it is safe to do so
- Do not eat or drink with contaminated hands or whilst wearing contaminated clothing.

5.3 Storage of petrol and other flammable substances is now governed by the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) under the Health and Safety at Work Act. Previous compliance with Fire Brigade licensing requirements should suffice but the details must now be compiled into a DSEAR risk assessment. Contact Health and Safety Office on x 88780 for further advice.

## **6.0 Removal of contamination and disposal**

6.1 Used absorbents are classified as hazardous waste and are therefore covered by the Hazardous Waste Regulations 2005 Amendment 2009. The regulations ensure that dangerous wastes are soundly managed from their production to their final destination or recovery.

6.2 Personnel involved in a spillage that requires the utilisation of an absorbent have a Duty of Care to ensure that all used absorbents, oils and contaminated materials including those recovered from a spillage (e.g. contaminated soil) are disposed of as Hazardous Waste. Quantities of less than 10 litres could be stored locally until it is practical to arrange its disposal. Please contact Sustainability [sustainability-estates@bristol.ac.uk](mailto:sustainability-estates@bristol.ac.uk) on 0117 928 9100 for disposal.

## **7.0 Definitions**

- 7.1 A watercourse is any inland freshwater or coastal water. This includes rivers, lakes, reservoirs and smaller watercourses such as streams and ditches as well as perforated drainage pipes.
- 7.2 A well or borehole is a shaft sunk into the ground.
- 7.3 Controlled waters include groundwater, inland freshwater and coastal waters and is defined in section 104 of the Water Resources Act 1991.

## **8.0 Further guidance**

8.1 The Environment Agency publishes a range on pollution prevention materials, including a series of Pollution Preventions Guidance Notes. The following are of particular relevance and are available at <http://www.environment-agency.gov.uk/>:

- PPG 2 Above ground oil storage
- PPG 3 Use and design of oil separators in surface water drainage systems

- PPG 11 Preventing pollution on industrial sites
- PPG 21 Pollution incident response planning
- PPG 26 Storage and handling of drums and Intermediate Bulk Containers
- Guidance note for the Control of Pollution Oil Storage (England) Regulations 2002 is available at [www.defra.gov.uk/](http://www.defra.gov.uk/)

8.2 Health and Safety Executive: L138 Dangerous Substances and Explosive Atmospheres Regulations 2002. Approved Code of Practice and guidance. INDG370: Fire and Explosion – How safe is your workplace - <http://www.hse.gov.uk/pubns/indg370.pdf>

8.3 Pollution prevention equipment, such as drip trays and spill kits, is available from a wide range of suppliers. The following is a list of such suppliers:

- ARCO - <http://www.arco.co.uk/> - 0117 9823751
- New Pig Ltd - <http://www.newpig.co.uk> - 0800 919900
- Darcy – [www.darcy.co.uk](http://www.darcy.co.uk)- 0800 0370 899.

This list is not exhaustive and the Sustainability Unit does not recommend the use of any particular supplier.

Version	Reason for the change	Amended by	Date
2	Change of personnel and legislation. Gap identified to deal with Emergency Situations lying outside of the departments direct responsibility	Rose Rooney	April 2010
3	Update in supplier details	Rose Rooney	November 2011
4	Update in Supplier details	Rose Rooney	January 2012