

# SCHOOLS AND EDUCATIONAL ESTABLISHMENTS: PPG16

# POLLUTION PREVENTION GUIDELINES

*This document has been drawn up to assist those involved in the management and maintenance of educational establishments. Compliance with these guidelines should minimise the risk of pollution occurring. They have been produced by the Environment Agency for England and Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland, referred to as the Agency or Agencies. Each site will be considered according to individual circumstances and early consultation with your local Agency office is advisable. Contact details will be found at the end of these guidelines.*

## 1. INTRODUCTION

- a. The Agencies are responsible for the protection of “controlled waters” from pollution, for the prevention of pollution of the environment and harm to human health by waste management activities and for the regulation of radioactive substances (except in Northern Ireland, where different legislation applies).

“Controlled waters” include all watercourses, lakes, lochs, coastal waters and water contained in underground strata (or groundwater) and it is an offence to pollute such waters, either deliberately or accidentally. In addition, the formal consent of the Agency is required for many discharges to controlled waters, including both direct discharges and discharges to soakaways. Such consents are granted subject to conditions and are not issued automatically.

- b. Discharges to the public foul sewer require authorisation by the sewerage undertaker and may be subject to the terms and conditions of a trade effluent consent. Where reference is made to disposal to sewer, this should always be subject to such approval.
- c. Any other waste produced on the site will be subject to the Duty of Care (Reference 1) and may also be subject to control under the Waste Management Licensing Regulations 1994. In addition, certain wastes are defined as “Special Waste” and are subject to rigorous controls (Reference 2). Advice is available from the Agencies.
- d. The storage and use of radioactive substances is normally subject to the need for a licence from the Agency. However, due to the very small quantities involved, schools are exempt. If in doubt, contact the Agency for advice.

## 2. SITE DRAINAGE

On most sites there will be two types of drain:

- i. Surface water drains should carry only uncontaminated rainwater from roofs and clean yard areas to a watercourse or soakaway. Under some circumstances, treatment may be required before discharge (see Section 4 (a)).
- ii. Foul drains should carry contaminated water, trade effluent, and domestic sewage to a sewage treatment works.

A frequently occurring factor in pollution incidents is a lack of awareness of the purpose of drains and gullies. Therefore it is recommended that gullies, grids and manhole covers are colour coded to aid identification, using blue for surface water and red for foul. Notices should also be used where appropriate and a set of up-to-date drainage plans kept on site.

## 3. SEWAGE AND WASTE WATER DISPOSAL

All foul sewage and waste-waters should pass to the foul sewer. Where no foul sewer is available, or where specific problems arise, alternative arrangements will be required. You should discuss this with the Agency. Treated effluent discharges to controlled waters will normally require consent. Further advice is available on sewage disposal where no mains drainage is available (PPG4 - Reference 3).

Sewage and waste-waters include all effluent from sinks, baths, toilets, kitchens, shower blocks, laboratories, washing machines, laundries, dishwashers and permanent vehicle washdown areas. All these effluents must be connected to the foul sewer (see Section 1b). It is desirable to minimise the amount of rainwater entering the foul sewer. Therefore, provision of a roof for waste stores and compactors, with the clean run-off discharging to surface water systems, may be necessary.

#### **a. Laboratory and kitchen equipment cleaning**

Waste waters from the cleaning of laboratory and kitchen equipment must not be discharged into any surface water drains. A designated and clearly marked cleaning area should be provided for this, discharging either to the foul sewer, a sealed underground tank or a bunded above ground tank, for collection and appropriate disposal by a waste carrier registered with the Agency.

#### **b. Discharges from air conditioning and heating systems**

Under no circumstances should chemically treated water from any air conditioning or heating systems be discharged into surface water drains. Such waste waters will either need to be collected and disposed of by a registered waste carrier or discharged to the foul sewer. Internal floor drainage systems for associated plant, and chemical storage/dosing areas, must not be connected to surface water drains.

#### **c. Floor and window cleaning**

Waste waters from floor or window cleaning activities must not be discharged into surface water drains. Provision should be made for such effluent to be discharged to the foul sewer and staff should be made fully aware of the correct disposal procedure.

### **4. SURFACE WATER DRAINAGE**

Surface water drainage discharges to a watercourse or to groundwater via a soakaway. Surface water should, therefore, be clean and uncontaminated. A discharge of waste water to the surface water drain will result in pollution.

#### **a. Treatment of surface water drainage**

Large car parks, access roads and hard surfaced areas can give rise to pollution due to oil drips from vehicles and the accumulation of dust and litter. The run-off from such areas may require treatment before discharge. The Agencies have published guidance on surface water disposal (Reference 4), which describes options for treatment ranging from permeable surfaces and infiltration trenches, offering control at source, to end of pipe systems, such as swales and constructed wetlands. These techniques are collectively known as "Sustainable Urban Drainage Systems" (SUDS).

#### **b. Oil separators**

Where it is not possible to install SUDS, an oil separator may be required on the drainage from large car parking areas or from the area immediately around above ground oil storage tanks, depending on the risk of contamination or spillage. Guidelines for the selection and installation of oil separators are available (PPG3 - Reference 5). Where installed, they should be regularly inspected and emptied when required by a registered waste carrier.

#### **c. Consent to discharge**

Consent to discharge will generally be required for the drainage from areas where the run-off may be contaminated. However, if the guidance in this document is followed, and potential sources of contamination are isolated from the surface water systems, a discharge consent may not be required.

### **5. WASTE MANAGEMENT**

#### **a. Reduction, re-use and recycling**

Methods to reduce the amount of wastes, such as re-use and recycling, should be considered. Significant savings may be made as material and waste disposal costs continue to rise. Advice on waste minimisation and local initiatives can be obtained from your nearest Agency office.

#### **b. Duty of Care and waste legislation**

Waste producers have a Duty of Care to ensure that the wastes they produce are properly dealt with. This means wastes should be stored securely and disposed of by a registered waste carrier to a suitable licenced facility. The waste producer has a duty to provide a description of the waste to the contractor and to ensure the contractor is registered with the Agency as a waste carrier. Full details are available from your local Agency office.

#### **c. Storage**

If waste cannot be eliminated, it must be properly stored and disposed of. Litter is polluting and must not be allowed to enter a watercourse. It is therefore recommended that skips should be covered or waste storage areas enclosed to prevent litter being blown out.

Refuse compactors often discharge highly polluted liquor. They should be sited within an area isolated from the surface water drainage system, for example using a raised kerb, preferably covered to avoid rainwater accumulation and connected to the foul sewer if possible. Compacting waste (other than Special Waste) in skips is exempt from Waste Management Licencing, providing it is carried out at the place where the waste is produced, without risk to the environment or harm to human health and it has been registered with the Agency.

#### **d. Waste chemicals**

All waste chemicals, including solvents, acids and detergents, should be safely disposed of in accordance with regulations or via a registered waste contractor. Some chemicals may be subject to the Special Waste Regulations 1996 (Reference 2), which impose additional controls on their movement and disposal. Contact the Agency for advice.

### **6. OIL STORAGE**

#### **a. Above ground**

Separate detailed guidelines for above ground storage tanks are available (PPG2 - Reference 6). In general, all above ground storage tanks, drums or containers should be sited on an impervious base within an oil-tight bund wall. Storage at or above roof level should be avoided.

#### **b. Below ground**

Underground oil tanks and pipelines may be subject to damage and corrosion and therefore above ground facilities are preferred. When this is not practicable, appropriate protective measures against damage and corrosion, such as double wall piping or laying the pipe in a conduit, should be provided. Regular inspection and pressure testing is essential, especially where groundwater pollution could occur. Underground pipework must also be protected from damage resulting from excessive surface loading.

In some areas, where groundwater sources are vulnerable and need protection from contamination, underground tanks may be subject to special restrictions (References 7 and 8).

#### **c. Fuel delivery**

All deliveries should be supervised. Delivery areas should be provided with a raised kerb surround. Any drainage from within this area should pass through a suitable oil separator. Before receiving a delivery of oil, assess the available capacity in the tank, check the delivery ticket with the driver and agree the quantity and grade of oil that is to be delivered. Ensure that all valves are properly set to deliver into the right tank. During the delivery, watch the level in the tank and the overflow, ensuring that the delivery is stopped at once in the event of an overflow. Watch for any leakage from hoses or joints and stop the delivery if there is any leak. After the delivery, make sure that all receiving valves are properly closed and locked and all dispensing, drainage and sight gauge valves are locked when not in use. Also ensure that oil dripping from pipework or hoses is caught in a tray and properly disposed of. Absorbent materials should be kept at hand to deal with any spillages. If a spillage does occur **DO NOT HOSE IT DOWN**. The spillage should be absorbed and contained as best you can, (sand or soil are very effective) and the Agency contacted as soon as possible. The sewerage undertaker should also be contacted if the area drains to the foul sewer.

#### **d. Boilerhouse**

Pumps within the internal sump of boilerhouses should be manually operated and discharged through an oil separator of an approved design. If using an automatic pump the discharge should be to the foul sewer.

### **7. SWIMMING POOLS**

Filter backwash waters are highly polluting and should be disposed of to the foul sewer (see Section 1b). When draining down the pool, if in doubt, please contact your local Agency office to discuss the best method of disposal. Pool water may have to stand for at least 7 days after chlorination or other chemical treatments before it can be disposed of and dechlorination may be required.

Swimming pool chemicals should either be kept in a secure store, or within a bunded storage area, preferably covered by a roof. The storage area should be sited on an impervious base and surrounded by a suitable liquid-tight bund wall resistant to chemical attack. No drainage outlet should be provided and any accumulated surface water within the bund should be removed by baling, or pumping under manual control, for disposal by a registered waste carrier.

In the event of a chemical spillage, contain the liquid and use an absorbent material to soak it up. Inform your local Agency office immediately if any chemicals have entered surface water drains. Please be aware of the health and safety implications of dealing with spillages of swimming pool chemicals.

## 8. PESTICIDES

If pesticides (including herbicides) are required on the premises, then they should be used in accordance with the Control of Pesticides Regulations 1986 (as amended). The use of herbicides to control aquatic weeds (in or near water) may only take place with prior approval of the Agency. All storage should be clearly marked, secure, fire resistant and not situated where pollution of groundwater or surface water could be caused. (PPG9 - Reference 9).

## 9. REFERENCES

1. Waste Management - The Duty of Care - A code of practice (revised 1996): ISBN 0-11-753210-X
2. Classification of special waste: Information Sheet 1: Environment Agency  
Use of the consignment note: Information Sheet 2: Environment Agency  
Obtaining and sending consignment notes: Information Sheet 3: Environment Agency  
A Guide to the Special Waste Regulations 1996: SEPA  
A Guide to the Special Waste Regulations (Northern Ireland)1998: Environment and Heritage Service
3. PPG4: Disposal of sewage where no mains drainage is available
4. Sustainable Urban Drainage - an introduction
5. PPG3: The use and design of oil separators in surface water drainage systems
6. PPG2: Above ground oil storage tanks
7. Policy and Practice for the Protection of Groundwater in England and Wales: ISBN 1 873160 37 2
8. Groundwater Protection Strategy for Scotland: SEPA
9. PPG9: The prevention of pollution of controlled waters by pesticides

References 1 and 7 are available from the Stationery Office, Tel: 08706 00 55 22

References 2-6, 8 and 9 are available free from the Agencies

All the Agencies' pollution prevention guidance notes are available on the web sites listed below.

### ENVIRONMENT AGENCY

#### HEAD OFFICE

Rio House, Waterside Drive, , Aztec West  
Almondsbury, Bristol BS32 4UD.  
Tel: 01454 624 400 Fax: 01454 624 409  
World Wide Web: <http://www.environment-agency.gov.uk>

### REGIONAL OFFICES

#### ANGLIAN

Kingfisher House  
Goldhay Way  
Orton Goldhay  
Peterborough PE2 5ZR  
Tel: 01733 371 811  
Fax: 01733 231 840

#### MIDLANDS

Sapphire East  
550 Streetsbrook Road  
Solihull B91 1QT  
Tel: 0121 711 2324  
Fax: 0121 711 5824

#### NORTH EAST

Rivers House  
21 Park Square South  
Leeds LS1 2QG  
Tel: 0113 244 0191  
Fax: 0113 246 1889

#### NORTH WEST

Richard Fairclough House  
Knutsford Road  
Warrington WA4 1HG  
Tel: 01925 653 999  
Fax: 01925 415 961

#### SOUTHERN

Guildbourne House  
Chatsworth Road  
Worthing  
West Sussex BN11 1LD  
Tel: 01903 832 000  
Fax: 01903 821 832

#### SOUTH WEST

Manley House  
Kestrel Way  
Exeter EX2 7LQ  
Tel: 01392 444 000  
Fax: 01392 444 238

#### THAMES

Kings Meadow House  
Kings Meadow Road  
Reading RG1 8DQ  
Tel: 0118 953 5000  
Fax: 0118 950 0388

#### WELSH

Rivers House  
St Mellons Business Park  
St Mellons  
Cardiff CF3 0EY  
Tel: 029 2077 0088  
Fax: 029 2079 8555

### SCOTTISH ENVIRONMENT PROTECTION AGENCY

#### HEAD OFFICE

Erskine Court  
The Castle Business Park  
Stirling FK9 4TR  
Tel: 01786 457 700  
Fax: 01786 446 885  
World Wide Web: <http://www.sepa.org.uk>

### REGIONAL OFFICES

#### NORTH REGION HQ

Graesser House  
Fodderty Way  
Dingwall Business Park  
Dingwall IV15 9XB  
Tel: 01349 862 021  
Fax: 01349 863 987

#### WEST REGION HQ

SEPA West  
5 Redwood Crescent  
Peel Park  
East Kilbride G74 5PP  
Tel: 01355 574 200  
Fax: 01355 574 688

#### EAST REGION HQ

Clearwater House  
Heriot-Watt Research Park  
Avenue North  
Riccarton  
Edinburgh EH14 4AP  
Tel: 0131 449 7296  
Fax: 0131 449 7277

### ENVIRONMENT & HERITAGE SERVICE

Calvert House,  
23 Castle Place,  
Belfast  
BT1 1FY  
Tel: 028 9025 4868  
Fax: 028 9025 4777

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water in England, Wales, Scotland and Northern Ireland.

EMERGENCY HOTLINE

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