

RETAIL STORES: PPG15

POLLUTION PREVENTION GUIDELINES

This document has been drawn up to assist those who design and operate major retail outlets and similar sites, such as distribution warehouses. 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. If a new store is planned, 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 more rigorous controls (Reference 2). Advice is available from the Agencies.
- d. A licence is normally required for the storage and use of radioactive substances. However, an exemption applies for the storage for sale of up to 500 smoke alarms for domestic use.

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

Discharges of waste water should normally pass to the foul sewer. In some cases, a trade effluent consent will be required. Sewerage undertakers will normally wish to minimise the amount of rain-water entering the foul sewer. It will, therefore, often be necessary to provide a roof for areas such as loading bays, cleaning areas and waste compactors.

a. Floor and window cleaning

Waste waters from floor or window cleaning activities must not be discharged into surface water drains. Such effluent should be discharged to the foul sewer at a designated location. Staff and contractors should be made fully aware of the correct disposal procedure.

b. Trolley and bakery equipment cleaning

Waste waters from the cleaning of trolleys, bakery equipment and other utensils 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, to a sealed underground tank or a bunded above ground tank, for collection and appropriate disposal by a waste carrier registered with the Agency.

c. Cleaning of yard and parking areas

The cleaning of yard and parking areas using steam or pressure cleaners should not be carried out unless the effluent generated can be contained by isolating the area from the surface water drainage system. Such waste waters must be discharged to the foul sewer or collected and disposed of by a registered waste carrier. Where chemicals are used to facilitate such cleansing, the surface water drainage system affected will need to be thoroughly flushed through with clean water and the resultant waste waters dealt with in the same way as those from the initial cleaning operation. A detailed guidance note on Pressure and Steam Cleaners is available from the Agency (PPG13-Reference 3).

d. Discharges from plant rooms, air conditioning and heating systems and chillers

Under no circumstances should chemically treated water from any refrigeration, air conditioning or heating system 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.

e. Sewage pumping stations

In some cases, direct gravity connection to the public sewer is not possible and a sewage pumping station may be required. Such stations need adequate maintenance and should be designed to minimise the risk of breakdown or overflow. This may mean that duplicate pumps and arrangements to deal with power failure will be necessary.

f. Loading bays

Vehicle loading or unloading bays where potentially polluting matter is handled should be drained to the foul sewer. Potentially polluting matter includes many foodstuffs and normal stock items of retail stores, such as cooking oils, fruit juices, dairy products and cleaning agents.

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 known collectively 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. Roof water down pipes

To prevent the risk of contamination, roof water down pipes should connect to the surface water drainage system via direct drain points or sealed top, side entry gullies. Open gullies or grates should be avoided.

d. Cut-off valves

Under some circumstances (for example if a yard might be regularly cleaned using chemicals or there is a high risk of spillage) a cut-off valve may be appropriate to prevent polluting discharges reaching controlled waters.

e. Garage and fuel delivery areas

Under normal circumstances, drainage from these areas will pass to the surface water system via an oil separator, although in some cases connection to the foul sewer may be appropriate. Effluent from the cleaning of such areas must not be discharged to controlled waters. The provision of cut-off valves and raised kerb surrounds to isolate drainage may be required. A detailed guidance note on Fuelling Stations is available (PPG7 - Reference 6).

f. Vehicle wash

Vehicle wash waters should not be discharged to surface water drains, watercourses or soakaways but may be discharged to the foul sewer. Alternatively, vehicle wash recycling systems are available. Franchise vehicle washing operations should not be permitted in car parking areas draining to ground or surface waters.

g. 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.

d. Compactors

Refuse compactors can produce highly polluting liquors and must be isolated from the surface water drainage system. It is best to drain the area to the foul sewer and to provide a roof to minimise the discharge. Compacting waste other than Special Waste in skips is exempt from Waste Management Licensing, provided 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.

The disposal of food products, particularly milk and other dairy products which have passed their sell-by date, can cause serious pollution. Under no circumstances should any waste liquids be discharged to the surface water system. Such wastes should either be taken off site for disposal or discharged to the foul sewer via a designated facility.

e. Packaging regulation

If a company handles more than 50 tonnes of packaging per year, and has an annual turnover in excess of £2 million, it may be required to register with the Agency or a compliance scheme to ensure that the recovery and recycling obligations of the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 are met. Contact the Agency for further advice.

6. OIL STORAGE

a. Above ground

Separate detailed guidelines for above ground storage tanks are available (PPG2 - Reference 7). 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 8 and 9).

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. Standby generators

Standby generators and their oil supply system should be provided with suitable bunding to ensure that any oil leak is contained.

7. REFERENCES

1. Waste Management - The Duty of Care - A code of practice (revised 1996): ISBN 0-11-753210-X
2. A guide to the Special Waste Regulations 1996 (as amended): 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. PPG13: High pressure water & steam cleaners
4. Sustainable Urban Drainage - an introduction
5. PPG3: The use and design of oil separators in surface water drainage systems
6. PPG7: Fuelling stations: Construction & operation
7. PPG2: Above ground oil storage tanks
8. Policy and Practice for the Protection of Groundwater in England and Wales: ISBN 1 873160 37 2
9. Groundwater Protection Strategy for Scotland. SEPA

References 1 and 8 are available from the Stationery Office, Tel: 08706 005522

References 2-7 are available free from the Agencies

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

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EMERGENCY HOTLINE

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