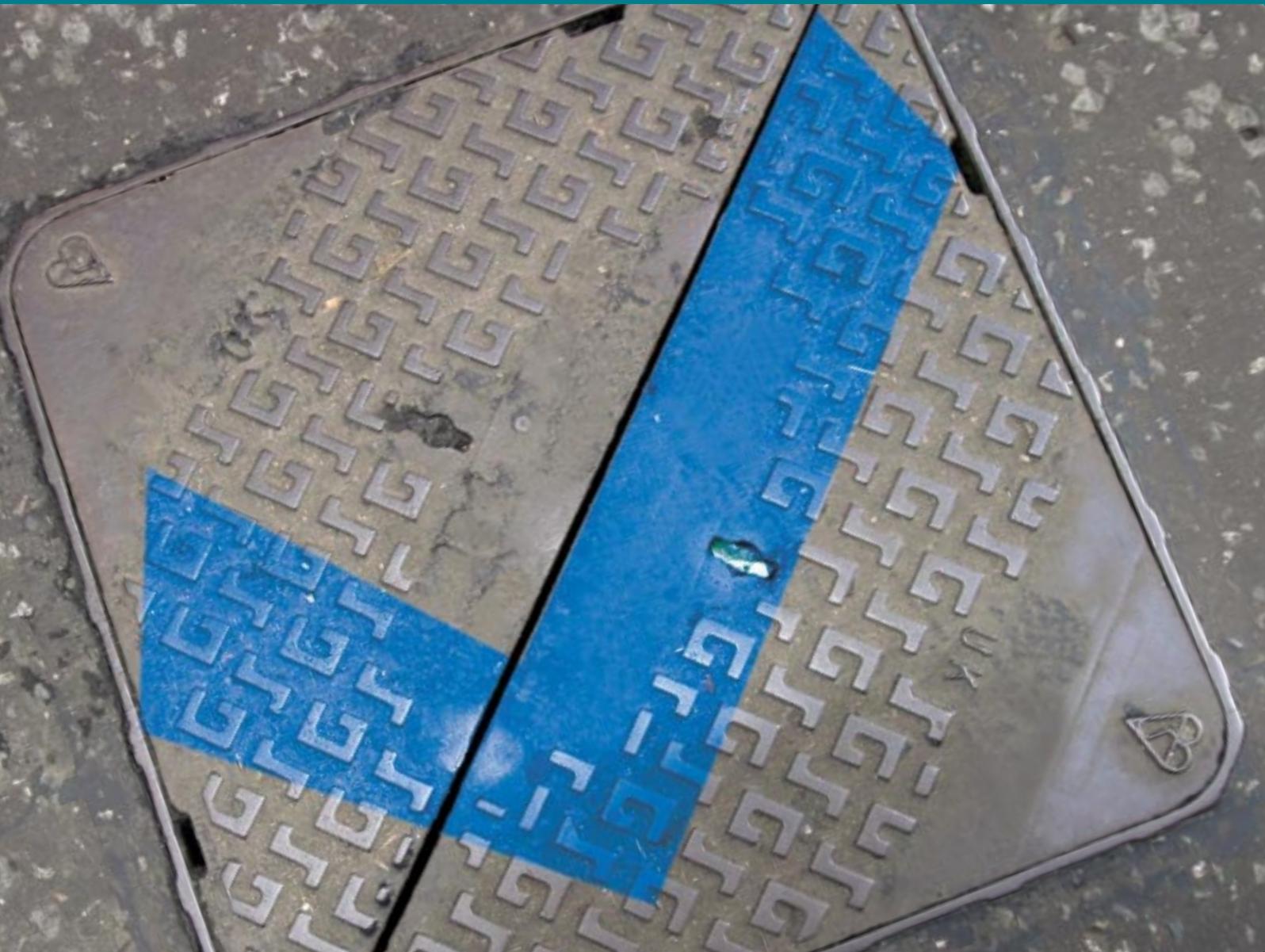


**POLLUTION
PREVENTION PAYS**

Getting Your Site Right

Industrial and Commercial Pollution Prevention



www.environment-agency.gov.uk

The Environment Agency is the leading public body protecting and improving the environment in England and Wales.

It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

Published by:

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Getting Your Site Right

Industrial and Commercial Pollution Prevention



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INTRODUCTION TO ENVIRONMENTAL PROTECTION AND POLLUTION CONTROL



All industrial and commercial sites have the potential to damage our natural environment. This pack is produced for businesses to help you reduce the risk of causing environmental pollution.

Pollution incidents occur every day as a result of spillages, accidents, negligence or vandalism – sometimes the pollutants put human health at risk and often they devastate wildlife habitats, including rivers in which they kill fish and destroy the invertebrate life on which fish and other animals feed.

To cause or allow pollution is against the law. Society is no longer prepared to accept businesses that do not take their environmental responsibilities seriously.

Magistrates and Sheriffs' Courts can impose fines of up to £20,000 for pollution offences, and if a case goes to Crown Court there is no limit to the fine and you could go to prison. The polluter will also have to pay clean-up and court costs.

Even if a case is not taken to court, the cost of repairing the damage to the environment has to be met – these costs can be very large. For example, fish restocking can cost thousands of pounds and cleaning up serious groundwater pollution can cost over a million pounds. Insurance premiums will increase considerably if a claim for pollution clean-up is made.

Following the guidance in this pack not only reduces the chance of causing pollution, but also makes good business sense. Minimising waste and pollution risk saves money by reducing operating costs. Businesses that have a 'green' image are at a competitive advantage, which is important in today's economic climate.



The Environment Agencies

The Environment Agency for England and Wales, the Scottish Environment Protection Agency (SEPA) and the Environment and Heritage Service Northern Ireland are regulators, and are responsible for protecting and improving the environment throughout the United Kingdom. We control pollution by authorising complex industrial processes, licensing and permitting waste activities and consenting discharges to the water environment (inland waters, such as rivers, lakes and streams, groundwater and coastal waters; these are known as Controlled Waters). We also regulate the use of water taken from the environment for drinking water supplies, industrial processes and agriculture. The Agencies have powers of enforcement and prosecution* to safeguard the environment. We prefer to advise and assist, but will not hesitate to take enforcement action or prosecute offenders where necessary.

Our officers are on call 24 hours a day, all year, to respond to pollution emergencies and can often give on-the-spot advice to minimise the worst effects of an incident.

Waste Management

Waste management facilities (keeping, treating and disposing of waste) are regulated by the Environment Agencies to protect the health and well-being of the environment and the community. Businesses that produce waste are also monitored by the Agencies. Waste from a business represents the loss of valuable resources and presents a risk to the environment if it is not treated carefully. It is usually possible to reduce waste production and to increase reuse and recycling without additional costs.

Water Quality

Historically, our inland and coastal waters have been used for the disposal of domestic and industrial effluents, which has had a devastating impact on the environment, particularly in heavily populated or industrial areas. In recent years water quality has improved and many rivers are now able to support diverse river life. Rivers are also used as a source of public drinking water supply. Groundwater is stored naturally in porous rocks and soils called aquifers. About 35% of public water supply is taken from groundwater, which supports industrial and agricultural uses, and thousands of private dwellings rely on their own wells and boreholes. Groundwater is also important for maintaining river flows and wetlands. In the past pollutants and effluents were often disposed of onto land and, by seeping through the soil, caused land contamination and groundwater pollution, which made the water unusable without costly treatment. There are now specific regulations to protect groundwater; these require prior approval for specific activities that involve a discharge to the ground.

All discharges to the water environment, whether from industry, sewage treatment works or other sources, require prior permission of the Environment Agencies in the form of a Discharge Consent or Authorisation. This is a legal requirement and contains conditions that relate to the quality and quantity of the discharge. Discharges of trade or sewage effluent to the water environment are illegal if made without consent.

* In Scotland SEPA submit a report to the Procurator Fiscal who have prosecution powers.



Air Quality

Emissions to the air can affect people's health, cause odour nuisance and damage the natural and built environment. The Agencies currently regulate the release of pollutants, including odour, to the air from large or more complex industrial processes and waste management facilities, such as landfill sites. Local Authorities are responsible for local air-quality management and regulate emissions of pollutants to the air from smaller processes. Please contact your Local Authority for advice on whether a release from your process needs authorisation.

Noise and Light

Noise and light pollution are not covered in this publication, but should be taken into account when the environmental impact of your site is assessed. Advice on noise reduction can be obtained from your Local Authority and in Scotland from local SEPA offices.

GETTING YOUR SITE RIGHT WITH THE POLLUTION PREVENTION PAYS PACK

This pack (booklet, posters and accompanying video) is designed to help industrial and commercial sites put effective pollution prevention measures into practice. These can be identified by carrying out an environmental review (site audit), which should cover legal requirements, areas of risk, resource management and waste minimisation and community relations. An environmental review is the first step towards developing an Environmental Management System (EMS), which provides the framework for a company to deal with the immediate and long-term environmental impact of its products, services and processes. The Agencies and other independent organisations can help (see Section 8, Further Information).

'Pollution Prevention Pays' offers good practice measures and ideas for improvements, many of which can be implemented at little or no cost. You must remember it is your responsibility to ensure that relevant environmental legislation is complied with at all times. **Some measures for pollution prevention may be legal requirements, and these are highlighted in the text.**



ENVIRONMENTAL PROTECTION – IS YOUR SITE RIGHT?

You can make your site right and protect the environment by putting into practice the action points on the following pages for the activities and areas listed below:

SITE DRAINAGE – a good knowledge of all the drainage systems on your site is **fundamental** to prevent pollution.

DELIVERIES AND HANDLING – delivery and handling of material, such as oils, chemicals and food stuffs, around your site is always a high-risk activity. Good working practices are essential.

STORAGE – poor storage of oils, chemicals and other materials represents a major risk to the environment.

WASTE MANAGEMENT – businesses should minimise waste production to save money and resources. Legal waste storage and disposal is an essential pollution prevention measure.

TRADE EFFLUENT – liquid effluents that are produced by a commercial or industrial process are known as “trade effluents” and require special consideration for their disposal.

GROUNDWATER PROTECTION – groundwater is out of sight, but must not be out of mind. As a valuable resource it must be protected from pollution.

TRAINING AND EMERGENCY PLANNING – training plays a crucial role in protecting the environment. Trained and knowledgeable staff can help prevent or lessen the effects of a pollution incident – saving both money and time.

You may find it helpful to use the Action Points as a checklist. Tick and date each one as you put it into practice.

SITE DRAINAGE

A good knowledge of all the drainage systems on your site is fundamental to prevent pollution.

There are two types of system – Separate and Combined.

The **Separate Drainage System** has two different drains – foul water and surface water. Drains are also known as sewers.

The **foul water drain** carries contaminated water (sewage and/or trade effluent) safely to a sewage treatment works, which may either be owned privately or by the local Sewage Treatment Provider.

The **surface or clean water drains** should only carry uncontaminated rainwater because they lead directly to ditches, streams, rivers or soakaways. It is usual for roadside drains to be connected to the surface water system.

The **Combined Drainage System** has one drain, which carries both foul and surface water to a sewage treatment works. This type of drainage tends to be used in older urban areas and city centres.

Drains owned by Sewer Providers are known as mains drainage, main sewers or public sewerage systems.

It is important that every manhole, drainage grill or gully on industrial and commercial sites is identified as being connected to foul, surface or combined drains. Without this knowledge it is impossible to be sure that all drainage is connected to the right system. Wrongly connected effluents can cause severe pollution. They can prove expensive and time consuming to trace, so it is essential to make sure that everything is connected correctly.

ACTION POINTS

- Produce a comprehensive and up-to-date **drainage plan** of the site, which accurately identifies all drains. If there is no in-house expertise to do this a reputable drainage company should be used. Key staff need to be familiar with the plan, which should be readily available.
- Check drainage plans before any new building work is carried out to ensure connections are made to the right drainage system. Remember to update the drainage plan to make sure that any alterations, additions or amendments to the drainage system are shown.
- Drains should be identified clearly by colour coding all manhole covers, drainage grills and gullies. Foul water drains should be painted **red** and surface water drains **blue**. Combined drainage systems could be colour coded with a red letter **C**. Everyone (including service personnel and contractors) should be made aware of the significance of the colour coding system.
- It is important that there are no wrongly connected effluents, especially in process areas in which trade effluent is generated – see Section 5, Trade Effluents. The following facilities are often overlooked and must be connected to the foul or combined drainage system:
 - Mess rooms
 - Darkrooms
 - Showers
 - Canteens
 - Laboratories
 - Toilets
 - Sinks, dishwashers and washing machines
- Seal all ducted cable ways so that they do not create uncontrolled drainage routes.
- Remember that only clean uncontaminated water (e.g. roof water) can be discharged to the surface water system. A leaflet, Making the Right Connection, is available – see Section 8, Further Information.
- If site foul drains are connected to a private sewage treatment system, such as a cesspool, septic tank or package plant, make someone responsible for its upkeep. Make sure it is maintained and emptied regularly (you may need a Discharge Consent, so check with your local Agency office).
- It may be necessary to provide permanent drainage isolation facilities, such as penstocks, valves or emergency containment systems, on high-risk areas or as part of your site's emergency procedures to prevent spillage or run-off polluting the environment. Contact your local Agency office for further advice about isolating high-risk areas and sites.
- To prevent oil pollution, oil separators (or interceptors) should be provided on any surface water drain at risk – particularly fuelling and vehicle parking areas (you may need a Discharge Consent, so check with your local Agency office). A guidance note on separators is available (see Section 8, Further Information). Contact your local Agency office if you require further advice. **BUT REMEMBER!** Separators:
 - Must be sized according to the area being drained.
 - Will not retain soluble oils.
 - Must be maintained and regularly emptied (oil and silt).
 - Will not work if detergents are present.



DELIVERIES AND MATERIALS HANDLING

Delivery and handling of material, such as oils, chemicals and food stuffs, around your site is always a high-risk activity. Good working practices are essential.

Special care should be taken during delivery, loading, unloading and transfer of all materials, particularly hazardous substances, as there is a risk of spillage and accidents. It is important to identify these risks so they can be minimised wherever possible. Making someone responsible for supervising deliveries can help avoid spillages – and so prevent damage to the environment, save valuable raw materials and avoid potential legal action.

Handling materials that are not liquid or solid at ambient temperatures requires special consideration that is outside the scope of this publication. Advice should be obtained from your supplier.

ACTION POINTS

- Ensure all **loading and unloading areas** are designated, clearly marked and isolated from the surface water drainage system, for example by using separators or sumps with isolating valves.
- Develop and implement procedures for supervising all deliveries.
- Minimise the quantity of material stored on site.
- Storage containers and pipework must be well designed, “fit for purpose” and comply with any relevant regulations. Their condition and storage levels must be checked before receiving each delivery to prevent loss of product, for example, by overfilling or tank failure.
- Fit appropriately sized drip trays to all delivery pipe inlets and remove any spilt material immediately.
- Fit an automatic cut-off valve or alarm to prevent spillages through overfilling. **This may be a legal requirement for oil tanks for which the vent pipe cannot be seen from the delivery point (see Section 3, Storage).**
- Pumped dispensing is preferable to gravity draw-off.
- Reducing the need for materials to be moved around the site lowers the risk of accidents or spillage. Transfer routes should be identified and kept clear at all times, the potential for environmental damage assessed and risk reduction measures carried out.
- Avoid manual handling wherever possible to reduce the risk of human error and accidents.
- Have a contingency plan and make sure everyone is aware of what to do in the event of a spillage or other accident. Have a stock of **emergency equipment**, for example drain covers, absorbent materials and protective clothing, available to mop up small spillages. Ensure that all residues and contaminated materials are disposed of correctly (see Section 7, Training and Emergencies).

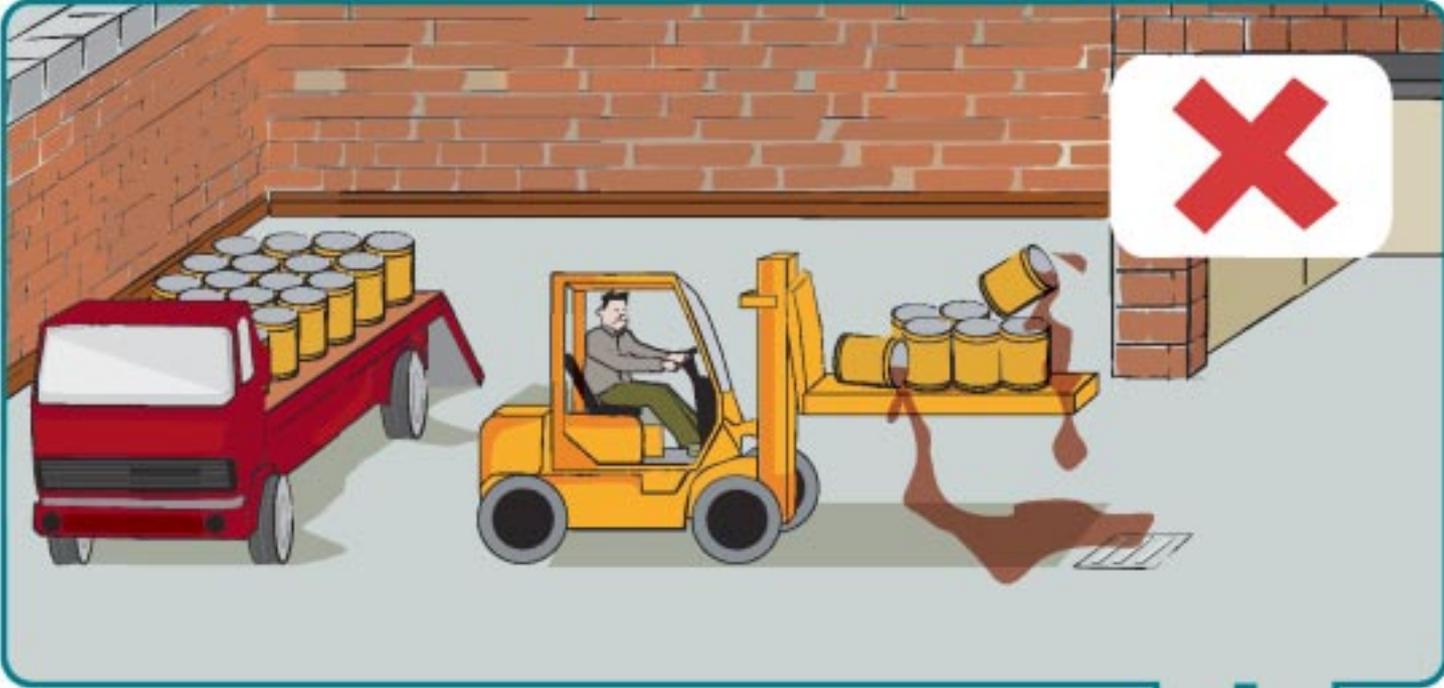
POLLUTION FACTS

An increasing number of pollution incidents are caused each year by vandalism and theft. It is important to keep one step ahead of potential intruders.

Oil is a particularly harmful pollutant. A small amount of oil causes a large problem. 5 litres of oil can cover an area of water the size of two football pitches.

Litter is a pollutant too, and must not be allowed to enter a water course.

POLLUTION PREVENTION PAYS SECTION 2



STORAGE

Poor storage of oils, chemicals and other materials represents a major risk to the environment.

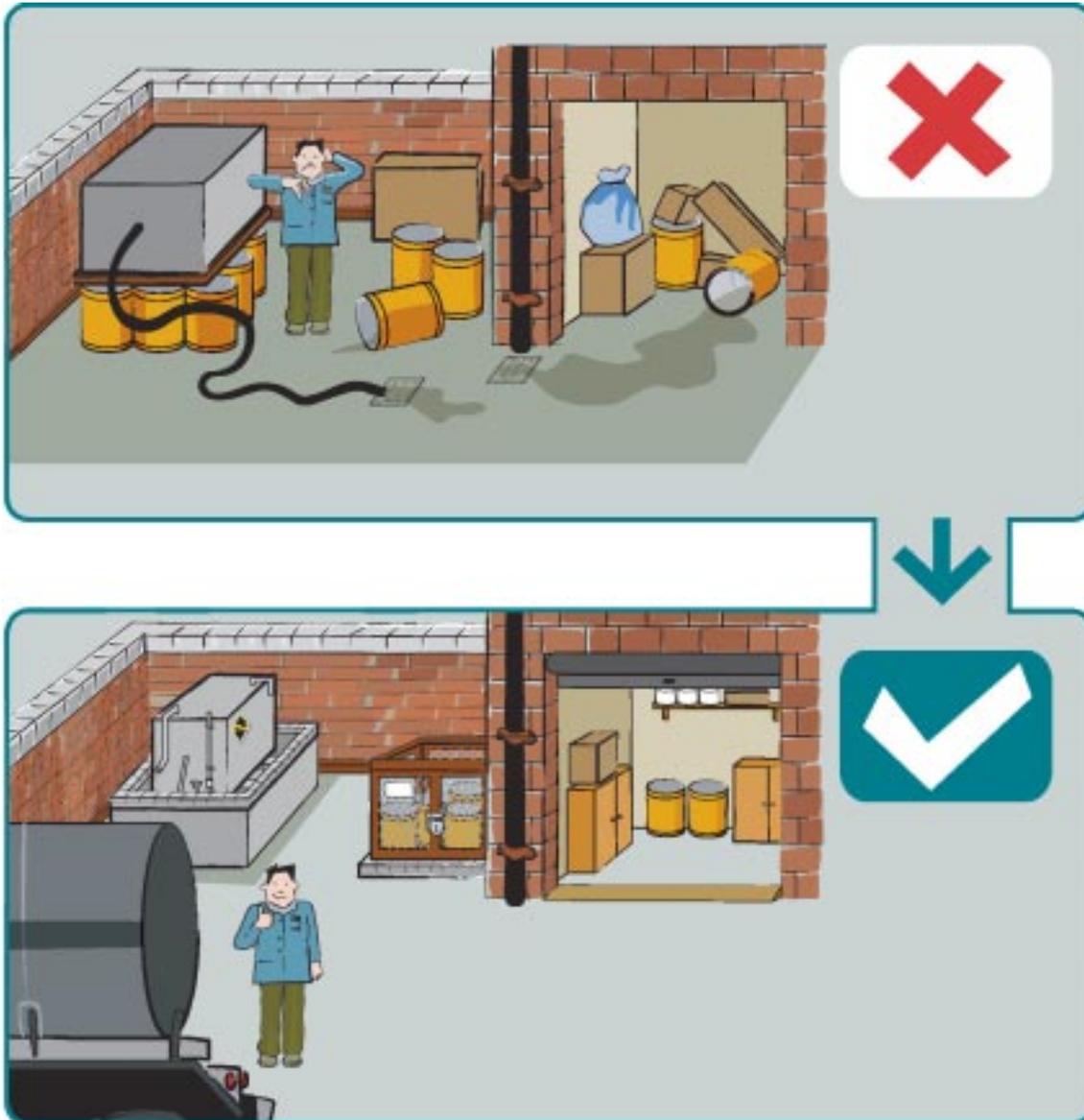
The potential for accidental spillage is at its greatest during deliveries and dispensing, but storage containers [tanks, intermediate bulk containers (IBCs), drums, bowsters, etc.] are also a risk. It is essential that they are sited appropriately, designed and maintained to take into account environmental protection. The use of secondary containment systems prevents materials escaping to the environment.

In England above ground oil storage containers (e.g. tanks, IBCs, drums and mobile bowsters) greater than 200 litres must comply with the **Control of Pollution (Oil Storage) (England) Regulations 2001** (see Pollution Prevention Guidance Note 2, the Environment Agency leaflet on Oil Storage Regulations or NetRegs at www.netregs.co.uk for further details). Oil storage regulations in Scotland, Wales and Northern Ireland are expected to set similar standards. **You must find out if oil storage legislation applies to your above ground oil store as some of the action points below may be a legal requirement.**

Storing materials that are not liquid or solid at ambient temperatures requires special consideration that is outside the scope of this publication. Advice should be obtained from the supplier of the material.

ACTION POINTS

- Use an appropriate container for the material stored. Make sure it is fit for purpose and clearly labelled with product type, maximum capacity and both health and safety and environment protection information.
- Locate storage facilities away from watercourses, open drains, gullies, unsurfaced areas or porous surfaces.
- Protect containers from impact damage where necessary.
- Roof storage is high-risk and should be avoided because any loss of the contents may drain to the surface water system via guttering and cause pollution.
- Storage tanks, IBCs and bowsters for chemicals, oils and raw materials must have a secondary containment system able to hold at least 110% of the tank's maximum capacity. It must be impermeable to the material stored, enclose the ancillary equipment (e.g. local fill and draw-off facilities, vent pipes, sight gauges, taps, valves, etc.) and have no drain-down outlets or connection to the environment.
- Secondary containment for drum storage should be provided by using a proprietary container store, bunded pallet, drip tray or kerb-bunded area – preferably roofed. The capacity should be at least 25% of the total volume of the drums being stored. Where access for vehicles is necessary provide a properly designed ramp, but make sure use of the ramp does not cause spillages.
- Loss from the container beyond the secondary containment system (known as jetting) can be minimised by keeping the container as low as possible, providing deflection screens and directing any potential discharges into the containment system.
- Produce maintenance schedules for regular inspection of storage facilities and make sure any necessary remedial work is carried out promptly.
- Regularly remove rainwater, which may have collected within open containment systems. This wastewater may be contaminated and must be disposed of appropriately in accordance with waste management legislation (see Section 4, Waste Management). In the long term it may be more cost effective to roof the facility or even replace the tank with a proprietary enclosed bunded tank system.
- All pipework must be protected against corrosion and physical damage (e.g. collision, vibration, ground disturbance, etc.). Aboveground pipes should be properly supported and their condition checked frequently.
- Avoid underground pipework, as faults are very difficult to detect and can lead to groundwater contamination. If they have to be used underground, pipes should preferably be laid in an impermeable duct, must have inspection chambers at all mechanical joints and be tested regularly to ensure they are not leaking. Their route should be marked clearly on the ground and on all site plans.



- Provide security measures for the site and storage areas to prevent vandalism and theft. Storage system valves, taps, hatches or lids and delivery hoses should be fitted with locks and locked shut when not in use. Where possible materials should be stored in secure buildings.

3.1 Underground Storage

Underground storage of oils and chemicals is a significant pollution risk to groundwater (see Section 6, Groundwater Protection). The Groundwater Regulations 1998 enable the Agencies to issue pollution prevention notices to make sure precautions are taken to protect groundwater.

Statutory Codes of Practice made under the Groundwater Regulations contain specific requirements and advice for the underground storage of oil and chemicals. **You must find out if these Regulations apply to your underground storage.**

ACTION POINTS

- Avoid underground storage of oils and chemicals unless absolutely necessary. Where unavoidable, please contact your local Agency office for further advice.
- It is essential that the risk to groundwater is reduced by good leak-detection facilities and management procedures.

WASTE MANAGEMENT

Businesses should minimise waste production to save money and resources. Legal waste storage and disposal is an essential pollution prevention measure.

Waste management and disposal is subject to strict legal controls. You must find out how these regulations affect your business. The NetRegs website (www.netregs.co.uk) provides full details of waste legislation and how you can comply. Contact your local Agency office for further advice.

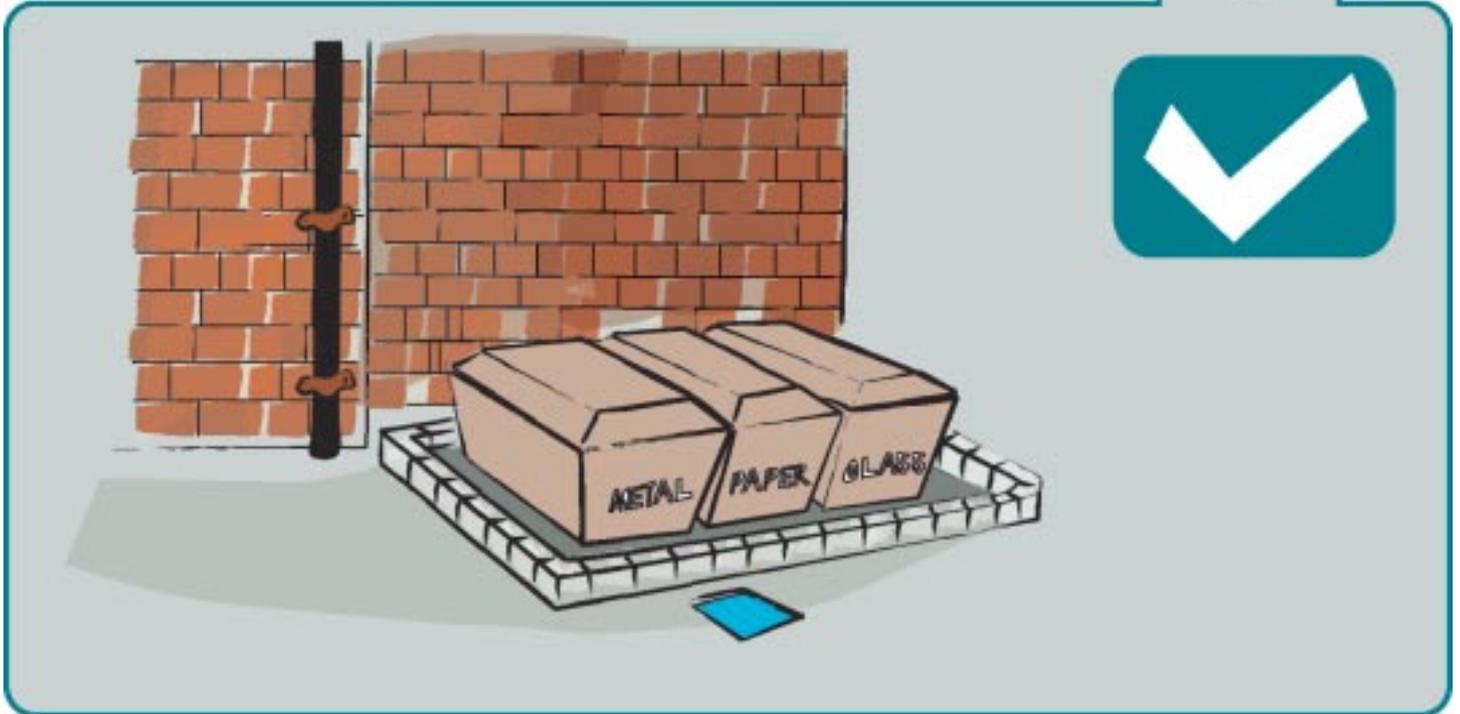
Waste Minimisation

A waste minimisation review will help you save money on raw materials and waste disposal costs. For example, work with your suppliers and distributors to find ways to eliminate or reduce the amount of packaging. Further advice on waste minimisation and initiatives in your area can be obtained from your local Agency office. Free independent information on waste minimisation is available from Envirowise and includes publications, events, site visits and specific advice. Visit the Envirowise web site at www.envirowise.gov.uk, or call the Environment and Energy Helpline on 0800 585794 (see Section 8, Further Information).

ACTION POINTS

- Carry out a waste minimisation review and consider methods to reduce the volume of waste you produce. Contact the Environment and Energy Helpline for free advice on 0800 585794.
- Reuse your waste or buy in products that can be reused many times – it will save money in the long term.
- Recycle as much waste as possible. Your local council or waste contractor should know about the facilities in your area.
- Try to substitute materials for less hazardous ones, for example biodegradable lubricants and solvent-free paints.
- Have waste taken off site frequently; do not allow large quantities to accumulate. **Under the Duty of Care you have a legal duty to ensure that any waste you produce does not escape from control, is transferred only to an authorised person (e.g. registered or exempt waste carrier or authorised waste manager), is accompanied by a full description of the waste and a waste transfer note, and is disposed lawfully.**
- Waste must always be stored in appropriately designed containers that are fit for purpose and of sufficient capacity to avoid loss, overflow or spillage.
- All waste and waste containers must be stored in designated areas, which are isolated completely from surface water drains or direct discharge to the environment. The area should be able to contain spillages.
- Segregate and label both wastes for recycling and hazardous waste from general waste. Do not mix or dilute hazardous wastes.
- Where appropriate skips should be covered or enclosed unless stored undercover or within a building.
- Waste compactors can produce highly polluting run-off and must be isolated from surface drainage systems. It is best to drain the area to the foul sewer, with prior permission of the local Sewer Provider, and to provide a roof to minimise the discharge.
- The disposal of certain hazardous wastes (e.g. oily wastes, acids, solvents and solvent-based products) have particular legal requirements and their movement must be accompanied by a consignment note. Copies must be kept by everyone involved in the transfer of the waste, including the Agencies. Contact your local Agency office or visit the NetRegs website (www.netregs.co.uk) for information on whether your waste materials need to meet these requirements.
- Burning material in the open air is an undesirable method of waste disposal and, in many cases, unlawful. Always try to find another way to dispose of waste that is less harmful to the environment. Contact your local Agency office for advice or visit the NetRegs website (www.netregs.co.uk).

POLLUTION PREVENTION PAYS SECTION 4



TRADE EFFLUENT

Liquid effluents that are produced by a commercial or industrial process are known as “trade effluents” and require special consideration for their disposal.

Trade effluents are polluting and must not be discharged to the surface water system. Generally the “Best Environmental Option” is to discharge trade effluent to the public foul sewerage system with the prior permission of the local Sewer Provider. There may be conditions set on the quality and quantity of a discharge and pretreatment may be necessary, depending on the nature of the effluent.

If discharge to the public sewerage system is not possible, a private treatment system may be considered which must be designed specifically to treat all effluents connected to it. You will need prior Agency Consent for any treated trade effluent discharge to the environment (check with your local Agency office). It is unlikely that Consent would be given to discharge trade effluent to the ground. Connecting trade effluent to private sewage treatment facilities is likely to cause pollution.

If treatment or sewerage disposal options are not possible then, because trade effluent is regarded as a liquid waste, storage and off-site disposal will be necessary and waste management legislation will apply (see Section 4, Waste Management).

ACTION POINTS

- Trade effluent drainage systems should be checked regularly for leaks. All treatment plants, including storage vessels and chemical storage areas, must be isolated from surface water drains.
- Discharge points for all trade effluent gullies and drains must be checked and included on your site drainage plan.
- Some effluents may be a small volume or considered “clean”, but the disposal route of **ALL** trade effluents must be considered:
 - Compressor blowdown
 - Cooling water
 - Boiler blowdown,
 - Compactor run-off
 - Steam condensates,
 - Air conditioning
 - Pressure testing liquids
- your local Sewer Provider before making a disposal. Ensure all contractors and/or cleaners know where they can dispose of waste waters properly.
- Cleaning agents including detergents are not suitable for discharge to surface water drains, even those described as biodegradable. **Do not** allow detergents to enter oil separators as the oil will be washed through.
- If yard areas are cleaned do not allow the run-off to enter surface water drains.
- Think carefully about your site drainage before using a mobile steam or pressure cleaner, especially if detergents or degreasers are used. Ensure they are operated only in an area isolated from the surface water system. Detailed guidance for the use of steam and pressure cleaners is available (see Section 8, Further Information).

5.1 Cleaning

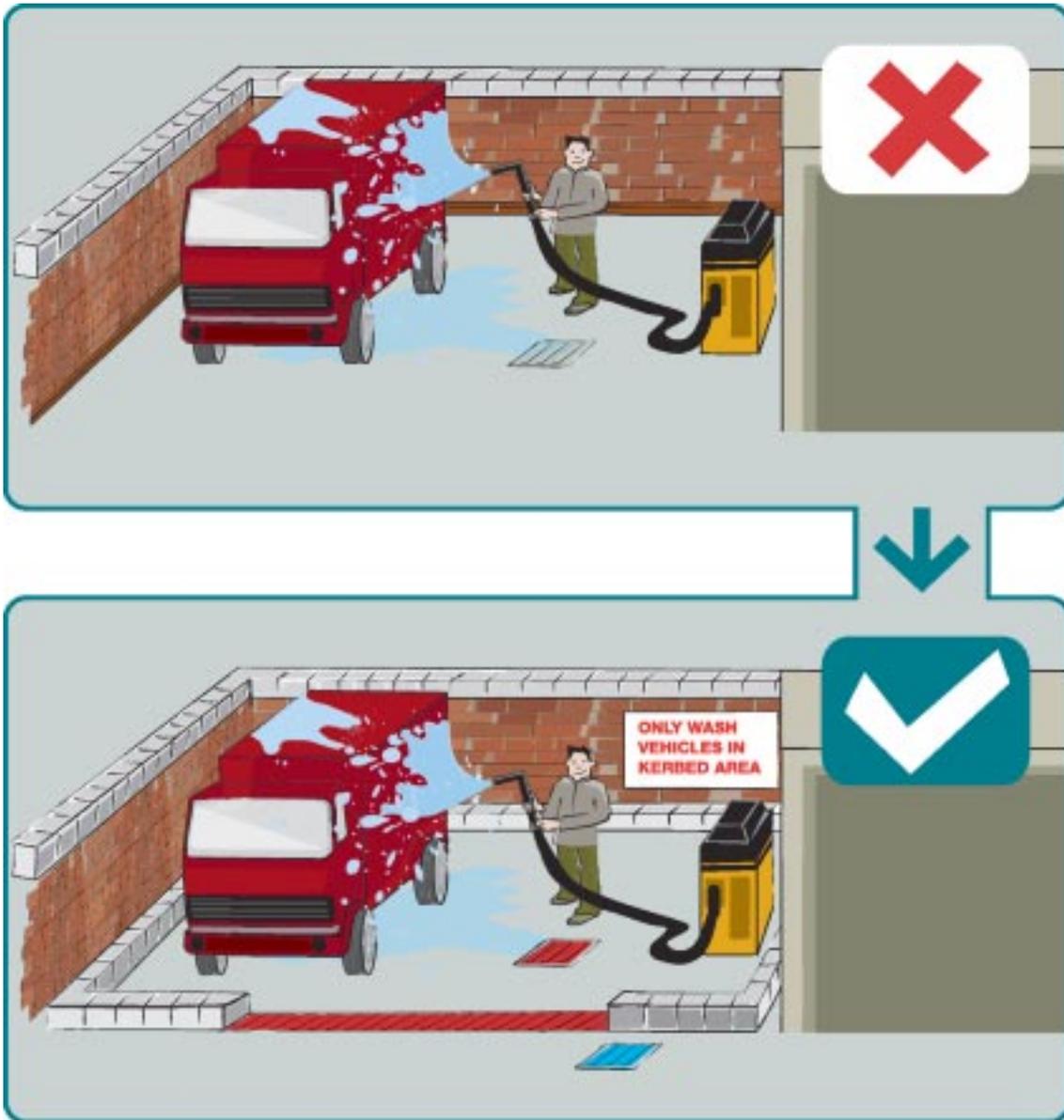
Vehicles, components, plant and equipment, floors, surfaces and containers are cleaned on site every day. All these activities generate dirty water and the disposal of this effluent, as with all trade effluents, must be considered carefully. All cleaning agents are potential pollutants, as are the materials they are intended to remove. These include detergents (even the biodegradable ones), disinfectants, degreasers, dirt and oil.

ACTION POINTS

- Carry out all washing and/or cleaning operations in a clearly marked, designated area. This includes cleaning vehicles or plant.
- Isolate all cleaning or wash-down areas from the surface water system and unmade ground or porous surfaces by using drainage grids, gullies or kerbs. Wash water should drain or be disposed of to the foul sewer; check with

5.2 Dewatering

Take care when removing excess water from a site, or dewatering generally, especially in areas that may be or are known to be contaminated. It is often necessary to dewater underground ducts or chambers for inspection and maintenance purposes. This results in a relatively small volume of liquid to dispose of. Larger volumes may be produced as a result of groundworks or construction projects in which excavations extend into groundwater sources or collect rainwater and other run-off.



Silt causes lasting damage to river life because it:

- Blocks fish gills so they suffocate and die;
- Destroys spawning sites of fish;
- Destroys insect habitats
- Stunts aquatic plant growth;
- Can build up and lead to flooding.

ACTION POINTS

- Before any dewatering takes place, the collected water should be tested to determine its quality and the most appropriate disposal option. The disposal of polluted water requires careful consideration and must be discussed with the local Agency office before any discharge is made.
- Silty water should never be pumped directly to a river, stream, road or yard gullies or surface water drains.
- Silt is generally a non-toxic pollutant and, in the absence of any other contaminants, can be disposed of by pumping to a settlement tank or over a large grassed area. If there is any risk that the silty water is contaminated with any other pollutant, you should consult with the Agencies before its disposal.
- Pollution prevention guidance notes that deal specifically with the dewatering of underground ducts or chambers and from construction and demolition sites are available (see Section 8, Further Information).

GROUNDWATER PROTECTION

Groundwater is out of sight, but must not be out of mind. As a valuable resource it must be protected from pollution.

Spillage and unsuitable disposal of oils, solvents, chemicals or waste materials causes serious damage to groundwater. Pollution can occur from discharges onto open ground and other porous surfaces or from drainage systems that soak into the ground (soakaways). Chlorinated solvents (e.g. trichloroethylene and perchloroethylene) are among the most serious causes of groundwater pollution. A leaflet, *Solvent Pollution and How to Avoid It*, is available (see Section 8, Further Information). It is vital that groundwater pollution is avoided, as once it has become contaminated, groundwater is very difficult and expensive to clean up.

It is essential to find out if your site is in a sensitive groundwater area (e.g. within the catchment of a drinking water supply borehole) as you may have to take additional pollution prevention measures to minimise the risk of causing groundwater pollution.

Statutory Codes of Practice made under Groundwater Regulations on specific high-risk activities, such as the underground storage of fuel, the use of solvents and non-mains drainage, are available or in preparation (see Section 8, Further Information).

The Agencies have powers to require action to be taken on storage, handling, use or disposal of certain dangerous substances (e.g. hydrocarbons, solvents, biocides, metals and ammonia) that are a potential risk for contaminating groundwater. Groundwater Regulations require authorisation by the Agencies before you dispose of waste that contains these substances into or onto land. Advice on this is available from your local Agency office.

ACTION POINTS

- Find out if your site is in a sensitive groundwater area; contact your local Agency office for further information and advice about additional pollution prevention measures.
- Consult with the Agencies about your arrangements for storage and disposal of chemicals or waste.
- Only allow clean uncontaminated rainwater to discharge to soakaways.
- Never allow wastes or chemicals to be disposed of onto the ground.
- Spillage of oils, chemicals or wastes must be dealt with promptly. Any contaminated soil should be removed and disposed of according to your emergency plans and waste management procedures. Specialist advice may need to be sought on remedial action for spillages of certain substances.

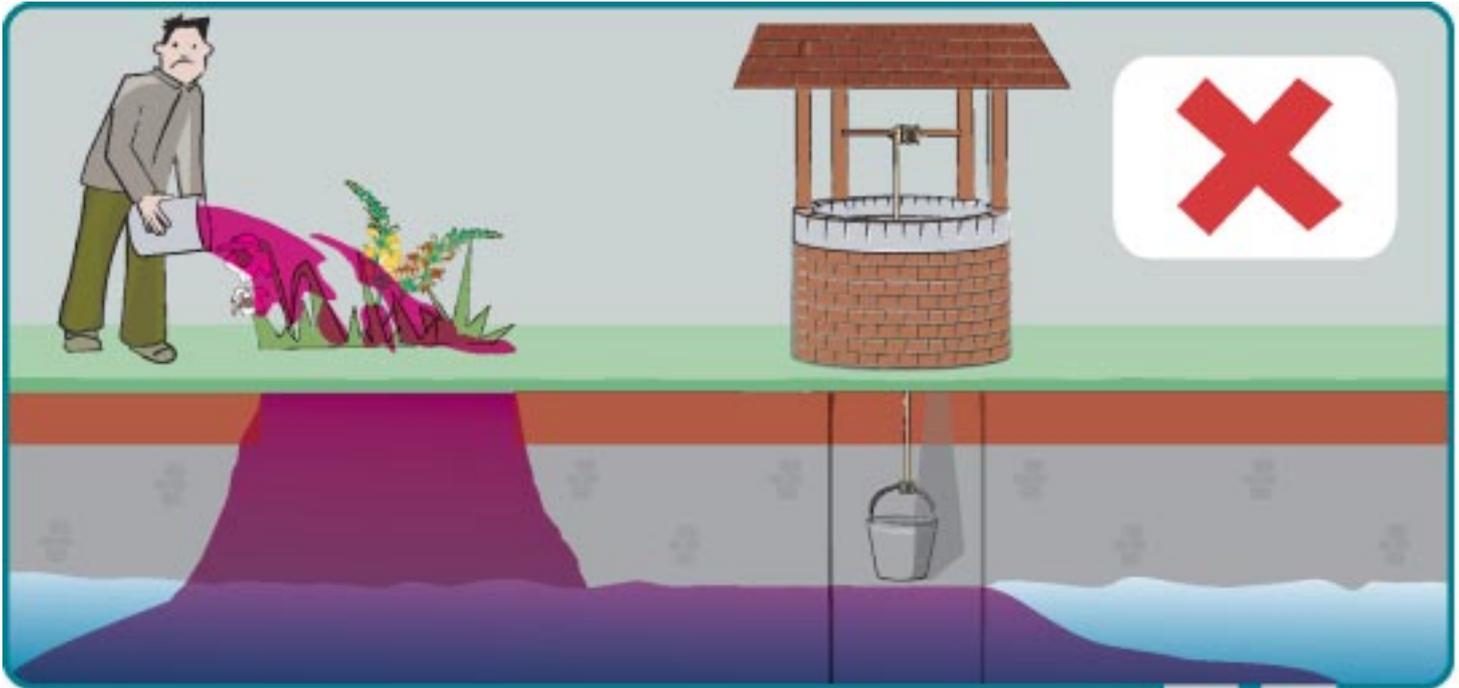
POLLUTION FACTS

Most pollution incidents are the result of ignorance, apathy or neglect of basic procedure.

Just 250 grams of pesticide could be enough to exceed the permitted limit in the whole of London's water supply for one day.

Just one litre of solvent is enough to contaminate 100,000,000 litres of drinking water (that's equivalent to approximately 50 Olympic sized swimming pools).

POLLUTION PREVENTION PAYS SECTION 6



TRAINING AND EMERGENCIES

Training plays a crucial role in protecting the environment. Trained and knowledgeable staff can help prevent or lessen the effects of a pollution incident – saving both money and time.

Occasional accidents are inevitable so it is important to have plans in place to deal with pollution emergencies and make sure everyone knows what to do in the event of an incident.

The Agencies must be notified of any environmental incident as soon as possible, telephone free on 0800 80 70 60, 24 hours a day, 7 days a week.

Training should cover environmental awareness, correct procedures and pollution-incident response.

ACTION POINTS

7.1 Training

- Make sure everyone is aware of how important it is to protect the environment and what your company does to prevent pollution. Include environmental training for new starters.
- Organise screenings of the Pollution Prevention Pays video and display the posters available with this pack in positions where everyone can see them.
- Reinforce training with a regular refresher programme.
- People (and their deputies) who have specific responsibilities for procedures or plant with a potential environmental impact should receive regular and adequate training in their role. They must have an awareness of the potential for harm to personnel and the environment from materials and equipment they are responsible for.
- Contractors should be trained in relevant environmental management and emergency procedures before starting work.
- Test your incident response plan by carrying out simulations and exercises for all those involved. Amend the plan to account for any deficiencies. Never leave anything to chance!
- Always have adequate emergency pollution-control equipment available to deal with spillages, accidents or firewater, such as absorbent materials, drain blockers or incident “grab packs”. Do not forget to provide personal protective clothing. More information on dealing with spillages and firewater is given in Pollution Prevention Guidance Note 18 (see Section 8, Further Information).
- Make someone personally responsible to regularly check and maintain routine and emergency pollution control and prevention equipment, devices and procedures. Make sure any remedial work is carried out as soon as possible.
- Devise procedures for the recovery, handling and disposal of all waste material that arises from incidents or emergencies.

7.2 Emergencies

- Develop a pollution incident response plan to prevent harm to human health and minimise damage to the environment caused by accidents, fires or spillages. Further guidance and a template are available in Pollution Prevention Guidance Note 21 (see Section 8, Further Information).
- If you have an incident that has or is likely to damage the environment you must inform the Agencies on 0800 807060 so that time is not wasted before you get expert help.

POLLUTION PREVENTION PAYS SECTION 7



The Agencies publish a series of free pollution prevention literature. The following are of particular relevance:

Pollution Prevention Guidance Notes:

- PPG2 *Above Ground Oil Storage Tanks*
- PPG3 *The Use and Design of Oil Separators in Surface Water Drainage Systems*
- PPG6 *Working at Demolition and Construction Sites*
- PPG11 *Preventing Pollution at Industrial Sites*
- PPG13 *High Pressure Water and Steam Cleaners*
- PPG18 *Managing Firewater and Major Spillages*
- PPG20 *Dewatering of Underground Ducts and Chambers*
- PPG21 *Pollution Incident Response Planning*
- PPG26 *Storage and Handling of Drums and Intermediate Bulk Containers*

Leaflets/booklets

- Making the Right Connection*
- Solvent Pollution and How to Avoid It*
- Oil Storage Regulations*
- Works Notices Regulations – information on Anti Pollution Works Regulations 2001*
- A Guide to Good Environmental Practice for Trading Estates and Business Parks*

Video Packs:

- Money for Nothing – Waste Tips for Free (waste minimisation information)*
- Keeping out of Deep Water – Groundwater Protection for Industry*

Many of these publications are available from the Agencies websites, together with other relevant information – see the Agencies Contact Details or phone the general enquiry line on 0845 933 3111.

NetRegs offers clear guidance and explains the regulations that apply to you, broken down into specific business premises. It also offers advice on good environmental practice and provides links to Business Support and other helpful organisations. It is free, anonymous and is designed to guide businesses through environmental regulation. Contact www.environment-agency.gov.uk/netregs or www.sepa.org.uk/netregs.

Envirowise offers free, independent practical environmental advice for all businesses; this includes free publications, events, site visits and waste reviews. More information is available from www.envirowise.gov.uk or by calling the Environment and Energy Helpline on 0800 585 794. For a comprehensive introduction to waste minimisation ask for your free copy of IT 313 Waste Wise – Increased Profits at Your Finger Tips. This is an interactive CD-Rom that brings together all the essential information companies need to minimise waste and save money.

ARENA Network is an independent organisation that works in partnership with the main Welsh agencies (e.g. National Assembly for Wales, Welsh Development Agency, Environment Agency Wales) and provides practical support to business and other organisations primarily in Wales on environmental management and training related issues. For more information phone 01443 844001 or visit www.arenanetwork.org.

Department for the Environment, Food and Rural Affairs (DEFRA) publications (phone 08459 556000)
Guidance Note for the Control of Pollution (Oil Storage) (England) Regulations 2001 Product code PB5765
Groundwater Protection Code for Petrol Stations and Other Fuel Dispensing Facilities Involving Underground Storage Tank 2001
Groundwater Protection Code for the Use of Solvents

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EMERGENCY HOTLINE

0800 80 70 60

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



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**ENVIRONMENT
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POLLUTION PREVENTION PAYS

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