

Guidance for Pollution Prevention

Safe Storage of Drums and Intermediate Bulk Containers (IBCs): GPP 26

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This guidance has been produced by Natural Resources Wales (NRW), the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA). For Northern Ireland, Scotland and Wales, this document provides guidance on environmental legislation. These guidelines are not endorsed by the Environment Agency as regulatory guidance in England.

For guidance on environmental regulations in England go to www.gov.uk.

To find the relevant regulations visit www.legislation.gov.uk.

Guidance for Pollution Prevention (GPP) documents are based on relevant legislation and reflect current good practice. Following this guidance will help you manage the environmental responsibilities to prevent pollution and comply with the law.

If you cause pollution or allow it to occur, you will be committing a criminal offence. Following these guidelines will help you reduce the likelihood of a pollution incident. If one does occur contact the environmental regulator immediately on the relevant incident hotline number: In Northern Ireland and Scotland call **0800 80 70 60**, in Wales call **0300 065 3000**.

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Section 1: Introduction

1.1 Who is this guidance for?

These guidelines will help you if you're responsible for storing and handling drums and Intermediate Bulk Containers (IBCs). They're written for site operators of industrial and commercial premises.

Following the guidance will help you reduce the risk of pollution from your site to land, surface waters and groundwater.

1.2 What is covered

The guidelines give information and advice about storing liquids, for example oil and chemicals, in:

- small containers
- drums, up to 205 litres
- IBCs up to 1000 litres

This guidance applies only where these containers aren't directly connected to any part of a manufacturing system, either as an input or output. This guidance also applies to containers that are slightly different sizes from those mentioned, and it applies to any number of containers.

These guidelines refer to environmental legislation you '**must**' follow in Northern Ireland, Scotland and Wales, including details for oil storage. Where the recommendations aren't a legal requirement, they are written as things you "**should**" do.

The guidance doesn't cover:

- containers above 1000 litres
- bulk storage in fixed tanks or mobile bowlers
- underground oil or chemical storage
- fire prevention and control
- air quality, although following the guidelines will help to protect air quality
- dangerous substances stored under Control of Major Accident Hazards (COMAH) Regulations
- regulations about transporting goods
- health and safety requirements, for example labelling and confined spaces.

Guidance for these activities is available in references 2, 3, 4 and 5 and from the Health and Safety Executive (HSE) and HSENI, Fire and Rescue Services (FRS) and your local council.

1.3 Legal requirements

Formal approval may be required when carrying out certain works or activities. It can take up to four months to process an application for formal approval, it is therefore important you contact the environmental regulator early on in the project.

There are laws that protect land, water, air, wildlife and people from pollution. If you cause pollution you will be committing an offence. Penalties include fines, imprisonment, Fixed Penalty Notices, stopwork notices or equivalent, and having to pay clean-up costs, along with damage to your reputation.

The Legal requirements are different throughout the United Kingdom (UK) (England, Northern Ireland, Scotland and Wales). If you are located in **Scotland** or **Northern Ireland**, you can find information on your legal environmental obligations by visiting the NetRegs website. In **Wales** guidance on regulations can be found on the Natural Resources Wales (NRW) and Welsh Government website (see **Further information**).

1.4 Pollution Prevention

It is important to understand how activities could affect the environment and cause pollution. Think about what pollution linkages there are (see Figure 1.).

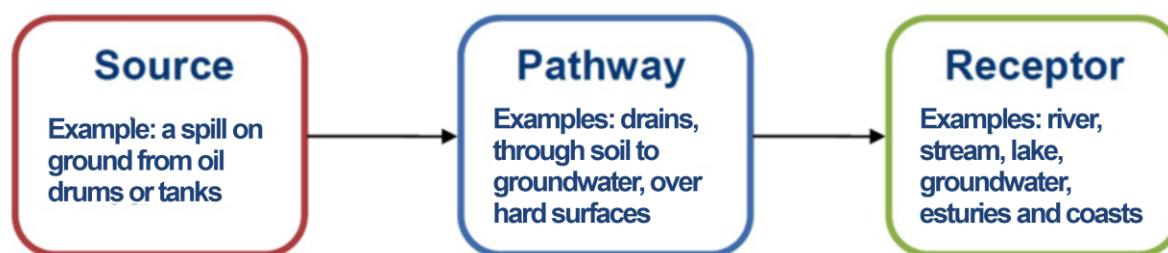


Figure 1: Example of a pollution linkage using the source > pathway > receptor model.

NOTE: Groundwater is both a pathway and a receptor.

The site and activities will only cause a risk to the environment or people if you have all three parts of the pollutant linkage present i.e. a source, a pathway and a receptor. You should put in place measures to prevent or minimise or mitigate the effects of any risks and thereby break the pollutant linkages between these three. By doing this, you can identify how to prevent or reduce the likelihood of pollution and reduce the impact of any risks that may occur. It is important that you fully understand the local drainage network as pollution is often caused by mistaking a surface water drain for a foul/combined sewer. Contact your local water company for advice on this.

If you cause pollution you will be responsible for the clean-up cost. This can be expensive and time consuming particularly if groundwater has become contaminated. There may be additional costs associated with recovering the cost for the environmental regulator's response (in line with the Polluter Pays Principle), you may receive fines through the criminal courts or civil claims and you may experience a reputational cost i.e. loss of future work.

Following this Guidance for Pollution Prevention will help you reduce the likelihood of an incident. However, if one does occur contact the environmental regulator immediately on the relevant Incident Hotline number. A rapid response to incidents will help to minimise the environmental impact and could reduce the overall costs.

For more information refer to **Section 10**.

Section 2: Why use this guideline?

Businesses routinely store and move a variety of potentially polluting materials in containers, ranging in capacity from a few litres up to drums of 205 litres (45 gallon) and 1000 litre IBCs. You must store these materials in accordance with:

- appropriate legislation
- HSE requirements
- any other relevant guidelines such as those issued by the FRS.

3.1 What are the problems?

Containers of oil, chemicals or other potentially polluting materials can pollute surface water and groundwater. Pollution can be caused by spills from:

- incorrect storage and handling of containers
- accidental leaks
- vandalism
- overfilling or failure of storage structures
- run-off from fires and contaminated firewater
- incorrect or damaged drainage systems.

These are all potential hazards. There are many substances that aren't harmful to humans but that will cause pollution if they're spilt, for example liquid food and drinks, detergents and paper sludges.

3.2 How a spill can escape from your site

Pollutants can escape into the environment from your site, or where a spill happens off site, via different routes or pathways:

- through the surface water drainage system
- direct run-off into a watercourse
- through the soil or via soakaways, drains or damaged surfaces to groundwater
- through the foul sewer system, where pollutants:
 - may be discharged through storm sewage overflows
 - could pass through the sewage treatment works
 - may reduce the performance of the works so it can't treat sewage properly.

See **Section 1.4** for details on pollution linkages.

Good management practices will help to prevent pollution incidents. You need to make sure your staff and contractors use the management practices you have in place. If they understand the potential links between the hazard sources, pathways and receptors and how this can affect your business, they will understand why your processes are important.

Section 3: Safe drum and IBC storage key points

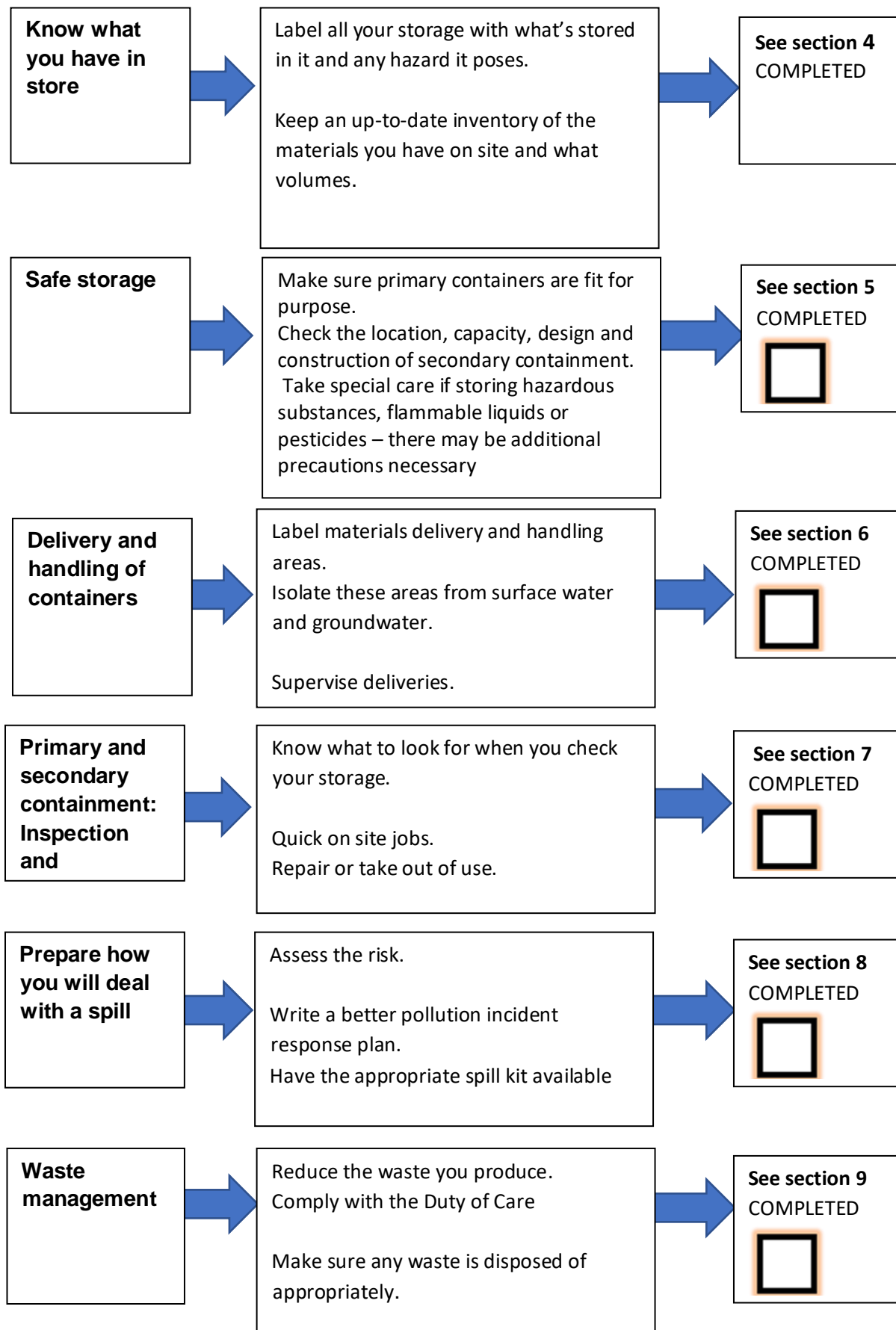


Figure 3: Activities that can cause silt pollution (courtesy NetRegs 2016)

Section 4: Storage basics

To control the pollution risk from your site you need to know what and how much you're storing and be able to identify it quickly. You should only store materials that you are allowed to. Make sure you keep Material Safety Data Sheets for all the substances you keep on site.

We recommend you:

- clearly label individual containers with details of what they contain and any hazard they pose
- label storage areas with details of what can be stored in them
- fit warning signs, for example appropriate hazardous substances symbols (pictograms), at access points to dedicated stores
- store different materials separately so they can't mix if there's a leak (it's easier to deal with a spill of just one material than a mixture); this may be a legal requirement for some substances – see information from the HSE in Reference 6
- only keep the minimum working quantity of materials on site
- protect storage from extremes in weather whenever possible, for example sunlight, frost
- keep storage areas away, or isolated, from on site drainage, surface waters and groundwater and vehicle routes.

Make sure your product inventory is kept up-to-date and contains detailed information including:

- product types
- trade names
- UN numbers
- Material Safety Data Sheets
- Control of Substances Hazardous to Health (COSHH) Regulations data
- volumes
- location on site or within the store.

There may be other legal requirements for your storage, for example health and safety requirements. It's your responsibility to find out what applies to your storage and make sure you comply.

Other sections of this guidance cover:

- safe storage
- primary and secondary containment
- special storage requirements for liquids with hazardous properties
- delivery and maintenance procedures
- how to deal with a spill.

Section 5: Safe storage

5.1 Primary container

Make sure your primary containers have sufficient strength and structural integrity so they don't leak or burst under normal use. For example, rusty or dented containers are unlikely to be fit for use.

If your containers have a packaging certificate and are marked as complying with the United Nations (UN) inspection would normally be considered structurally sound. However, they should still be examined before use in case they have been damaged since their last inspection.

Repair or remove any damaged or unsuitable containers as soon as they are identified.

Unless legal requirements say otherwise, you should store primary containers inside a building, under cover or protected from the elements by another method. Steel drums stored outside in a vertical position are at risk of rusting from rainwater, while plastic containers can deteriorate over time and become brittle.

Don't store drums directly on top of one another because this greatly increases the risk of drums splitting under pressure or falling over.

If you're reusing containers, it's your responsibility to make sure what it's made from is suitable for the product you're planning to put into it, and that it has a life expectancy suitable for your needs. You should also make sure that any residues from the previous contents are unlikely to contaminate or react with the new contents. Remember to re-label used containers with current content. **See section 10: Waste Management**, for information about how you can dispose of any residues legally and safely.

5.2 Secondary containment systems

It's good practice (and a legal requirement for all containers with greater than 200 litres capacity holding oil or its products, including waste oil) to store all drums or IBCs on, or in, an impermeable secondary containment system. Secondary containment systems are designed to catch leaks or spills from the primary container while it is in use.

Make sure all your drums and IBCs are stored in a suitable secondary containment system. This will significantly reduce the risk of causing pollution. It will also allow you to recover or treat any spilled material, and will help to stop spilled product escaping. The secondary containment must not have any drainage.

5.2.1 Secondary containment options include:

Drip Tray

- A simple tray underneath storage containers to collect leaks and spills.
- For use with a single drum or a few small containers, in storage or at point of use.
- If you store oil on a drip tray in drums, the tray must be able to contain at least 25% of the total drum volume, or 110% of the largest one, whichever is the greatest.



Dispensing sump trolley

- Proprietary system for transporting and then dispensing a single drum or small container.
- Not suitable for use with IBCs due to their weight when full.
- Good when products need to be stored close to their point of use.



Sump pallets

- Pallets to hold containers with a sump to contain spills
- Suitable for use with small containers: two, four or eight drums, or four IBCs.
- Containers kept off the ground with adequate containment. (at least 25% of the total drum volume or 110% of the largest one)
-



Decking

- Decking units allow containers of any size to stand off the ground on a grid with containment underneath.
- Can be added to cover the floor area required, either when in use or in a dedicated store.



Bunded dispensing station

- Designed to allow drums and IBCs to be stored safely and collect and drips or spills while in use.
- Provide secondary containment volume, but with extra space to allow small containers to be filled over the secondary containment



Racking –external storage

- Similar to drum racking but for use outside.
- Made with a roof and doors to keep rainwater off the drums and IBCs and out of the integrated sump.
- Drums stored horizontally should be turned to 3 or 9 o'clock as above.



Drum racking – indoor storage

- Racks for storing drums, either vertically or horizontally. They may have containment that allows you to dispense from the drums.
- Off the ground storage with integral bunding or can be used in dedicated stores.



- Drums stored horizontally would ideally be turned so both outlets are horizontal (i.e. are at 3 and 9 o'clock) so less product will be lost if there is a leak.

Dedicated external store

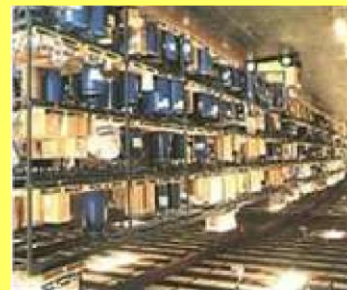
- Purpose built or adapted external store with design features such as ramped access.
- Useful for storage of large quantities of materials, particularly where ventilation is important.
- Roofing prevents rainwater accumulating and storage should be off the ground.



- Make sure the store is secure. Security fencing will prevent vandalism and prevent drums being ejected in case of fire.

Dedicated internal store

- Purpose built or adapted storage area.
- Can be built to suit any size of container or mix of containers.
- Ideal where significant storage capacity is needed.
- Containment can be in the form of stepped or ramped access, kerbing, bunded walls, sloping floors or the use of one of the systems described above.



Dedicated external store

- Purpose built or adapted external store with design features such as ramped access.
- Useful for storage of large quantities of materials, particularly where ventilation is important.
- Roofing prevents rainwater accumulating and storage should be off the ground.



- Make sure the store is secure. Security fencing will prevent vandalism and prevent drums being ejected in case of fire.

Photos are provided by Denios UK, Fentex and Environment Agency staff.

Different manufacturers or suppliers will provide storage options that are made from different materials, look different and have additional or different features from the examples shown. The types of storage shown here give examples of what is available, they are not intended as an endorsement of any of these products.

5.2.2 Where is the best place to put your secondary containment and storage?

You should carefully consider where you put the store of each material you have on site.

The best option is to store your drums and IBCs indoors. This might not be possible due to health and safety concerns but storage indoors reduces the risk of vandalism. It prevents the build up of rainwater in the bund or drip trays which could become contaminated by any drips, leaks or spills. It will also reduce the risk from extremes of temperature that can affect the integrity of the storage containers.

We recommend that you don't have storage areas or containers within 10 metres of surface water or 50 metres of a borehole, well or spring.

You should also consider how close your storage areas are to:

- surface water drains;
- sensitive groundwater areas, for example Source and Specified Water Protection Zones in **Wales**;
- flood plains, including high tidal water levels;
- designated vehicle movement areas;
- ignition sources;
- people who could be affected by odours, fire or spills, for example schools and houses;
- other storage areas that contain materials that would react with those in this storage area.

You can check if there are sensitive groundwater areas or Source Protection Zones near your site by checking your environmental regulator's website or by contacting them. See Reference 7 for guidance about storing materials in sensitive groundwater areas.

You can check if your site is at risk of flooding by using the flood maps. See Reference 8 for links to flood maps for your area. If you have no option other than to store materials close to these areas, you may need more protection than the minimum levels of secondary containment described in this PPG.

You might, for example, need bollards to protect storage areas from vehicle traffic. You may also need to protect your storage and secondary containment from rising flood waters.

If you're in any doubt about the type of secondary containment you need, or where it can be placed, ask your environmental regulator for advice. Contact details are at the end of this document.

5.2.3 How big does your containment need to be?

The amount of liquid your secondary containment facilities can hold should be based on the maximum volume of product you may be storing at any one time. If you have a fixed fire-fighting system you will need additional capacity for the quantity of firefighting media likely to be used.

Container Type	Minimum secondary containment volume
Single Drum	Secondary containment for drum storage can be provided by a drip tray with at least 25% of the volume of the drum.
Multiple Drums	Secondary containment for drum storage can be provided by a drip tray with at least 25% of the total volume of the drums stored or 110% of the largest drum, whichever is the greatest.
Single IBC	Secondary containment with at least 110% of the container volume. (You can't use a drip tray with just 25% of the volume if you store oil in an IBC)
Multiple IBCs	Secondary containment with either a minimum of 25% of the total volume stored, or 110% of the volume of the largest container, whichever is the greater.

Where containers are stored inside a building, you should make sure that the secondary containment takes into account the risk from the materials stored. For example, agrochemicals such as pesticides should have extra capacity in the secondary containment; preferably between 110% and 185% of the maximum storage capacity. See section 5.3 for more information.

With large external stores, 25% containment capacity may result in low containment walls, which are quickly overwhelmed by rainfall or fire-fighting agents. We recommend an additional 100 mm height on the walls to account for this.

5.2.4 What should secondary containment systems be made from?

You can use secondary containment systems that are prefabricated from:

- steel,
- plastic
- fibre glass
- concrete or masonry with suitable lining to make sure it's impermeable and can withstand the material stored.
- kerbs, ramps or sloped floors.

The type of system you use must be able to contain the liquids you store and should be suitable for the needs of your site. All containment walls and floors must be impermeable and resistant to attack from the materials stored. Make sure the system you put in is designed for long term storage, not just for temporary or emergency storage. There can be no drainage outlet from your secondary containment.

Masonry and some constructed concrete structures aren't impermeable unless they're treated with a product designed to resist the materials you plan to store. Concrete and masonry bunds shouldn't have a damp-proof course.

Floor joints should be avoided but, if they're required for constructional purposes, take great care that the joint sealing results in a complete and lasting liquid-proof seal and is resistant to heat, for example during a fire. Sealants must be able to withstand attack from any material likely to be stored.

A sloping floor together with a sump cast in the base slab will ease the recovery of spilled product and any accumulated rainwater. Ensure that gradients are within the safe working limits recommended by the manufacturer for any forklift trucks used.

5.2.5 What else do you need to think about?

The secondary containment you choose has to work for you and your processes. When you're designing your storage you should take account of other aspects.

Containment:

- site environmental sensitivity, including underlying groundwater;
- nature of the product, e.g. toxicity, persistence;
- impermeability and resistance to attack from materials stored;
- fixed fire-fighting systems and fire water containment;
- fire resistance, including the effects of fire on the containment system;
- effect of extremes in weather, freezing or high temperatures.

Safety:

- signage;
- ventilation at high and low level (above secondary containment);
- manual handling;
- the need to segregate products, especially if they are incompatible and would react if mixed.

Fire prevention and control:

- separation from ignition sources, process areas, occupied buildings and site boundaries;
- distance between stores, to stop fire spreading, consult your local FRS for advice;
- fire detection systems;
- water supply for fire fighting;
- access for fire fighting vehicles and personnel;
- discuss fire fighting options with your local FRS.

Security:

- protection from vandalism, unauthorised use and arson.

Relevant legislation

- For example if storing certain hazardous substances - see **Section 5.3**

Services such as electricity supply should be carried over the secondary containment system rather than penetrating it. Mains water supply (except water-based fixed fire-fighting systems and safety shower/eye wash stations) shouldn't enter the containment area of the store. Make sure there is no drainage discharge from the secondary containment. All above are a legal requirement in **Wales** for all containers over 200 litres capacity.

External walls next to any racked storage should be strong enough to withstand the force of the rack, or its contents, falling against them. In clad buildings where racking extends above any containment system, provision should be made to prevent a high level leak running down between the cladding and the containment wall. Containers shouldn't be stored at such a height or so close to the walls that they might fall outside the containment system or that liquid 'jetting' from a leak would reach over the wall.

5.3 Special storage requirements (COMAH, COSHH, Pesticides and flammables)

If the quantity of hazardous substances you store exceeds the thresholds set in the Control of Major Accident Hazards (COMAH) Regulations, the requirements of those regulations will supersede this guidance. You can find guidance on the requirements of these regulations on the HSE website. This will also give information on the separation distances to minimise risk from fire and reactions. See Reference 9: COMAH.

Because of the risks associated with particular materials you may need additional pollution prevention measures such as:

When drums and IBCs are being handled, particularly during dispensing, there's the potential for minor leaks, emissions or spills. Under the Control of Substances Hazardous to Health (COSHH) Regulations, employers are required to carry out a risk assessment and to identify the steps needed to reduce any identified risk to their employees' health.

You can find information from the HSE on the requirements of COSHH in Reference 10.

5.3.2 Flammable liquids

A flammable liquid is defined as a liquid with a flashpoint of 60°C or below. If you store and use flammable liquids (including highly flammable liquids and petroleum products) you must comply with health and safety legislation.

You can find information from the HSE on the storage of flammable liquids in containers in Reference 6.

You can find information from the HSE on the safe use, handling and dispensing of flammable liquids in Reference 6.

5.3.3 Pesticides

You can only have or store pesticides that have been approved for use in the UK and for which the approval is still valid. The HSE provide a guidance note on pesticide storage for farmers and other professional users. See Reference 11

If you store more than 200 litres (200 kg) of pesticides for sale or supply, you must follow the statutory guidance in the 'Yellow code of practice', reference 11, and have the necessary store keeper training and certification.

The store and its management arrangements must be supervised by someone holding a certificate of competence and it must be inspected annually, as a minimum, by an independent expert. A store registration scheme is operated by BASIS (Registration) Limited. See useful websites.

If you're storing pesticides for professional uses, for example

- farming
- horticulture
- forestry
- amenity area use
- industrial land and sports grounds

you must follow the statutory guidance in the codes of practice for plant protection products, Reference 11.

Further guidance on pesticide storage is available - see **Section 12**, other useful sources of information.

5.3.4 Timber treatments

Timber treatments are classed as pesticides so are subject to the same requirements. See References 11 and 12.

5.3.5 Solvent storage

Make sure that any organic, and particularly chlorinated, solvents are stored safely. Even a small spill of these materials can seriously pollute groundwater making it unusable for drinking water supply and toxic to aquatic life. Groundwater is an important source of public and private drinking water, which once contaminated, is very difficult and expensive to clean up.

You should store all solvents according to the guidelines in Reference 2, making sure you have appropriate secondary containment and regularly check your storage for needed maintenance and leaks.

5.3.6 Oil Storage

If you are storing oil (or fuels) in drums or IBCs, you must comply with the relevant regulations on oil storage. You can find more information on oil storage in Reference 2 and 5, and in the useful websites.

5.3.7 Adblue

Adblue contains urea and ammonia. Ammonia is corrosive to metals so can damage tanks and pipework. It is important that solutions such as Adblue are stored in containers that are designed and manufactured from materials that are suitable for use with urea. The same applies to all storage ancillary equipment, such as valves, dispensing nozzles and pipework.

- Use containers that are designed for use with Adblue
- Isolate your storage from surface water drains (note that oil separators will not remove Adblue)
- Have secondary containment e.g. bunds or drip trays
- Use a dispensing nozzle with an automatic shutoff that can't be left open.

See Section 12: Useful sources of information for the industry guide to storage and use of AdBlue

Section 6: Delivery and handling

Many pollution incidents involving drums and IBCs happen during the delivery and handling of containers, for example forklift damage or spills.

You should designate and clearly mark delivery, handling and transfer or decanting areas. Make sure the area is impermeable and isolated from the surface water drainage system, possibly with the use of ramps, sumps or drainage shut-off valves. This will minimise the risk of your storage causing pollution if an accident happens.

If you're unable to isolate the area from surface water drains, consider placing reusable drain covers over the drains during every delivery to prevent pollution if there is an accident. Think about putting a roof or canopy over the area to simplify the management of surface water in these areas. In **Scotland** you must not allow any runoff from oil or chemical storage, handling or delivery areas to enter the surface water drainage system from facilities constructed after 1 April 2007. There are specific legal requirements in **Wales** related to preventing spills during the delivery and draw off of oil and its products.

Make sure everyone knows the correct procedures for these activities. Make someone responsible for supervising all deliveries and transfer processes. They should know where spill kits are kept and they should know how to use them. See **Section 8**.

Only allow forklift trucks to be used by trained operators and supervise deliveries (loading and unloading). Any damaged containers or spills should be reported immediately for action (see **Sections 7 and 8**). Use drum carriers, drum taps, funnels and containers with lids to minimise the risk of spillage during handling and transfer.

Unless you are decanting into a container with a wide neck, use a funnel to reduce the chance of material spilling. The funnel should be stored within the secondary containment, or in a secure area, when it's not in use so drips can't cause pollution. Make sure all taps are closed after the transfer of materials is completed and that there are no leaks from valves or seals.

Section 7: Inspection and maintenance

Drums and IBCs will last longer if they're protected from direct sunlight and rainfall, both of which can degrade the primary container and secondary containment.

You should inspect your primary containers and secondary containment facilities regularly, and check them at least weekly, unless the material you're storing means you need to inspect it more frequently. You should make sure that:

- they aren't damaged or leaking, for example no corrosion, deformities, cracks or stains from the material stored;
- rainwater that has collected in the bund or drip tray has been removed
- the bund or drip tray is clean and clear of product and debris;
- product label signs and hazard information are undamaged;
- maximum storage volumes and stack heights haven't been exceeded and products are stored in the correct area;
- all taps not in use are closed and any pipework attached to the container is completely inside the secondary containment (again a legal requirement in Wales for oil and its products).

In extremes of weather conditions, for example prolonged hot weather, heavy rainfall or freezing temperatures, you may need to make inspections more frequently.

Check the secondary containment. If it has accumulated liquid, such as rainwater, you should check that it is uncontaminated and not the result of a leak. Contained water shows that the secondary containment is intact, however it will also reduce the capacity of the containment. Any liquid should be pumped or bailed out in a controlled way. If it is contaminated it may need to be disposed of as hazardous/special waste. See **Section 10**

Any defects or damage to the container or the secondary containment should be repaired as soon as possible. Make sure that the repairs are done in a way that ensures the container or secondary containment remain impermeable to the product being stored. If it can't be repaired then the container or containment system should be taken out of use immediately.

Keep a record of inspections, cleaning and maintenance.

Section 8: Dealing with spills

8.1 Prevent spills

Assess the risks on your site and put in place procedures to prevent them. Following the guidance in sections 4-8 of this document will help you to minimize the risk of spills. Safe, secure storage, careful deliveries and transfers as well as good training for staff are essential for preventing pollution.

References 13 and 14 have guidance on containment, emergency planning and incident response.

8.2 Minimise environmental harm from spills

Have a drainage plan

You should draw up a detailed site drainage plan, this will help you prevent pollution in the event of a spill or a fire. This should be part of your site's pollution incident response plan (PIRP). Reference 13: GPP 22 provides guidance on developing a PIRP as well as providing a template to follow.

Train staff

Staff training is important in preventing pollution; this could be from a spill or from a fire. Training should include when and how to use a spill kit and the appropriate PPE for the materials stored on site. Staff training records should be kept and appropriate refresher training provided.

Spill kits

A spill kit should contain products that are suitable for dealing with the products that you have on site and the products that you transport. It should contain:

- Leak sealing putty
- Over drums
- Drain seals
- Oil/chemical sorbents
- PPE

You should have spill kits situated close to storage areas where they may be needed, and well away from these areas in case of a major spill or fire that prevents access.

Make sure staff are trained in the use of the spill kits, and if they are used to contain a spill on site, make sure the products are replaced for the next time they are needed.

If you have a spill and aren't sure what to do, or if you can't take action to stop it reaching the environment, call us on our hotline, **0800 80 70 60** or **03000 65 3000** in Wales.

To contain leaks or spills:

- If you use a spill response contractor, make sure they are suitably qualified, or are a member of a trade body.
- **Have a 'quarantine area'** where leaking containers can be placed safely.
- **Have a leak-sealing kit** available at delivery and handling areas, or other high-risk locations, to temporarily seal leaking containers until they can be put

somewhere safe or taken out of use. You may be able to use temporary secondary containment, for example for small portable containers or portable tanks.

- **Carry a spill kit** on all vehicles transporting drums and IBCs, with PPE, appropriate to the goods being transported. Depending on what you're transporting, this may be a legal requirement. In some circumstances, this may mean a vehicle should have a dual purpose spill kit for the material being carried, the fuel tank and any fuel additives.
- If you're storing large numbers of drums or IBCs **ask your local FRS for advice** about distance between storage sections, road widths and fire prevention.
- **Never wash away spilt material** or use detergents or dispersants unless you've planned for this, know your drainage system can contain the spill, have consulted your environmental regulator and included it in your pollution incident response plan.
- **Replenish all equipment and kits after use.**

Contain any spillage following the pollution control hierarchy in Reference 14 - GPP 22: Dealing with spills. In high-risk areas, consider the use of cut-off or isolation valves in the drainage system.

All contained spills and sorbents or pollution control equipment used to control the spill should be stored safely until they can be disposed of. Take care to ensure all spill granules are scraped up for disposal, both on and off site. Contaminated sorbents or equipment may need to be disposed of as hazardous/special waste. See **Section 10**.

Section 9: Waste Management

If you produce, import or arrange for waste to be disposed of, you have a legal responsibility to make sure it's stored, transported, kept, treated and/or disposed of without harming the environment. This is called your Duty of Care.

Under the Duty of Care legislation (see Reference 15) you have a legal duty to make sure any waste you produce does not escape from your control. Waste must be transferred to an authorised, registered or exempt waste carrier or appropriately authorised waste site. It must be accompanied by a full description of the waste and a Waste Transfer Note and be disposed of lawfully. You should check on the proposed destination and ensure the site is authorised to receive the waste.

In **Scotland** and **Northern Ireland** you must separate dry recyclable materials such as paper, card, glass, metals and plastics. These must be collected separately from other wastes and managed in such a manner as to allow high quality recycling.

Some types of waste, called 'hazardous wastes' or in Scotland, 'special wastes', such as oily wastes, acids, solvents and solvent-based products are harmful to human health or to the environment. When dealing with hazardous/special wastes:

- you must store, handle and dispose of these differently to non-hazardous wastes
- you must not mix different types of hazardous or special wastes together
- if you mix hazardous or special wastes with non-hazardous wastes then you must consider everything as hazardous or special waste
- the movement of hazardous/special wastes must be accompanied by a consignment note. Everyone involved in the transfer of the waste, including your environmental regulator, must keep copies of the consignment notes for proof of legal disposal.

In **Wales** any premises that produces less than 500 kg of hazardous waste in a 12-month period is exempt from registering. However hazardous waste moved from an exempt premises must still be covered by a Hazardous Waste Consignment Note. The unique Consignment Note code will show that the waste has come from an exempt premises.

For guidance on the handling, storage and consignment of hazardous/special waste see Reference 17.

9.1 Storing waste

Waste containers must always be clearly labelled with their contents. You should store all waste and waste containers in designated areas which are isolated from surface water drains or direct discharge to the environment.

Your waste must be stored securely; all reasonable steps must be taken to ensure that waste cannot escape and members of the public are unable to gain access to it.

The area where waste is collected and stored should be able to safely contain any spill or leak. Empty containers shouldn't be allowed to accumulate, but should be collected by your supplier (where possible), dealt with using suitable on-site facilities or removed as soon as possible by a registered waste carrier to a permitted or licensed facility.

It's a good idea to remove wastes often enough so they don't cause odour, pest or vermin problems and to reduce the risk of fire. For further information on the storage and disposal of waste oils. See reference 16 - GPP 8: Safe storage and disposal of waste oils.

In Scotland and Northern Ireland, if you store waste temporarily on your site, you must meet the requirements of a Paragraph 41 exemption from Waste Management Licensing. The exemption doesn't have a limit on the volume of non hazardous waste you can store. But if you store hazardous/special waste in Scotland or Northern Ireland, there are specified maximum total volume limits for different cases and you mustn't store it for longer than 12 months. If you exceed these limits you will require a waste management licence. You don't have to register the exemption with your environmental regulator. There are different availability of exemptions in Wales, see the NRW website for details.

Section 10: Incident response

Incident Hotline Numbers:

In **Scotland, Northern Ireland and England** call:

0800 80 70 60

(24 hour service)

In **Wales** call:

0300 065 3000

(24 hour service;
Press 1 for Welsh, 2 for English)

You should immediately report any environmental incidents by calling the Incident Hotline for your country.

Incidents can include spillages (e.g. from oils and chemicals), contaminated surface water run-off, flooding, riverbed disturbance, damage to underground services, damage to habitats and poor waste disposal and storage. If in doubt, report it.

You should produce an Incident Response Plan as part of the environmental impact management of your work. Include the following:

- site risks
- list of key external and internal contacts (include your environmental regulator, Local Authority, Fire Service)
- reporting procedures
- site plan including drainage and location of storage/refuelling areas
- list of stored materials
- details of local environmental sensitivities e.g. abstractors, high amenity areas and fish farms
- location of spill equipment
- procedures for spill containment and remediation

Train your staff and contractors in the use of spill equipment and how to manage and dispose of waste materials legally.

If you are using oils and chemicals in close proximity to the water environment, store a suitable spill kit or absorbent materials nearby. Provide appropriate temporary storage for any oils and chemicals. Contain all spillages using absorbents such as sand, soil or commercially available booms or pads and notify the environmental regulator immediately, using the Incident Hotline numbers above.

Glossary

Environmentally sensitive area	Examples include: Site of Special Scientific Interest (SSSI), Area of Special Scientific Interest (ASSI), Special Area of Conservation (SAC), Special Protection Area (SPA), National Nature Reserve (NNR), Sites of international conservation importance – Ramsar sites, areas of Outstanding Natural Beauty (AONBs), National Scenic Areas (NASs).
Fixed fire fighting system	Fire fighting apparatus installed at a site, not fire extinguishers placed around a site. Designed specifically for a site and the materials present to make sure a fire is put out quickly and effectively. Fire fighting agent is chosen for the product and equipment on the site.
Groundwater	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil. The saturation zone is where all the cracks in the rock and all the spaces between the grains of rock and within the soil are filled with water, these are known as aquifers.
Hazardous waste, Special waste in Scotland	Wastes, specified in the European Waste Catalogue, which may be harmful to human health or the environment. This includes, but isn't limited to: <ul style="list-style-type: none">•Paint (oil and solvent based)•Oil and oily sludges, e.g. engine oil•Other chemical wastes such as disinfectants, solvents, insecticides and pesticides Garage waste such as used oil filters or fuel filters, aerosols, antifreeze and brake fluid, lead acid batteries, contaminated rags.
Primary container	The container the material is stored in, for example a tank, intermediate bulk container or drum. It's the first line of defence and must be fit for purpose.
Secondary containment	This is a bund, or a drip tray. Secondary containment systems must be maintained and be big enough to contain a spill from the associated container/s.
Spill kit	This is a collection of pollution control equipment held in one place and specific to the materials you have on site. Proprietary oil and/or chemical spill kits are available; check with your pollution control equipment supplier that the contents are suitable for your needs before buying these. We recommend storing a spill kit near to where it may be needed, for example next to storage containers or delivery areas, and in an alternative location in case it isn't safe to reach some of the spill kits during an incident.
Surface water	This includes rivers, streams, canals, burns, ditches (including ones that are temporarily dry), lakes, lochs, loughs, reservoirs, ponds, estuaries and coastal waters, up to three miles offshore

Waste

Defined by the Waste Framework Directive as “...any substance or object which the holder discards or intends or is required to discard...”

Waste is also a resource, albeit one which may present risks to the environment and human health and so must be managed appropriately.

References

Reference 1

HSE: Chemical storage and delivery

HSE: Chemical warehousing – the storage of packaged dangerous substances

<http://www.hse.gov.uk/pUbns/priced/hsg71.pdf>

HSE: Chemical manufacture and storage <https://www.hse.gov.uk/chemicals/manufacture.htm>

HSE: Storage of flammable liquids in containers <http://www.hse.gov.uk/pUbns/priced/hsg51.pdf>

HSE: COMAH CA Delivery Guides: [Strategic Topic Delivery Guides](#). Especially: secondary and tertiary containment; emergency planning.

<http://www.hse.gov.uk/comah/cahttp://www.hse.gov.uk/comah/ca-guides.htm - strategicguides.htm#strategic>

Reference 2

Regulations for Oil storage:

GPP 2: Above ground oil storage <http://www.netregs.org.uk/media/1475/gpp-2-pdf-janhttp://www.netregs.org.uk/media/1475/gpp-2-pdf-jan-2018.pdf2018.pdf>

In Northern Ireland: DAERA: Oil Storage <https://www.daera-ni.gov.uk/articles/oil-storage>

In Scotland: SEPA: Oil Storage in Scotland

<https://www.sepa.org.uk/regulations/water/pollution-control/oil-storage-in-scotland/>

In Wales: Control of Pollution (Oil Storage) (Wales) Regulations

www.legislation.gov.uk/wsi/2016/359/contents/made

and a related FAQ document: <https://naturalresources.wales/media/681287/osr-wales-faq-rt-pc-final-draft-v2https://naturalresources.wales/media/681287/osr-wales-faq-rt-pc-final-draft-v2-01022017.pdf01022017.pdf>

Reference 3

Fire and rescue services:

Northern Ireland: <https://www.nifrs.org/>

Scotland: <http://www.firescotland.gov.uk/>

Wales: <https://gov.wales/find-your-local-fire-and-rescue-service>

Reference 4

Transporting dangerous goods

GOV.UK: <https://www.gov.uk/guidance/moving-dangerous-goods>

Reference 5

HSE COMAH CA Procedures and Delivery guidance

<http://www.hse.gov.uk/comah/cahttp://www.hse.gov.uk/comah/ca-guides.htmguides.htm>

Reference 6

Flammable liquids

Health and Safety Executive: HSG51 Storage of flammable liquids in containers. ISBN 978 0 7176 1471 4 <http://www.hse.gov.uk/pUbns/priced/hsg51.pdf>

Health and Safety Executive: HSG140 Safe use and handling of flammable liquids. ISBN 978 0 7176 0967 3 <http://www.hse.gov.uk/pUbns/priced/hsg140.pdf>

Reference 7

Groundwater protection:

Groundwater Protection Codes for Wales – <https://gov.wales/water>

For Northern Ireland, Groundwater: <https://www.daera-ni.gov.uk/articles/groundwater#toc-4>

For Scotland, SEPA Groundwater protection policy for Scotland, especially section F: The storage and handling of chemicals.

<https://www.sepa.org.uk/media/34371/groundwater-protection-policy-for-scotland-v3-november-2009.pdf>

Reference 8

Flood maps

Northern Ireland: <https://www.infrastructure-ni.gov.uk/topics/rivers-and-flooding/flood-maps-ni>

Scotland: <https://www.sepa.org.uk/environment/water/flooding/flood-maps/>

Wales: <https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en>

Reference 9

COMAH

HSE COMAH guidance: <http://www.hse.gov.uk/comah/guidance.htm>

Reference 10 COSHH:

HSE Great Britain: <http://www.hse.gov.uk/coshh/>

HSE Northern Ireland: <https://www.hseni.gov.uk/articles/coshh>

Reference 11

Pesticides

Defra Code of practice for suppliers of pesticides to agriculture, horticulture and forestry, The "Yellow Code". Product code PB 3529. On HSE website

http://www.hse.gov.uk/pesticides/resources/Y/yellow_code.pdf

HSE Guidance on storing pesticides for farmers and other professional users

<http://www.hse.gov.uk/pubns/ais16.pdf>

Codes of practice for the use of plant protection products.

Wales, <https://gov.wales/pesticides-code-practice>

Scotland: Code of practice for using plant protection products

<https://www.gov.scot/publications/pesticides-code-practice-using-plant-protection-products-scotland/>

For Northern Ireland - <https://www.daera-ni.gov.uk/sites/default/files/cop-plant-protection-final.pdf>

For Scotland – specific rules for pesticide storage can be found in General Binding Rule 23 (i)

and (j) within the Controlled Activities Regulations Practical Guide (pp 24, 25)

https://www.sepa.org.uk/media/34761/car_a_practical_guide.pdf

Reference 12

HSE: Industrial timber treatment plants <https://www.hse.gov.uk/woodworking/industrial-timber-treatment-plants.htm>

Reference 13

PIRP

GPP 22: Pollution incident response planning

<https://www.netregs.org.uk/media/1643/gpp-22-dealing-with-spills.pdf>

Reference 14

Incident response

GPP 21: Incident response - Dealing with spills

<https://www.netregs.org.uk/media/1436/gpp-21-final.pdf>

Reference 15

Duty of care for waste

In Northern Ireland: Duty of care: A code of practice <https://www.daera-ni.gov.uk/publications/waste-management-duty-care-code-practice>

In Scotland: Duty of care: A code of practice <https://www.gov.scot/Publications/2012/10/2631>

In Wales – Duty of Care -a code of practice <https://naturalresources.wales/guidance-and-advice/environmental-topics/waste-management/waste-duty-of-care/?lang=en>

Reference 16

Safe storage and disposal of used oils

GPP 8: Safe storage and disposal of used oils

<http://www.netregs.org.uk/media/1435/gpp8-v3-swni.pdf>

Reference 17 Hazardous/Special Waste

In Scotland and Northern Ireland see NetRegs: Hazardous/Special Waste guidance pages

<https://www.netregs.org.uk/environmental-topics/waste/hazardous-special-waste/>

In Wales: Register as a producer of Hazardous Waste

<https://naturalresources.wales/permits-and-permissions/waste-permitting/register-or-renew-as-a-hazardous-waste-producer/?lang=en>

In Wales: see Hazardous Waste guidance

<https://naturalresources.wales/guidance-and-advice/environmental-topics/waste-management/completing-hazardous-waste-consignment-notes/?lang=en>

Website List

HSE: COSHH Essentials: <http://www.hse.gov.uk/coshh/essentials/index.htm>

The Department for Business Innovation and Skills: www.bis.gov.uk Government on-line business advice and support service:

- For Northern Ireland – NIBusinessInfo <https://www.nibusinessinfo.co.uk/>
- For Scotland - Business Gateway_ For Scotland – Find Business Support <https://findbusinesssupport.gov.scot/>
- For Wales – Business Wales: <https://businesswales.gov.wales/>

NetRegs – www.NetRegs.org.uk

Health and Safety Executive: <http://www.hse.gov.uk/>

The Oil Care Campaign: <http://oilcare.org.uk/>

Oil Storage Regulations, Regulators guidance.

- For Northern Ireland: <https://www.daera-ni.gov.uk/publications/control-pollution-oilhttps://www.daera-ni.gov.uk/publications/control-pollution-oil-storage-regulations-northern-ireland-2010-guidancestorage-regulations-northern-ireland-2010-guidance>
- For Scotland, <https://www.sepa.org.uk/regulations/water/pollution-control/oilhttps://www.sepa.org.uk/regulations/water/pollution-control/oil-storage-in-scotland/storage-in-scotland/>
- For Wales: <https://gov.wales/sites/default/files/publications/2019-06/oil-storage-regulations.pdf>
- Pesticides:
- BASIS (Registration) Limited: <http://www.basis-reg.com/>

HSE Chemicals Regulation Directorate, for pesticides information: <http://www.hse.gov.uk/pesticides/>

Adblue:

- Federation of Petrol Suppliers (FPS) and Petrol Retailers Association (PRA): Safe storage and use of emission reduction solutions - eg AdBlue

http://www.ukpra.co.uk/assets/ERS%20guide%20with%20FPS%20and%20PRA_Final_1.pdf

- Safe storage and use of emission reduction solutions

Petrol Retailers Association:

<https://www.esfrs.org/EasySiteWeb/GatewayLink.aspx?allId=7556>

Waste minimisation information available from:

- In Northern Ireland: Wrap Northern Ireland: http://www.wrapni.org.uk/?gclid=EAlaIqobChMlIpeNts-U3AIVEhttp://www.wrapni.org.uk/?gclid=EAlaIqobChMlIpeNts-U3AIVE-AbCh3NigKQEAAAYASAAEgL1-PD_BwEAbCh3NigKQEAAAYASAAEgL1-PD_BwE
- In Scotland: Zero Waste Scotland <http://www.zerowastescotland.org.uk/>
- In Wales: WRAP Cymru <https://wrapcymru.org.uk/>

Dee Water Protection Zone (Wales)

NRW website <https://naturalresourceswales.gov.uk/guidance-and-advice/environmental-topics/water-management-and-quality/water-quality/dee-water-protection-zone/?lang=en>

Gov.uk website <https://www.gov.uk/government/publications/consent-for-a-controlled-activity-within-the-river-dee-water-protection-zone>

Welsh Government
www.gov.Wales

Department of Agriculture, Environment and Rural Affairs Northern Ireland
www.daera-ni.gov.uk

Sustainable Drainage System guidance for Wales
<https://gov.Wales/sustainable-drainage-systems-suds-guidance>

Health and Safety Executive (HSE) - Using Storing and Disposing of Plant Protection Products
www.hse.gov.uk/pesticides/topics/using-pesticides.htm

GB Non-Native Species Secretariat
www.nonnativespecies.org

CEDaR Online Recording for INNS.
www2.habitats.org.uk/records/ISI

Scottish Natural Heritage (SNH) www.snh.gov.uk

Chemicals Regulation Directorate (HSE)
www.hse.gov.uk/crd

Further information

For information about environmental compliance, or to report inconsistencies or inaccuracies in this guidance, visit www.netregs.org.uk.

You can view guidance on environmental regulations online at www.netregs.org.uk (for businesses in Scotland and Northern Ireland) and at <http://naturalresources.Wales> (for businesses in Wales).

This guidance is issued by the Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency (NIEA) and Natural Resources Wales (NRW).

This document is available at www.netregs.org.uk/environmental-topics/pollution-preventionguidelines-ppgs-and-replacement-series/.

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Useful contacts

Incident/Pollution hotline: Northern Ireland, Scotland and England

0800 80 70 60 (24-hour service)

Emergency hotline - Wales

0300 065 3000 (24-hour service; press 1 for Welsh, 2 for English)

Floodline – Wales, Scotland and England

0845 988 1188

Flooding incident line - Northern Ireland

0300 200 0100

Natural Resources Wales

www.naturalresourcesWales.gov.uk

Head Office (Ty Cambria)
29 Newport Road
Cardiff
CF24 0TP

Tel: 0300 065 3000 (Mon – Fri,
9am- 5pm)

enquiries@naturalresourcesWales.gov.uk

Scottish Environment Protection Agency

www.sepa.org.uk

Corporate Office
Strathallan House
The Castle Business Park
Stirling
FK9 4TZ

Tel: 03000 99 66 99

www.sepa.org.uk/contact

Northern Ireland Environment Agency

www.daera-ni.gov.uk

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Klondyke Building
Cromac Avenue
Gasworks Business Park
Malone Lower
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