

Pollution Prevention Guidelines: PPG1

July 2013

Understanding Your Environmental Responsibilities - Good Environmental Practices

Pollution Prevention Guidelines (PPGs) are based on relevant legislation and good practice. Following the guidelines will help you manage your environmental responsibilities to prevent pollution and comply with the law.

PPGs are produced by the Environment Agency, Scottish Environment Protection Agency and Northern Ireland Environment Agency, referred to as 'we' or 'us'. In this guidance, where we say 'must', this is a legal requirement; where we say 'should', this is recommended good practice.

We recommend you regularly check and review what you do to make sure you're up to date with legal requirements and good practice. If you cause pollution or allow it to occur, you may be committing a criminal offence.

PPG1 explains your environmental responsibilities and where to find the information you need to put the basics into action. Read the other PPGs in the series for more detailed information, or contact us for advice.

Essential checklist

| Action | See section | ✓ |
|--|-------------|---|
| Understand why you need to take action to protect the environment and comply with the law, and how it could benefit you. | 1 | |
| Know your drains: make a drainage plan of your premises, identifying your drains and where they go to. Get permission for discharges where required. | 2 | |
| Understand how your treatment facilities work - such as septic tanks, oil separators - and maintain them properly. | 2 | |
| Store oils, chemicals and other materials in suitable containers, in safe locations, and handle them to avoid spills. | 3 | |
| Install secondary containment for stored materials where possible, or where you are required to do so by law. | 3 | |
| Reduce, reuse and recycle where possible. Plan your activities carefully to help you do this and avoid waste. | 4 | |
| Use only legal and appropriate waste carriers to take your waste away. Know what happens to your waste | 4 | |
| Make an emergency plan in case things go wrong. Test it regularly. | 5 | |
| Know if you are at risk of fire or flood. Ask for expert advice to help you reduce your risk and minimise the consequences. | 5 | |

1. Understanding your environmental responsibilities

1.1. What's in it for you?

Legal compliance: If you or your business causes pollution or don't comply with a permit we've issued, we may take action against you. Anyone involved could be prosecuted. You may get a fine or go to prison or you may have to pay to put things right.

Save money: If you cause pollution, your insurance costs may increase, you may have to pay compensation and/or to put things right. The costs of any legal action can be high. You may lose materials or assets which you already paid for and you may affect your business's competitiveness by damaging your business reputation.

Manage risk: Businesses which manage the risks to their success are often better prepared to deal efficiently with problems when they happen. Managing risks gives you peace of mind and maximises your chances of running a successful business.

Enhance your reputation: Legal compliance and implementing good practice will improve your reputation with customers and your neighbours. Remember, it is a criminal offence to cause pollution.

Remember, a little effort can go a long way to protect you and your business from the serious consequences of pollution.

1.2. Why do we need to protect our environment?

Pollution occurs when substances released to water, land or to air have a harmful effect on our environment. It can affect our drinking water supplies, people's health, business activities, wildlife and habitats, and our enjoyment and use of the environment. You might not see it, but you can pollute it.

Pollution can happen accidentally or deliberately, and can come from a single place (point source) or from lots of different, possibly unknown and unconnected sources (diffuse sources).

Many different substances can cause pollution – common examples include fuels and oils, chemicals, sewage, farm manure, slurry, detergents, milk and fire-fighting run-off.

You should understand your premises and how your activities could affect the environment and cause pollution. Think about what pollution linkages you have (see Figure 1).



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

Your site and activities will only cause harm to the environment or people if you have all of these present: a source, a pathway and a receptor. You should put in place measures to break the links or weaken the links. By doing this, you can identify how to prevent or reduce the likelihood of pollution and reduce the impact of any problems which may occur.

2. Your drains: making sure dirty water leaves your premises properly

2.1. What activities do you need to think about?

Almost all premises produce dirty water which could cause pollution if it enters rivers, streams, ditches or groundwater. Dirty water comes from kitchens, bathrooms, toilet and laundry facilities, vehicle washing, and rainwater run-off from dirty areas of your premises and liquid wastes or trade effluents from your business activities.

Many premises also store liquid materials such as chemicals, fuels and oils, milk or fertilisers which can spill, leak or release their contents if there is a fire or flood. You also should drain rainwater away from your premises efficiently to reduce your flood risk.

If you're using any of these kinds of facilities, storing or moving any materials, or making changes to your premises, you should understand your drains and know where they go.

2.2. Why is it important?

Drains are common pathways for dirty water to enter the environment and cause pollution, through wrong connections, spills and leaks, fires and poor or inadequate maintenance. To reduce the risk of pollution, you should know where your drains are, where they go and correct any problems you may find, such as wrongly-connected pipes.

You must not allow dirty water to enter surface water drains or storm drains, watercourses or groundwater.

If you make changes to your premises, such as building an extension or changing activities, you should understand your drainage systems so you can manage these changes safely, cost-effectively and without causing pollution.

You must get permission for any dirty water (such as trade effluents) discharges to sewer, from your sewerage company - or to the environment from us.

2.3. Where do your drains go?

Everyone should know about the drainage system. Contractors and visitors may also need this information.

We recommend all premises create a drainage plan. Your drainage plan will help you plan where to carry out activities safely and help you to maintain and inspect your drains. Make sure the plan is available when needed.

You should talk to your sewerage company, landlord or a drainage consultant to help you work out what drains and facilities you have.

'Separate systems' have two drains, one for dirty water (foul drain) which goes for treatment and one for clean water (surface water or storm drain) which goes directly to a ditch, stream or river (see Figure 2). 'Combined systems' have one drain carrying dirty and clean water for treatment. You may have one or a combination of systems at your premises and you may have highway drains too.

You must only allow clean water, such as rainfall, to enter surface water, storm or highway drains.

Identify the type of drainage system you have, the route and direction of your drains, including their destination when they leave your premises. Colour-code the manholes to help identify them easily, using red for foul drains and blue for clean water drains. We recommend that your drainage plan should identify any nearby waterways, particularly if any of your drains discharge to them.

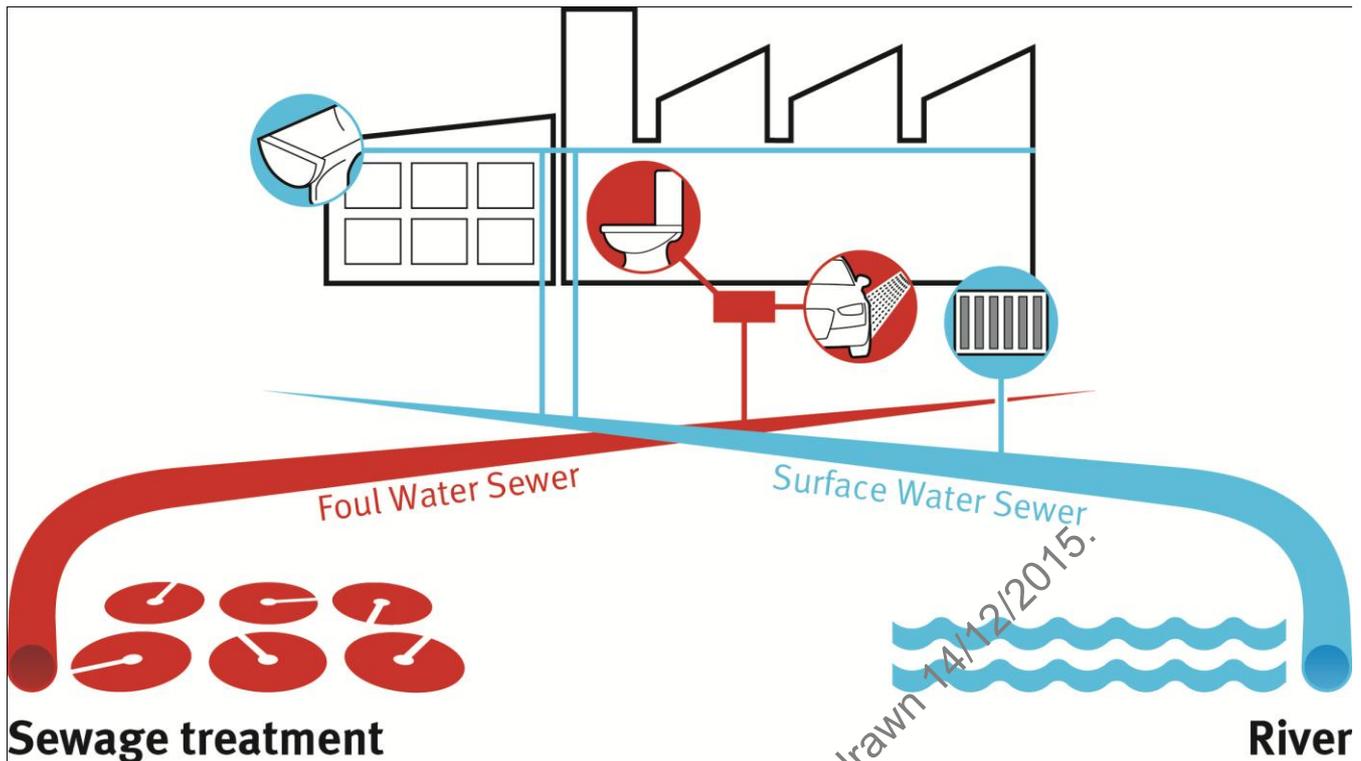


Figure 2: Examples of clean and dirty water sources at a premises and sewers to which they should drain

You may have treatment facilities on your premises, such as septic tanks or package plants which treat sewage or interceptors – also known as separators – which separate oil from water. If you don't operate and maintain these systems properly they are likely to pollute the environment. Consider whether you should find out more about your drainage system and treatment facilities - how they work, maintenance, how to correct any problems and if you need to make improvements.

Mark treatment facilities on a plan of your premises, along with the location of any access manholes, shut-off valves.

If you wash and clean vehicles on your premises, you must consider what happens to the dirty water run-off. Remember, oil separators will not work if detergents enter them.

2.4. What next?

Available from us (see 'Further Sources of Information' section):

- Is your site right? A simple 10 point checklist
- Getting your site right – Pollution Prevention Pays
- PPG3: Use and design of oil separators in surface water drainage systems
- PPG4: Treatment and disposal of sewage where there is no mains drainage
- PPG5: Works and maintenance near water
- PPG13: Vehicle Washing & Cleaning
- Find out if your drains are connected properly: <http://www.connectright.org.uk>

3. How do I store and use oils, chemicals and other materials safely?

3.1. What activities do you need to think about?

You may store, handle and use a wide range of materials at your premises. Some of these materials may not seem potentially polluting but can be very damaging to the environment.

You must also consider what visitors and contractors may deliver, collect, store or handle whilst they are on your premises, even if you don't own these materials.

3.2. Why is this important?

Oils and chemicals are obvious sources of potential environmental harm, but other materials such as food and drink products and detergents can cause significant pollution. You should reduce the likelihood of pollution happening by considering what hazards are associated with the materials you have and where you store and how you handle them.

Remember, you have already paid for these materials and if you lose a quantity of them, you are losing money, before you start to clean-up. You also want to avoid any health and safety problems which could affect people on your premises or people nearby.

3.3. What do you store and how do you store it?

Identify what you store and understand the risks from those materials. Consider the product information you get from your suppliers and take advice from waste management companies and others.

Make sure you are storing materials – including wastes – in the safest place and mark their locations on a plan: use your drainage plan to help you. Consider how, when and why you use the materials and whether you could make improvements.

Avoid storing materials near open drains, on bare ground, near to watercourses, soakaways and other sensitive areas. You should store all potentially polluting substances on leak-free (impermeable) surfaces. Remember, leaks and spills to ground could pollute groundwater, which is expensive and difficult to clean up, and may affect drinking water supplies. We also recommend you store materials where they're protected from damage by collision and extremes of weather, including flooding.

3.4. How suitable are your storage areas and containers?

Store all potentially polluting materials in suitable, labelled containers in dedicated storage areas which are designed, constructed and maintained properly. Inspect your storage areas and containers regularly to make sure they are in good condition, including being free of cracks and leaks.

Consider if there are any legal requirements which may apply to the material you are storing - such as oil - and if you must store any materials separately for safety or fire risk reasons.

Make sure you think about how to keep your materials secure on your premises to reduce the risk of accidental damage, vandalism, arson or theft.

3.5. Can you contain leaks and spills?

You can't completely avoid spills and leaks, so put in place measures to reduce their likelihood and severity. You should be able to catch minor spills, leaks or overflows from your containers or stores and be able to clean them up easily and safely.

Consider installing and maintaining secondary containment, such as a bund wall or using banded pallets. It's good practice for your secondary containment to be able to hold more than your tank or container is able to hold, commonly called 110% containment. In some cases this is a legal requirement, such as when storing oils. Secondary containment gives you time to either correct or minimise the problem and to get help.

You should inspect and maintain your secondary containment so it's still effective, such as sealing any cracks or holes, making sure any walls or floors are rendered impermeable, and safely removing any rainwater from the secondary containment.

You and others on your premises should know where to find your spill kits, understand how to use them properly and understand how to store and use materials safely. Label your spill kits and check their contents regularly.

If you have a spill or any pollution incident, report it to us immediately on 0800 807060 (24 hours, 7 days a week) – we can advise on what to do and help to inform others.

3.6. Safe delivery and handling

Delivery and handling of materials are risky activities which you may regularly carry out on your premises.

You should have procedures for safe collection, delivery and handling for everyone to follow. We recommend supervising all deliveries and collections to make sure your procedures are being followed.

Think about how you could minimise moving materials - this could save you time and money.

3.7. Where next?

Available from us (see 'Further Sources of Information' section):

- Is your site right? A simple 10 point checklist
- Getting your site right – Pollution Prevention Pays
- PPG2 Above ground oil storage tanks
- PPG7 Refuelling facilities
- PPG8 Safe storage and disposal of used oils
- PPG13 Vehicle washing and cleaning
- PPG22 Dealing with spills
- PPG26 Drums and intermediate bulk containers

Netregs (Northern Ireland and Scotland):

- Oil storage guidelines:
www.netregs.org.uk/library_of_topics/materials__equipment/hazardous/oil_storage.aspx

Environment Agency (England)

- Oil storage regulations: www.environment-agency.gov.uk/osr

4. How do I throw less away and dispose of waste correctly?

4.1. What activities do you need to think about?

Everything you buy and use on your premises might end up as waste, from food to packaging, to off-cuts. What wastes are you generating at each stage of your activities? How do you manage these wastes, including storage, transport, treatment or disposal?

4.2. Why is this important?

Everyone generates waste. Poorly managed wastes can pollute the environment, for example through illegal dumping or leaking into the ground or watercourses.

You have a responsibility – called the duty of care - to ensure you produce, store, transport and dispose of waste without harming the environment. This includes waste you produce directly and indirectly, such as waste produced by a contractor doing work on your behalf.

4.3. What waste do you generate?

Waste is any substance or object which you discard, intend to discard or are required to discard. Wastes which are most hazardous to the environment or human health, such as solvents, asbestos and oils must be managed differently from other wastes. You must understand what types of waste you produce and how you must manage them by law.

4.4. Minimising the amount of waste you create

Consider what you buy, and think how you could use less, how you could get the most out of what you do use and where you can, re-use, recycle or recover more. Disposal should always be your last option (see Figure 3). The best way to do this is to reduce the amount of waste you produce and to store different sorts of waste separately to make it easier to recycle.

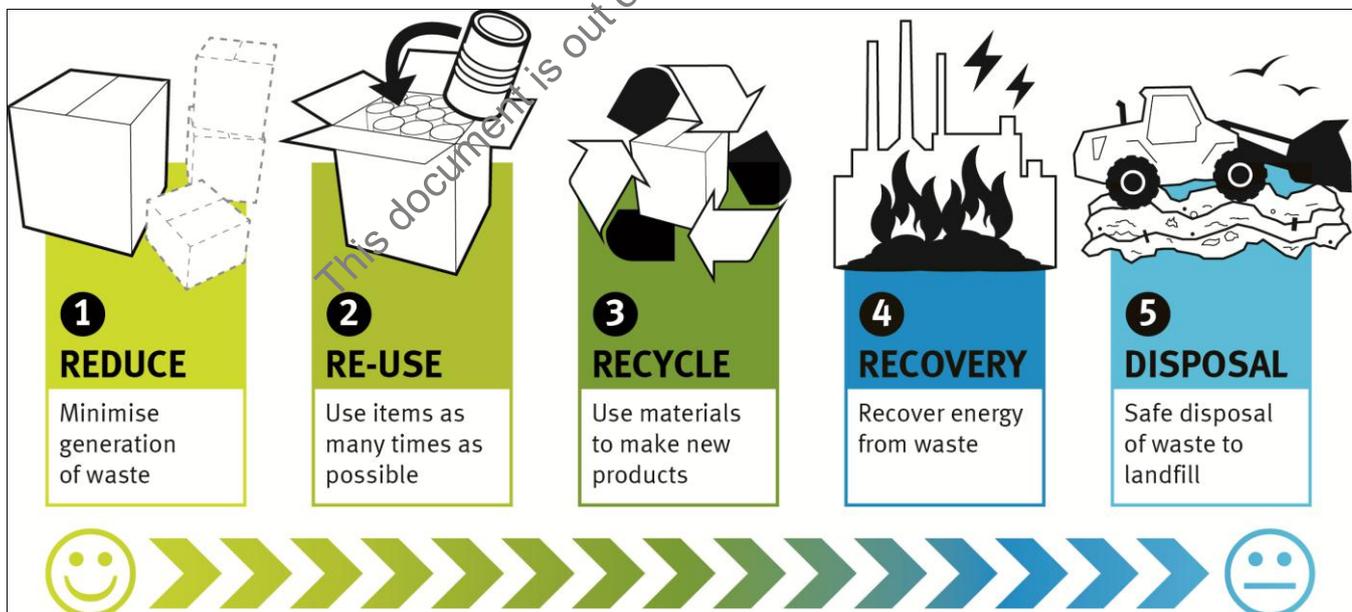


Figure 3: 'Waste hierarchy' - waste management options in the order of their environmental impact

In England and Wales, you must declare on your waste paperwork that you've considered the waste hierarchy before you dispose of waste. Disposal is very expensive – remember, by throwing something away, you are paying for it twice, once when you buy it and again to dispose of it.

4.5. How do you store and handle your waste?

Store your wastes separately where possible to make reuse and recycling easier. For example, separate paper from plastic wastes. Use a designated clearly-labelled storage area. You must store your waste securely to prevent it blowing about or leaking, and to prevent access by people or animals. Only mix wastes where it is safe and legal to do so.

In Scotland, 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. Segregated materials must not be landfilled after 1 January 2014.

Some types of waste, called 'hazardous wastes', or, in Scotland, 'special wastes', are very harmful to human health or to the environment. 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.

Consider the security of your premises too - any waste dumped on your property becomes your responsibility to remove, and it will cost you money.

4.6. How do you dispose of your waste?

You must only use a registered waste carrier to take your waste away. Check on our websites or by contacting us, before you buy their services. Also, check that they will take your waste to a site permitted to deal with your type of waste. Remember, not all waste management sites can take all types of waste.

You can transport your own waste to a permitted waste site, but you may need to register as a waste carrier or as a professional collector or transporter of waste, depending on where you are in the United Kingdom, what you are carrying and how often you do it. Check with us.

You must keep records of waste you have transferred to another person for up to 3 years. Hazardous /special wastes require different types of paperwork.

4.7. Where next?

Available from us (see 'Further Sources of Information' section):

- Is your site right? A simple 10 point checklist
- Getting your site right – Pollution Prevention Pays

Environment Agency website (for England)

- Understanding your duty of care: www.environment-agency.gov.uk/dutyofcare
- Find out about waste carriers registrations: www.environment-agency.gov.uk/business/sectors/wastecarriers
- Find out about waste, including hazardous waste: www.environment-agency.gov.uk/waste

Netregs website (for Northern Ireland and Scotland):

- Waste guidelines (includes duty of care, hazardous/special waste, waste carriers) www.netregs.org.uk/library_of_topics/waste.aspx

NIEA website (for Northern Ireland)

- Waste web pages: <http://www.doeni.gov.uk/niea/waste-home.htm>

5. What do I do when things go wrong or if there is an emergency?

5.1. What activities do you need to think about?

Sometimes things go wrong. The better prepared you are for a crisis – however small – the better you'll be able to deal with it.

Think about your premises and consider what could go wrong and why. Consider fires, flooding, accidents, vandalism, leaks and spills and how these may occur.

5.2. Why is this important?

Even minor problems can have a large impact on you, your premises and your ability to carry on as normal with your daily activities. Dealing with the unknown is always more difficult, time-consuming and stressful than putting into action a plan you have prepared and practiced.

Remember, you are responsible for any contractors working on your behalf, so you must make sure you give them clear work instructions and supervise them appropriately.

5.3. Planning and training for problems and emergencies

The best way for you to cope when problems and emergencies arise is to plan. Well managed premises are less likely to have problems in the first place.

We recommend that you create and implement an incident response plan. You may even have a legal responsibility to make a plan. It should include procedures to deal with problems and emergencies and a copy of your drainage plan. You should ensure everyone on your premises - including visitors - understand what they need to do. Keep a copy of your plan off site too, so you can always access it.

Check whether your premises are at risk from flooding – if you are, make a flood plan and sign up for flood warnings. Consider asking your local Fire & Rescue Service to visit and offer you advice on fire prevention and safety. They can help you to prepare a fire response plan for your premises.

Make time to regularly train people on correct procedures and responding to incidents. Review and update your procedures to keep them relevant. Do this each time you make changes to your premises.

You should provide protective clothing and pollution control equipment which is appropriate to your premises and the potential risks on your site. Make sure you keep this equipment in good condition, replaced when necessary and that people know where it is and how to use it.

If you have a pollution incident, report it to us immediately on 0800 807060 (24 hours, 7 days a week) – we can advise on what to do and help to inform others.

5.4. Where next?

Available from us (see 'Further Sources of Information' section):

- Is your site right? A simple 10 point checklist
- Getting your site right – Pollution Prevention Pays
- PPG18: Managing fire water and major spillages
- PPG21: Incident response planning
- PPG22: Dealing with Spills
- Am I at risk of flooding? Call Floodline 0845 988 1188. In England and Wales, check online at www.environment-agency.gov.uk/flood. For Scotland go to

www.sepa.org.uk/flooding.aspx. You can sign up for free to get flood warnings sent directly to your phone.

Further sources of information

Pollution Prevention Guidance: <http://www.environment-agency.gov.uk/ppg> (England) or http://netregs.org.uk/library_of_topics/pollution_prevention_guides.aspx (Northern Ireland and Scotland)

Environmental guidance for businesses in Northern Ireland and Scotland: <http://netregs.org.uk>

Full text of all United Kingdom legislation: <http://www.legislation.gov.uk>

Central government services, advice and information: <http://www.gov.uk>

Find your local council: <https://www.gov.uk/find-your-local-council>

WRAP, advice on recycling and waste: <http://www.wrap.org.uk> or Zero Waste Scotland <http://www.zerowastescotland.org.uk/> (Scotland)

Find your local sewerage provider: <http://www.water.org.uk/home>

Check your plumbing <http://www.connectright.org.uk>

We produced this guidance in accordance with the Code of Practice on Guidance on Regulation. We welcome any questions, comments, or suggestions about how we could improve our guidance.

Would you like to find out more about us, or the environment?

Then call us on

03708 506 506 (Mon - Fri, 8am - 6pm)

Incident hotline

0800 807060 (24 hours, 7 days a week)

Floodline

0845 988 1188 (24 hour service) or Type Talk 0845 602 6340

Environment Agency

www.environment-agency.gov.uk

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Scottish Environment Protection Agency

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Northern Ireland Environment Agency

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