Environment Alliance – working together

Pollution Prevention Guidelines

Incident Response Planning: PPG 21

These guidelines are produced jointly by the Environment Agency for England and Wales, the Northern Ireland Environment Agency and the Scottish Environment Protection Agency (SEPA), referred to here as 'we' or 'us'. They have been written in accordance with the Code of Practice on Guidance on Regulation 2008 from the Department for Enterprise and Regulatory Reform (BERR) – **reference 1**.

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

If you cause pollution or allow it to occur, you may be committing a criminal offence. Should this happen, our response will be guided by our enforcement and prosecution policy.

1.0   Introduction

These guidelines set out best practice for producing an incident response plan to deal with an environmental incident on your site. Following such a plan will help you to prevent or reduce environmental damage if such an incident occurs. The guidelines set out:
- why you need a plan;
- what information you should include;
- who should be involved in its production;
- what supporting procedures you may need to implement the plan;
- what the plan should look like by providing **a template** (at the end of these guidelines).

They are aimed at those sites which do not have a statutory duty to prepare such plans. They may be used to supplement guidance for sites controlled under the Control of Major Accident Hazards Regulations 1999 (COMAH) – **reference 2,** and the Environmental Permitting Regulations 2007 **reference 3** under these regulations there is a statutory obligation to have an incident response plan in place.

As well as using these guidelines to produce your plan, you should seek further advice from your regulator on the specific requirements for each site operated under these regulations. In England and Wales please contact our National Customer Contact Centre on 08708 506 506. In Scotland and Northern Ireland, please contact the regulators at the websites provided. The NetRegs web site also provides guidance on the legal requirements of these regulations in all UK countries. A list of websites is provided at the end of these guidelines.

1.1   Who should read these guidelines?

This guidance is for:
- site operators of industrial and commercial premises to help them produce an incident response plan;
- other organisations, authorities and individuals whose site or operations pose a potential risk to the environment and who should have a incident response plan;
- the Fire and Rescue Service and others who may be involved in the production of, and/or have an interest in, such plans for example, the Health and Safety Executive, Maritime and Coastguard Agency, Government Decontamination Service, public health officials and insurers/underwriters.

The next section tells you how to assess the risk your site may pose to the environment and what level of plan you need to help reduce that risk.

1.2   Why have a plan?

Many industrial and commercial sites have the potential to cause significant environmental harm which could threaten water supplies, public health and wild life in the event of an environmental incident for example fire, explosion or spillage. These include sites that:
- store, use or process toxic and/or polluting substances such as chemicals, oils, food or beverages
- contain hazardous materials such as asbestos within the fabric of the building;
- contain or store materials which would give rise to hazardous products in the event of a fire, for example, toxic smoke from burning plastic.

Causes of environmental incidents on your site include:
- delivery and use of materials;
- overfilling containment vessels;
- plant or equipment failure;
- containment failure;
- fires, explosions or failure to contain fire fighting water;
- wrong connections of sewers and pipes;
- incompatible materials coming in contact;
- uncontrolled reactions;
- discharge of partially-treated or raw effluent;
- vandalism;
- flooding of part or all of your site.

Any of these incidents could affect:
- drainage systems, surface waters, aquatic ecosystems, groundwater and soil;
- air quality by producing toxic fumes and airborne pollutants which may damage human health, wild and domestic animals and ecosystems;
- thermal radiation which can harm people and the environment.

The impacts may be immediate and long lasting; you may be responsible for the costs of cleanup. This can be expensive particularly if you contaminate groundwater. There may be additional costs too associated with our incident response and/or fines or costs through the criminal and/or civil courts. Your company's business reputation may suffer.

To identify the risk your site poses to the environment we recommend you undertake a simple risk screening assessment. Our PPG 28 – Controlled Burn guidance (**reference 4**) provides detailed advice on how to do this and applies to all sites, not just those where controlled burn is relevant.

Where this assessment indicates that your site could cause an environment incident you can reduce the likelihood of such an incident occurring by following our Pollution Prevention Guidelines.

Our Pollution Prevention Pays – Getting Your Site Right guidance (reference 6) and PPG1 – A General Guide to Pollution Prevention **(reference 7)** will provide you with guidance on general pollution prevention and correct storage of materials.

Whilst our PPG 18 – Managing fire water and major spillages (**reference 5**) will help you identify the equipment and techniques you can use to mitigate the impact of any fire or major spillage on your site.

But you can't completely remove the risk of an incident occurring which could cause pollution. We therefore recommend that all sites produce an incident response plan. It doesn't have to be complicated it could be very simple as the level of risk should influence the size complexity and details of your plan.

Your plan may just cover how you deal with environmental incidents or be part of a more comprehensive incident response plan for the site for example COMAH on-site and off-site plans for example COMAH emergency plans.

The incident response plan may support the work of Local Resilience Forums in England and Wales, in Scotland, the Strategic Co-ordinating Group and in Northern Ireland the Northern Ireland Civil Contingencies Framework and the development of their local risk registers which are a statutory obligation under the Civil Contingencies Act 2004 **reference 8** and at the UK Resilience web site in the list.

The information in the plan may also help the emergency responders produce their own response plan for your site, for example Fire and Rescue Service Operational Incident Response Plans or 7(2)(d) – **reference 9** and in the web site list.

2.0   The planning cycle

The planning cycle is the continuous process of assessing the risk of your site and preparing for incidents. The process is supported by procedures that make sure your plan works (validation), that you review and revise it regularly and that your staff and contractors are prepared and trained. The key elements of the planning cycle are:
• preparing the plan;
• activating and responding;
• plan testing/training;
• reviewing and training.

The following diagram shows how each stage of the planning cycle links to and supports the next one. This ensures that you keep the plan up to date, it remains effective and that you communicate it to your staff and contractors who show that they understand it.

Diagram 1 shows the seven stage of the Planning Cycle as a process of continuous improvement.

Diagram 1 – The Planning Cycle
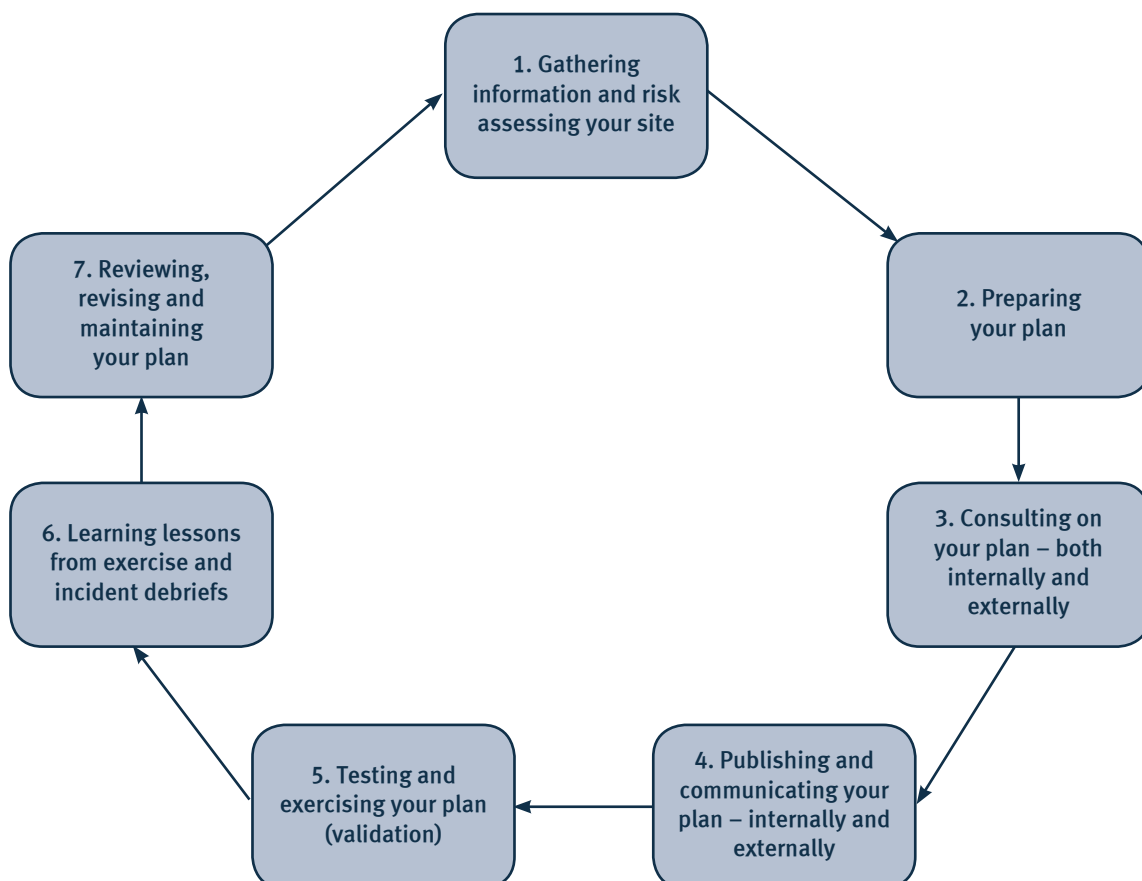
2.1 Preparation

The following sections suggest the type of information you'll need to complete your plan. The suggested template for your incident response plan can be found at the end of these guidelines.

2.1a Cover page

This should give:
- details of the site: name, full postal address, national grid reference/location and any contact details;
- a summary of the main business activities carried out on site;
- objectives of the plan;
- the date the plan was signed off, by whom and the version number;
- the person who's responsible for its review, distribution and implementation;
- a distribution list of your staff and external organisations that hold copies.

2.1b External and internal contact lists

The external contacts list should contain 24-hour contact details for all those organisations or companies that may need to be involved during or after an incident. For example:
- emergency services;
- your environmental regulator;
- local authority;
- local water company/authority;
- the Health and Safety Executive;
- local health care providers/Health Protection Agency;
- specialist clean-up contractors;
- sources of specialist advice e.g. UK Government Decontamination Service, the National Chemicals Emergency Centre (see website list);
- chemical suppliers and manufacturers.

The internal contacts list will reflect the organisational structure of your company and the response procedures you have in place. The names/positions on the template are suggestions only.

If your site isn't staffed outside office hours, you must identify contact details for key holders.

2.1c Site chemical, product and waste inventory

You should maintain an up-to-date record of all substances stored on-site, together with an indication of the maximum quantity likely to be stored. Attach product data sheets and COSHH – **reference 10** assessments for any substances posing a risk to people and/or the environment.

You should mark on the site plan all stores, bulk storage vessels, drums or containers that you use for storing oils, chemicals or other potentially polluting materials. If you regularly store oils or chemicals or hold them away from fixed installations or storage areas in any significant quantity (for example, in production areas), you should indicate their whereabouts on the site plan. Our PPGs **references 11 and 12** provide advice on safe storage. If you have chemical process lines, include these on the plan. Make sure that all emergency responders can access this inventory and, if possible, distribute it as part of your emergency planning process.

2.1d Pollution prevention equipment inventory

Record the equipment and materials you have on site to deal with pollution incidents – **references 5 and 6**. For example:
- absorbents;
- drain mats/covers;
- pipe blockers;
- booms;
- pumps;
- over drums.

If any equipment requires special training to use it, include the contact details of staff members who are trained in its use.

2.1e   Site plan

This should be a clear diagram of the site showing layout and access details, along with a schematic representation of the site drainage arrangements. Features that you should show are:
- the layout of buildings;
- access routes and meeting points for emergency services;
- the location of process areas and any on-site treatment facilities for trade effluent or domestic sewage;
- areas or facilities you use to store raw materials, products and wastes (include details of tank sizes and products stored);
- bunded areas, with details of products stored and estimated retention capacity;
- location of hydrants, 'fireboxes' and pollution prevention equipment and materials;
- any watercourse, spring, borehole or well located within or near the site;
- areas of porous or unmade ground;
- site drainage – foul, surface and trade effluent drainage systems including features such as:
  - inspection points to detect pollution;
  - oil separators/interceptors – **reference 13** PPG3;
  - firewater/spillage containment systems;
  - balancing tanks;
  - pollution control devices (shut-off valves/penstocks fitted in drains);
  - sacrificial containment areas such as car parks;
  - other areas suitable for portable storage tanks, for blocking drains and temporary storage of firewater.

You should provide a brief description of how all facilities operate and make sure they're clearly labelled above ground (see section 2.2)

2.1f   How to produce a drainage plan

You should use the standard/conventional features of drainage plans. This will make them easier for other organisations to use and for your own staff to understand.

- Use red for foul sewers.
- Use blue for surface water sewers, watercourses and soakaways.
- Use the same convention for drain covers and grips.
- Number the drain covers to help identify them.
- Distinguish between separate or combined system (Red C = Combined).
- Mark the location, depth and construction details of any soakaways or depth for boreholes and wells.
- Indicate the direction of flow for all sewers.
- Identify the sewage treatment works/sewage pumping station to which your site connects.
- Identify all surface water outfalls from the site.
- Identify suitable points for installing pollution control booms or for constructing a dam either at the outfalls or on the receiving watercourse.
- Consider installing permanent boom anchor points at a suitable location, taking into account possible flow conditions.

Whilst you are drawing up your drainage plan, use the opportunity to check for any mis-connections from your site, for example, a foul sewer that is linked or connected into a watercourse. This is illegal and may also lead you to respond incorrectly during a spillage.

In many cases, you'll need additional drainage plans to provide detailed information. You should attach these to your response plan and refer to them in it.

2.2   Activation and response

Once you've written your plan, develop supporting emergency procedures to check the plan works if there's an incident. Make sure all relevant staff and contractors are aware of these procedures and the plan.

Examples of the information to include are:
- procedures for alerting key staff;
- standby/rota systems;
- clearly defined roles and responsibilities;
- names of staff and contractors trained in incident response;
- the types and location of emergency response equipment available and appropriate personal protective equipment (PPE) to be worn;
- a system of response coordination;
- off-site support.

The actual level of your response will depend on your site. Consider what could happen on your site as a worst case scenario and develop procedures to deal with it. The checklist below gives some suggestions on procedures.

Procedures Checklist
• Clearly define the circumstances when the plan should be activated. This will depend on the nature of your site and the type of the incident. • Ensure all relevant staff know how and when to contact other emergency responders: emergency services, us, local authority, sewage undertaker and other organisations identified in your emergency plan. • Consider the impact that an incident on your site could have on the environment outside your boundary: nearby properties, downstream abstractors, agricultural land or environmentally sensitive sites. Once identified, agree contact procedures with them if possible. • Put in place staff evacuation procedures – your local authority emergency planning department will help you with these. • Identify any special methods you need to deal with substances posing particular health or environmental risk. • Develop a fire fighting strategy with your local fire and rescue service; if a controlled burn is an agreed option, state this clearly. The same applies to the use of foam (see **reference 4** for further advice). • Staff should be trained in the use of spill kits, drain blockers and other pollution control equipment and the operation of pollution control devices. • Identify procedures for recovering spilled product and the safe handling and legal disposal of any waste associated with the incident. • You should have staff available who are trained to deal with media enquiries.

2.3 Plan testing

Once your plan is completed, test it regularly by exercising; at some sites for example COMAH sites, it is a legal requirement. Exercises are vital to:
- validate the whole plan – does it work?;
- develop your staff's and contractors' competencies in emergency response;
- test your standard procedures.

You can design exercises to be discussion based, table top or live. You can set them up to test the whole plan or critical elements within it such as:
- contacts lists;
- the activation process;
- equipment;
- information management.

Where resources permit, include external partners/responders as this helps validate your plan.

The frequency of testing and exercising should be related to the environmental risk your site poses, staff turnover, the introduction of new processes or materials and conclusions from any previous exercises or incidents.

The effectiveness of any site incident response plan will depend on staff training. You should make sure that all staff and contractors working on-site are aware of the plan which you should make available electronically and in hard copy. All staff should know their role and responsibilities and the relevant procedures if an incident occurs (see section 2.2). Maintain and regularly review records of all staff training.

Your staff training should include:
- awareness of the potential for harm to people and the environment from the materials held on-site;
- information on the sensitivity of the environment surrounding the site;
- the environmental responsibilities of your business;
- use of the correct personal protective equipment and any appropriate and/or necessary health and safety training;
- reporting procedures if there's a risk of surface water, groundwater or land contamination;
- reporting to the local water/sewerage undertaker if a discharge to the foul or combined sewer is involved;
- safe and correct use of all spill clean-up equipment or pollution prevention structures and/or devices on site;
- safe handling and legal disposal of contaminated materials and wastes resulting from an incident, including arrangements for using specialist contractors and services;
- appropriate and safe decontamination.

2.4 Review and maintenance

Your plan must remain effective and up to date so record any lessons learnt from exercises or actual incidents in post exercise/incident debriefs. Use recommendations from the debriefs or from staff and contractors to improve your plan. Even if you haven't carried out an exercise, it's good practice to review the plan regularly we suggest as a minimum every 3–4 years (in line with Environment Permitting Regulations and COMAH guidance) and communicate all changes to your staff and other responders.

3.   Waste

Waste material associated with an incident will come under the Duty of Care – **reference 14**. This means you have a legal duty to make sure that any waste the incident produces does not escape your control and that you dispose of it legally, safely and properly.

You must transfer such waste to an authorised registered waste carrier or exempt waste carrier or waste manager. A full description of the waste and a waste transfer note must accompany it. The waste must be disposed of lawfully.

If the waste is hazardous waste (or special waste in Scotland) **reference 15,** for example oil waste, acids and/or solvents, additional requirements will apply and its movement must be accompanied by a consignment note. Everyone involved in the transfer of this waste must keep a copy of the consignment notes for proof of legal disposal.

You must include procedures in your plan for dealing with any waste arising in an incident. Contact us for further details.

4.   Distribution and revision

If you wish, you may contact us at the local office to discuss your plan. Once you've taken into account any relevant comments, distribute copies of the completed plan to the organisations recorded on its front page. Keep a copy of the plan on site in an easily accessible location away from the main building such as a gatehouse or a dedicated 'firebox' to which the emergency services can readily gain access. A notice at the site entrance should indicate the location of the plan.

We will treat any information supplied in your plan as confidential. With your permission, we may discuss the response to an incident with the other organisations who have received a copy of the plan from you.

5.   References

All the Pollution Prevention Guidance notes (PPGs) are available at:
– www.environment-agency.gov.uk/ppg
– www.sepa.org.uk/guidance/ppg
– www.ni-environment.gov.uk/ppg

You can also order the Pollution Prevention Pays pack at the first of these sites.

1.   **Code of Practice on Guidance on Regulation 2008 – from Department for Enterprise and Regulatory Reform (BERR) website (in list below)**

2.   **The Control of Major Accidents Hazards Regulations (COMAH) – Statutory Instrument 1999 No 743**
    The Control of Major Accident Hazard Regulations (Northern Ireland) 2000 SR 2000 No 93
    HSE guidance – Emergency response and spill control – from HSE website
    HSE guidance – HS(G)191 Emergency Planning for Major Incidents Control of Major Accident Hazards Regulation 1999

3.   **Environmental Permitting (England and Wales) 2007 Regulations (SI2007 No 3538)**

4.   **PPG28: Controlled Burn**

5.   **PPG18: Managing Fire Water and Major Spillages**

6.   **Pollution Prevention Pays pack and DVD – from Environment Agency website**

7.   **PPG1: General Guide to Pollution Prevention**

8.   **Civil Contingencies Act 2004 (c36) and Civil Contingencies a short guide: Cabinet Office publication**

9.   **Fire and Rescue Service Act 2004**

10.   **The Control of Substances Hazardous to Health Regulations 2002 (SI No 2267) (as amended).**
    Approved Code of Practice and guidance L5 (Fifth edition) HSE Books 2005. ISBN 0 7176 2981 3

11.   **PPG2: Above Ground Oil Storage**

12.   **PPG26: Storage and handling of drums & intermediate bulk containers**

13.   **PPG3: Use and design of Oil Separators in Surface Water Sewers**

14.   **Waste Management, The Duty of Care, A Code of Practice (Revised 1996). The Stationery Office.**
    ISBN 0 and – 11–753210X

15.   **The Hazardous Waste (England and Wales) Regulations 2005 SI 894. ISBN 0 110726 855**
    The List of Wastes (England) Regulations 2005; SI 2005 895; ISBN 0110726847
    The List of Wastes (England) (Amendment) Regulations 2005; SI 2005 1673; ISBN 0010730011
    The Hazardous Waste (Wales) Regulations 2005; SI 2005 1806 (W.138); ISBN 0110911717
    The List of Wastes (Wales) Regulations 2005; SI 2005 1820 (W.148); ISBN 0110911725
    Hazardous Waste (Northern Ireland) Regulations 2005, SR 300; ISBN 0 33796 064 X
    The List of Waste Regulations (Northern Ireland) 2005, SR 301; ISBN 0 33796 095 X
    Special Waste Regulations 1996, SI972. ISBN 0 11 054565 6
    Special Waste Amendment (Scotland) Regulations 2004, SSI 112. ISBN 0 11069 0303

Other useful sources of information:

Fire and Rescue Service Manual Volume 2 Fire Service Operations – Environmental Protection, The Stationery Office. ISBN 978 0 11 341316 4

CIRIA 164

CIRIA Report 164, 1997, P A Mason, H J Amies, P R Edwards, G Rose, G Sangarapillai, Design of containment systems for the prevention of water pollution from industrial incidents. ISBN 0 86017 476 X

Safety and environmental standards for fuel storage sites Buncefield Standards Task Group (BSTG) Final report – July 2007: www.hse.gov.uk/comah/buncefield

Useful websites:

Environment Agency: www.environment-agency.gov.uk

Northern Ireland Environment Agency: www.ni-environment.gov.uk

Scottish Environment Protection Agency: www.sepa.org.uk

Department for Environment Food and Rural Affairs: www.defra.gov.uk

Health and Safety Executive: www.hse.gov.uk

Buncefield Report: www.buncefieldinvestigation.gov.uk

Maritime and Coastguard Agency: www.mcga.gov.uk

The National Chemical Emergency Centre: www.the-ncec.com

UK Government Decontamination Service: www.defra.gov.uk/gds

Communities and Local Government (England and Wales): www.communities.gov.uk

UK Resilience: Civil Contingencies Secretariat: www.ukresilience.info and www.preparingforemergencies.gov.uk

Scottish Government: www.scotland.gov.uk

NetRegs: www.netregs.gov.uk

Construction Industry Research and Information Association: www.ciria.org.uk

The Stationery Office: www.tsoshop.co.uk

The Department for Enterprise and Regulatory Reform: www.berr.gov.uk

Business Link – Practical Guidance for business: www.businesslink.gov.uk

incident response plan

Environment Agency

Template for an incident response plan

Use this template to help you identify all the relevant information you need to effectively respond to an incident on your site. It is not intend as a description of all the procedures you need to activate the plan. You should identify, develop and record these separately using the guidance in Section 2.2 – Activation and response.

The template is a guide only and can be modified to take in to account any site specific requirements and operational needs. We recommend discussing your plan where possible with relevant external organisations particularly the emergency services and us to maximise co operation during an incident. Once in place you can use it as a basis for supporting the planning cycle and maintain effective and safe response to incidents.

Incident Response Plan

Name and address of company/Location of site	NGR: Map references: Link to map:

Overview of the activities on site:
Include the number of employees at different times of the day.

Description of surrounding area:

Date and version of plan:	Name or position of person responsible for compiling/ approving the plan:

Incident Response Plan

Review date:

Date of next exercise:

Objectives of the plan:

List of external organisation consulted in the preparation of the plan with contact details:

Distribution list number of copies of the plan and version:

Incident Response Plan

External contacts

Contact	Office hours	Out of hours
Emergency services (Fire/Police/Ambulance)		
Local police		
Local hospital/NHS Trust		
Environmental Regulator Incident hotline		
Environment Regulator Local contact		
Local Authority Emergency Planning Department		
Local water company/authority		
Electricity company		
Gas company		
Waste management contractor		
Specialist advice		
Specialist clean up contractor		

Internal contacts

Names and positions of staff authorised/trained to activate and co ordinate the plan		
Other staff: Managing Director		
Site Manager		
Environmental Manager		
Health and Safety Manager		

Chemical Product and Waste Inventory

Trade name/ substance	Solid/liquid/ gas or powder	UN number	Maximum amount	Location marked on site plan	Type of containment	Relevant health and environmental properties

Pollution Prevention Equipment Inventory (on and off site-resources)

Type	Location	Amount	Staff contact

Site Plan
Sections 2.1e and 2.1f of the guidance tells you how to produce both a site plan and a drainage plan.
These should be kept with the rest of the plan ready to use during an incident response.