Guidance for Pollution Prevention

Pollution incident response planning: GPP 21

Version 1.1 June 2021

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

For **Wales, Northern Ireland**, and **Scotland**, 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

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 the plan should look like by providing **a template** (in Appendix).

It is important to minimise the risk of pollution to protect the environment and human health. If you cause pollution you may be liable to enforcement action by your local Environmental Regulator.

Who is your Environmental Regulator?

- In **Northern Ireland**, it is the Northern Ireland Environment Agency (NIEA).
- In **Scotland**, it is the Scottish Environment Protection Agency (SEPA).
- In **Wales**, it is Natural Resources Wales (NRW).

Contact details are found at the end of this document.

1.1 Who is this guidance for?

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 an 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 guidelines are aimed at sites which are not already required, as a condition of a permit, to prepare pollution incident response plans. If you operate a site that is required to have a pollution incident response plan, then you should speak to your environmental regulator about the specific requirements for your site. Contact details are listed at the end of these guidelines.

1.2 Pollution prevention

Many industrial and commercial sites have the potential to cause pollution. Affecting 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 occurs when substances released to water, land or to air have a harmful effect on our environment.

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).

Common causes of pollution include:

- delivery and use of materials
- overfilling containment vessels
- plant or equipment failure
- containment failure
- human error
- lack of staff training
- fires, explosions or failure to contain firefighting 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.
- environmental crime

You should understand your site and how your activities could affect the environment and cause pollution. Think about what pollution linkages you have (see Figure 1). The pollution linkages include a source i.e. where the pollution can come from. The next step is to think about how the pollution can travel through the environment, the pathway. Finally the receptor i.e. who or what can be affected by the pollution.

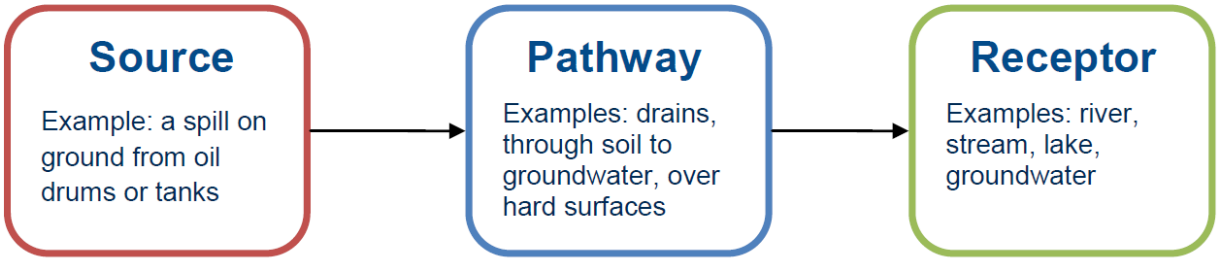

Figure 1: Example of a pollution linkage using the source > pathway > receptor model.

NOTE: Groundwater can be both a pathway and a receptor.

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.

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 (see Figure 2.)

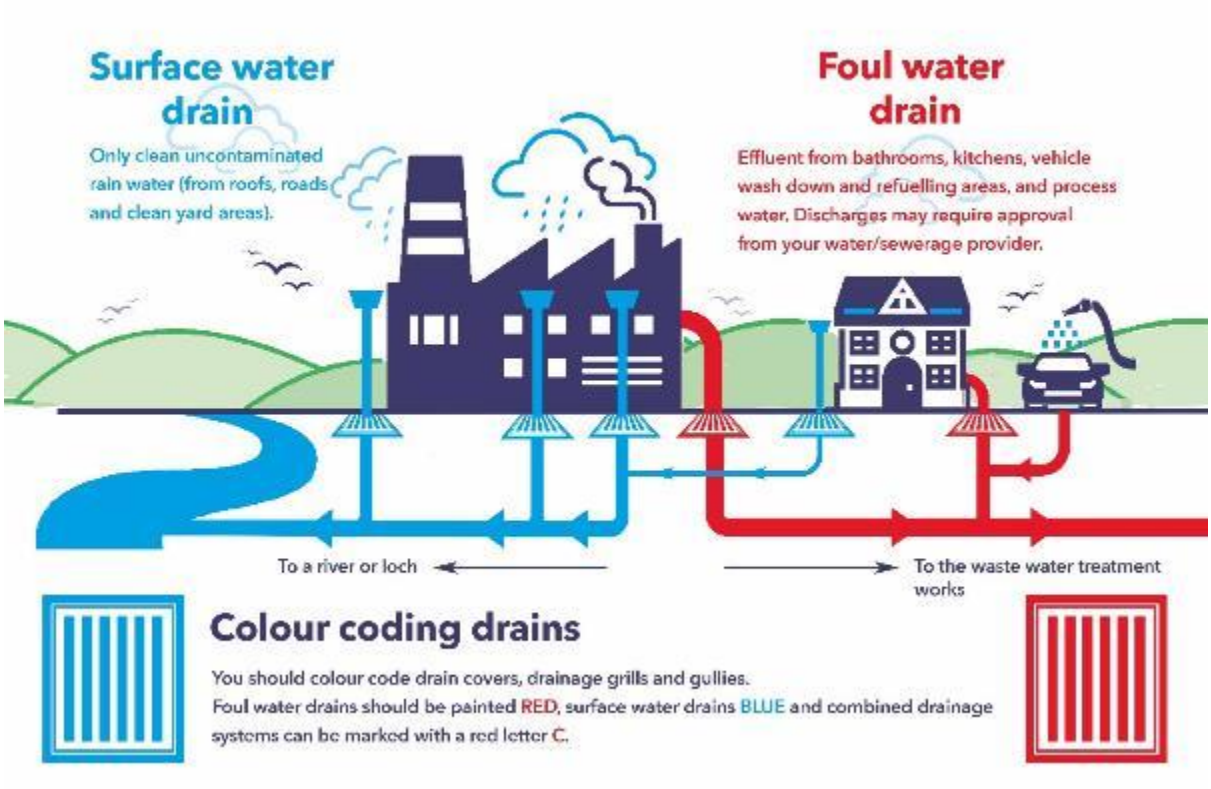

Figure 2. Drain identification.

The clean-up cost of pollution can be expensive and time consuming particularly if groundwater becomes contaminated. The costs of the clean-up must be borne by the person/business causing the pollution. There may also be additional costs including fines, and reputational cost i.e. loss of future work.

This guidance has been developed to help you plan to reduce the likelihood of an incident. However, if one does occur you must report it to your environmental regulator immediately via the Incident Hotline number **0800 80 70 60** - see section 5. A rapid response to incidents will help to minimise the environmental impact and could reduce the overall costs – For more information refer to section 5.

1.3 The wider application of your plan

Your Pollution Incident Response Plan could be designed to deal with environmental incidents on your site, or it could be part of a more comprehensive incident response plan for the site, for example Control of Major Accident Hazards (COMAH) on-site and off-site plans.

The incident response plan may support the work of Local Resilience Forums in **England** and

Wales, the Resilience Division in Scotland and the Civil Contingencies Framework in **Northern Ireland** (see **Reference 3**). These groups can use your Incident Response Plan to help develop their local risk registers.

The information in the plan may also help the emergency responders produce their own response plan for your site in the case of an incident.

Image: SEPA inspector at an industrial site.

Section 2. The Plan: Assessing, Preparing, Activating, Testing, Reviewing

The following diagram (Figure 3.) 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. This planning cycle is a process of continuous improvement.

Figure 3. The planning cycle

2.1 Assess the risks on site

You should identify all the potential risks to the environment from the materials, processes and activities on your site. There is detailed guidance in how to carry out a risk screening assessment in GPP 28 – Controlled Burn (**reference 1**). This applies to all sites, not just those where controlled burn is relevant.

You should also refer to:

- **Reference 2**: GPP 1 – A General Guide to Pollution Prevention, which covers general pollution prevention and the correct storage of materials
- **Reference 3**: GPP 18 - Managing Firewater and Major Spillages, which will help you identify the equipment and techniques you can use to deal with the impact of fire or major spillages on your site.

2.2 Gather information and prepare your plan

2.2.1 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
- a reference to the Inventory Section of your plan – to allow emergency responders to identify the locations of hazards, such as gas cylinders and chemical stores.

2.2.2 External and internal contacts list

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 Council
- 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)
- sensitive receptors, for example a local drinking water supply
- 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 and positions on the template are suggestions only.

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

2.2.3 Site chemical, products and waste inventory

You should maintain an up-to-date record of all substances stored on-site, where they are stored, together with an indication of the maximum quantity likely to be stored. Attach Safety Data Sheets and COSHH assessments (see **reference 5)** 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 GPP 02: Above Ground Oil Storage provides advice on safe storage (**Reference 6**). 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.

2.2.4 Pollution prevention equipment inventory (spill kits etc.)

Record the equipment and materials you have on site to deal with pollution incidents. Make sure this is updated regularly. See **reference 3:** GPP 18 Firewater and major spillages.

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 have been trained in its use.

2.2.5 Prepare a 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.

The site plan should include:

- 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 how much the bund can contain
- location of hydrants, 'fireboxes' and pollution prevention equipment and materials • any watercourse, spring, borehole or well located within or near the site
- areas of permeable or unmade ground.

2.2.6 Prepare a drainage plan

You should also include an up to date site drainage plan which includes foul, surface and trade effluent drainage systems (See figure 4. below).

The drainage plan should include:

- surface water drainage
- the foul sewer
- any connections where trade effluent drains into the foul sewer
- inspection points to detect pollution
- oil separators/interceptors – **reference 7** GPP3 Use and design of oil separators in surface water drainage systems.
- 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. Note when inspections were last carried out on pollution control devices.

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 drains, watercourses and soakaways.
- Colour your drain covers and grips in the same way.
- 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, 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.

While you are drawing up your drainage plan, use the opportunity to check for any misconnections from your site, for example, a foul sewer that has been linked or connected into a watercourse. This is illegal and may lead you to respond incorrectly during a spillage. If misconnections are found, contact your water and sewerage provider and take appropriate action to remediate.

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.

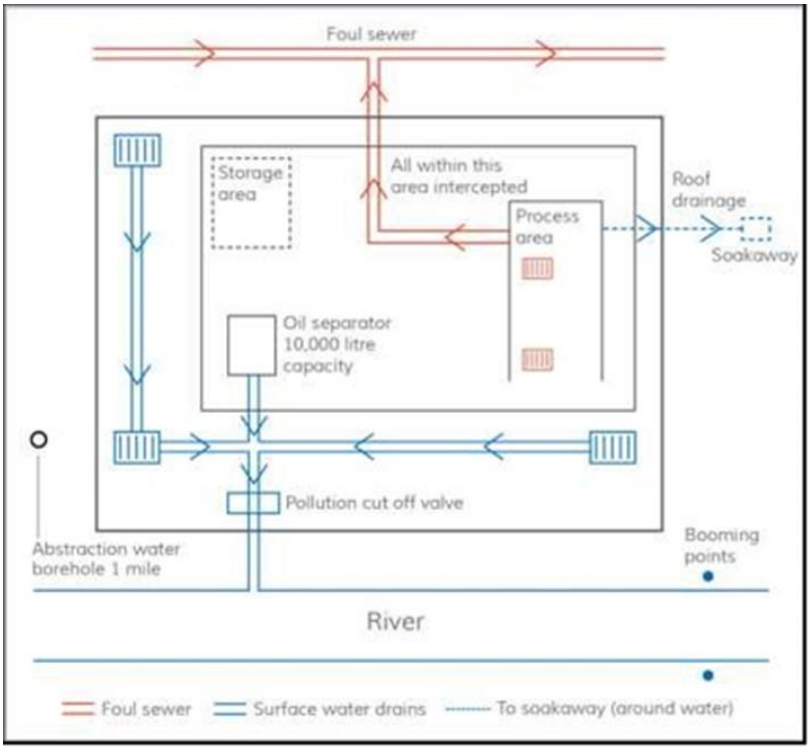

Figure 4. Example of a drainage plan (UK Fire and Rescue)

2.3 Activate and seek responses

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.

Pollution Incident Response Plan Checklist

Procedure	**Included?**
Clearly define **when you will activate the plan**. 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, environmental regulator, local authority, sewage undertaker and others identified in your plan.	
Agree **contact procedures**, if possible, with nearby properties, downstream or downgradient abstractors (from surface water and groundwater), agricultural land or environmentally sensitive sites that could be affected by an incident on your site.	
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 1: Controlled Burn** for further advice).	
Train your staff 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.	
Have staff available who are trained to deal with **media enquiries**.	

2.4 Test your plan and train staff

Once your plan is completed test it regularly by carrying out exercises. 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
- 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. Make it available electronically and in hard copy.

All staff should know their roles 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.

2.5 Review and update your plan

Your plan must remain effective and up to date, so record any lessons learnt from exercises or actual incidents. Use these recommendations, or comments 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 and communicate all changes to your staff and other responders.

Section 3. Distribute your plan

You may want to contact your environmental regulator at the local office to discuss your plan. Contact details are at the end of this document.

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 weatherproof 'firebox' to which the emergency services can readily gain access. Keep an electronic version of the plan and keep a record of who you have sent the plan to.

A notice at the site entrance should indicate the location of the plan.

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

Section 4. 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

(Press 1 for 24 hour service)

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

You should follow your incident response plan.

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.

References

1. GPP 28 – Controlled Burn http://www.netregs.org.uk/environmentaltopics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-forpollution-prevention-gpps-full-list/
2. GPP 1 – A General Guide to Pollution Prevention http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgsand-replacement-series/guidance-for-pollution-prevention-gpps-full-list/
3. GPP 18 - Managing Firewater and Major Spillages http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgsand-replacement-series/guidance-for-pollution-prevention-gpps-full-list/
4. Local Resilience Forums

   Northern Ireland: Civil Contingencies https://www.executiveofficeni.gov.uk/articles/civil-contingencies
   Scotland: Resilience division http://www.readyscotland.org/readygovernment/resilience-division/
   Wales: Wales Resilience http://walesresilience.gov.uk/?skip=1&lang=en
   England: https://www.gov.uk/guidance/local-resilience-forums-contact-details
5. COSHH and Safety Data Sheets

   Scotland, Wales and **England**: HSE - COSHH http://www.hse.gov.uk/coshh/
   Northern Ireland: HSENI - COSHH https://www.hseni.gov.uk/topic/coshh
6. GPP2: Above Ground Oil Storage http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgsand-replacement-series/guidance-for-pollution-prevention-gpps-full-list/
7. GPP3: Use and design of oil separators in surface water drainage systems http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgsand-replacement-series/guidance-for-pollution-prevention-gpps-full-list/
8. Duty of Care – Codes of practice

   Duty of Care code of practice **Northern Ireland -** https://www.daerani.gov.uk/publications/waste-management-duty-care-code-practice
   Duty of Care Code of Practice **Scotland** – http://www.gov.scot/resource/0040/00404095.pdf
   Duty of Care code of practice **England** and **Wales** – https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice
9. Public registers of waste carriers

   In **Northern Ireland**: Registered waste carriers/transporters https://www.daerani.gov.uk/articles/registered-waste-carriers-transporters
   In **Scotland**: Registered waste carriers and brokers http://apps.sepa.org.uk/rocas/
   In **Wales**: Public register for waste carriers, brokers or dealers. https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en

In **England**: Register of waste carriers, brokers and dealers https://environment.data.gov.uk/public-register/view/search-waste-carriers-brokers

Other useful sources of information

UK Fire and Rescue: Environmental Protection Handbook for the Fire and Rescue Service

https://www.ukfrs.com/sites/default/files/2017-09/Environment%20Agency%20and%20DCLG%20environmental%20handbook.pdf

CIRIA: Containment systems for the prevention of pollution (C736): *Secondary, tertiary and other measures for industrial and commercial premises.*

https://cdn.shopify.com/s/files/1/0523/8705/files/CIRIA_report_C736_Containment_systems_for_the_prevention_of_pollution.compressed.pdf (free publication)

HSE: Safety and environmental standards for fuel storage sites. Buncefield Standards Task Group (BSTG) Final report – June 2010

https://www.hse.gov.uk/comah/buncefield/bstgfinalreport.pdf

Useful websites

Environmental Regulators

- Northern Ireland Environment Agency: https://www.daerani.gov.uk/contacts/northern-ireland-environment-agency-contact
- Scottish Environment Protection Agency: www.sepa.org.uk/
- Natural Resources Wales: https://naturalresources.wales/
- Environment Agency: https://www.gov.uk/government/organisations/environmentagency

National bodies

- Health and Safety Executive: www.hse.gov.uk
- Health and Safety Northern Ireland: www.hseni.gov.uk/
- Maritime and Coastguard Agency: www.mcga.gov.uk • The National Chemical Emergency Centre: the-ncec.com/
- UK Government Decontamination Service: www.gov.uk/government/groups/government-decontamination-service

Fire and rescue

- Northern Ireland Fire and Rescue Service: www.nifrs.org/
- Scottish Fire and Rescue Service: www.firescotland.gov.uk/
- Wales Fire and Rescue: https://www.wlga.wales/fire-and-rescue

- England Fire and rescue services: http://www.fireservice.co.uk/information/ukfrs/

Resilience and Civil Contingencies

- Northern Ireland: Civil Contingencies www.executiveoffice-ni.gov.uk/articles/civilcontingencies
- Scotland: Resilience Division www.readyscotland.org/ready-government/resiliencedivision/
- Wales Resilience: walesresilience.gov.uk/?skip=1&lang=en
- England: Emergency Planning https://www.gov.uk/government/policies/emergencyplanning

Devolved Governments

- Scottish Government: www.gov.scot/Home
- Welsh Government: http://gov.wales/?lang=en
- The Northern Ireland Executive: https://www.northernireland.gov.uk/

Appendix. Pollution Incident Response Plan Template

Incident Response Plan

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 intended 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 2.3 – 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 your environmental regulator 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 activities on site: *Include number of employees at different times of the day*	
Description of surrounding area:	
Date and version of plan:	**Name and 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 organisations consulted in the preparation of the plan – with contact details:	
Distribution list, number of copies 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		
Environmental regulator		
Local Authority Emergency Planning Dept		
Water company/authority		
Electricity company		
Gas company		
Waste management contractor		
Specialist advice		
Specialist clean up contractor		
Internal contacts		
Names of staff authorised to activate and co-ordinate plan		
Other staff: Managing director		
Site manager		
Environmental manager		
Health and Safety manager		

Incident Response Plan

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	Health and environmental properties

Incident Response Plan

Pollution Prevention Equipment Inventory (on and off site resources)

Type	Location	Amount	Staff contact

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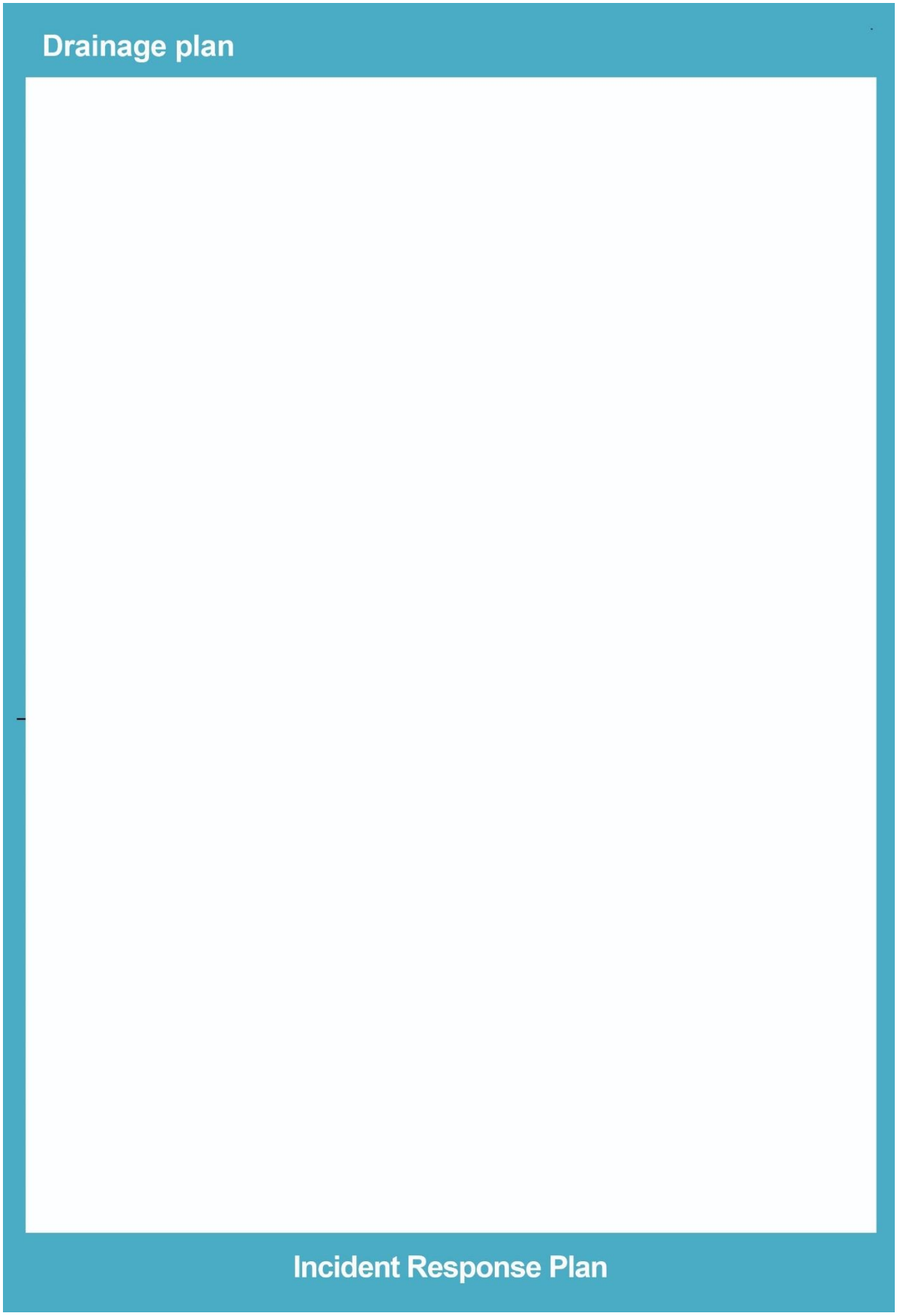
Incident Response Plan

Site plan

Sections 2.2.5 and 2.2.6 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.

Incident Response Plan

Drainage plan



Incident Response Plan

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) and the Northern Ireland Environment Agency (NIEA).

This document is available at www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-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** (press 1 – 24-hour service)
Floodline – Wales, Scotland and England	**0845 988 1188**
Flooding incident line - Northern Ireland	**0300 200 0100**

Natural Resources Wales	**Scottish Environment Protection Agency**	**Northern Ireland Environment Agency**
www.naturalresourceswales.gov.uk	www.sepa.org.uk	www.daera-ni.gov.uk
Head Office (Ty Cambria) 29 Newport Road Cardiff CF24 0TP	Corporate Office Strathallan House The Castle Business Park Stirling FK9 4TZ	Head Office Klondyke Building Cromac Avenue Gasworks Business Park Malone Lower Belfast BTZ 2JA
Tel: 0300 065 3000 (Mon – Fri, 9am–5pm)	Tel: 03000 99 66 99	Tel: 0300 200 7856
enquiries@naturalresourceswales.gov.uk	www.sepa.org.uk/contact	nieainfo@daera-ni.gov.uk