

Pollution Prevention Guidelines

pollution incident response planning: PPG 21

These guidance notes have been drawn up to assist those developing site-specific pollution incident response plans to prevent and mitigate damage to the environment caused by accidents such as spillages and fires. They are aimed at those sites which do not have a statutory duty to prepare such plans e.g. under the Control of Major Accident Hazards Regulations (COMAH) and the Pollution Prevention and Control (PPC) Regulations for which more detailed plans may be required. These notes have been jointly produced by the Environment Agency for England and Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland, which are referred to here as the Agency or Agencies.

1. Introduction

The guidance given in PPG11 (Reference 1) on preventing pollution on industrial sites provides basic advice. Further information on techniques for managing run-off generated in the event of a fire ('fire water') and major spillages is available in PPG18 (Reference 2).

This document provides supplementary advice on pollution incident response planning. It explains why a plan is needed, what information should be included and provides a suggested template for those preparing a plan. It is intended principally for organisations, authorities and employees with responsibility for medium to large sites, but much of the information is relevant to smaller sites and especially those where high risk activities are carried out. The guidance aims to help managers and operators consider the appropriate level of detail for a specific site, taking into account the risks and the site layout.

2. Why produce a pollution incident response plan?

Most industrial and commercial sites have the potential to cause significant environmental harm and to threaten both water resources and public health. The Agencies' Pollution Prevention Guidance Notes aim to reduce the risk of an incident occurring, but there will always be a residual risk of a spillage or a fire that could cause serious environmental problems. In addition to the obvious threat posed by chemicals and oils, even materials that are non-hazardous to humans, such as foods and beverages, can cause serious environmental harm. The run-off generated in the event of a fire can also be very damaging and atmospheric deposition could have a long-range impact.

The environmental impact of an incident may be long term and, in the case of groundwater, may persist for decades or even longer. As a result, the legal consequences and clean-up operation can be costly. Rivers, sewers, culverts, drains, surface water soakaways, porous or unmade ground, water distribution systems and service ducts all present routes for pollutants to quickly enter the surrounding environment (including surface water and groundwater). Thus, the effects of a discharge may not be evident on site, but may become apparent some distance away. Any incident response plan should take into account the vulnerability of groundwater both beneath and down-gradient of the site.

In most cases, an incident of this kind need not result in serious environmental damage provided appropriate pollution prevention measures are in place or immediately available. The key is to have a contingency or pollution incident response plan in place. This need not be costly to prepare, but could minimise the consequences of an incident.

3. Producing an incident response plan

The centre pages of this guidance note are designed for easy removal and may be used as a framework for a site incident response plan, which can be modified to meet individual site or operator requirements. The following information could be included in the plan.

a. Cover page

This should give details of the site and the roles/names of those people for whom the plan is relevant. The page should incorporate:

Box 1 Company name and full postal address of site

Box 2 A brief description of the main business activities on-site (specify those with a high potential for environmental harm)

Box 3 Date plan was completed and date it is due to be reviewed

Box 4 The 'signing off' of the plan by an appropriate company manager

Box 5 A list of recipients of the completed plan.

b. Contact list

This should list contact numbers for:

- emergency services
- relevant environmental regulators
- local water supplier and sewer provider
- Health and Safety Executive (HSE)
- specialist clean-up contractors.

The list should also identify key holders and staff to be contacted in the event of a significant incident (including their home and mobile numbers). Contact numbers for sources of specialist advice such as chemical suppliers and manufacturers whose products are held on-site should also be given.

c. Site drainage 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. An example of a site drainage plan is shown below.

- Use red to mark for foul drainage on the plan and blue for surface water drainage. Indicate the direction of flow clearly.
- Use a similar approach for drain covers on-site. These can also be numbered to assist identification and painted red for foul sewers or blue for surface water; mark a red 'C' on combined sewage systems.
- Mark off-site discharge points for surface water and trade effluent clearly. Also mark the location of any soakaways.
- Identify the sewage treatment works to which sewage and trade effluent discharge, along with the nearest foul sewer pumping station serving the site (the local sewer provider should have this information).
- Show any watercourse, spring, borehole or well located within or near the site.
- Indicate the direction of flow (or depth for boreholes and wells), surface water outfalls from the site and suitable points for installing pollution control booms or a dam.
- If possible, install permanent boom anchor points at a suitable location, taking into account possible flow conditions.

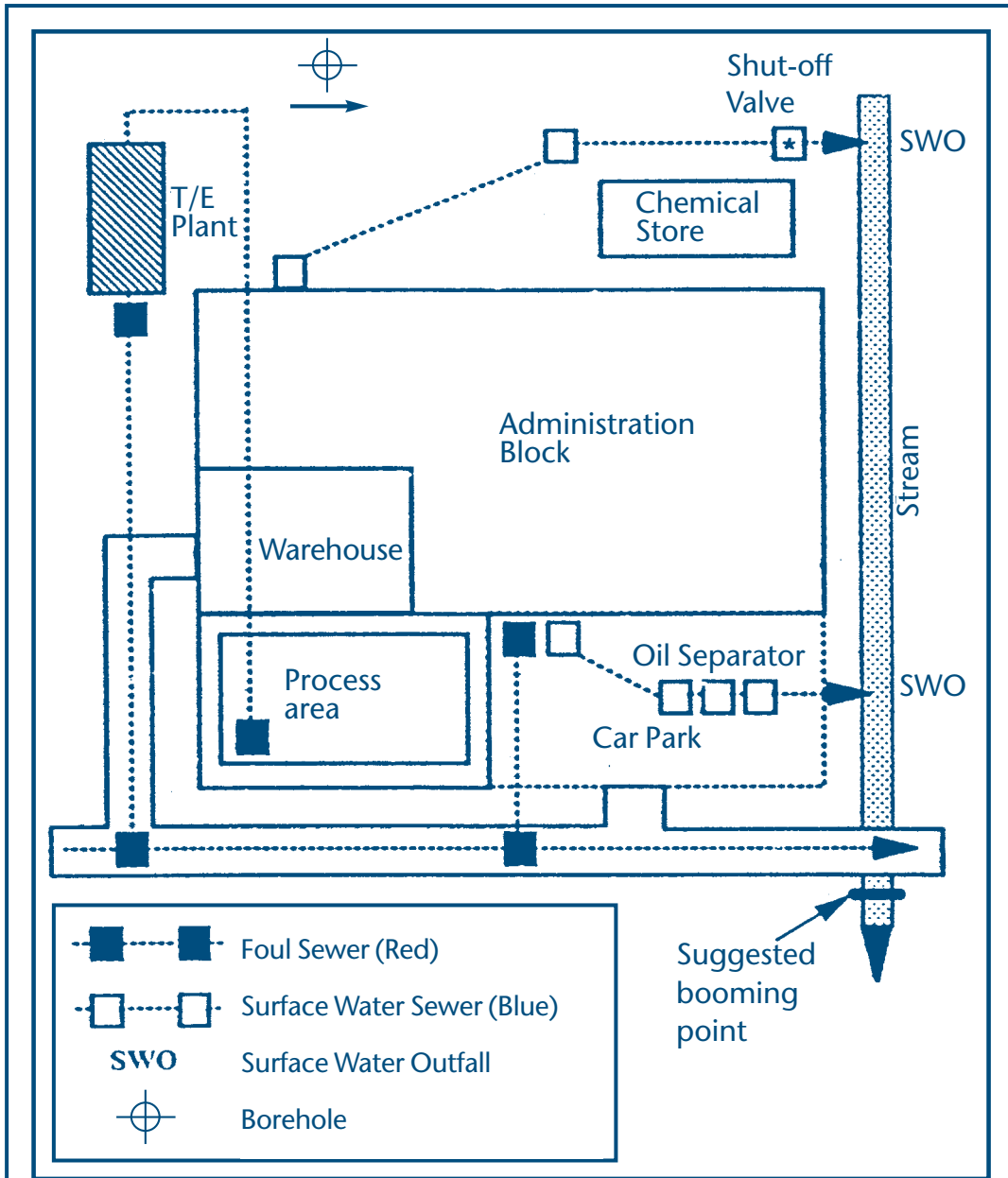
A site drainage plan should show/identify the following:

- i. General layout of buildings
- ii. Site access routes for emergency services (marked clearly)
- iii. Location of process areas and any on-site treatment facilities for trade effluent or domestic sewage
- iv. Areas or facilities used for storage of raw materials, products and wastes (include details of tank sizes)
- v. Any bunded areas together with details of products stored and estimated retention capacity
- vi. Any potentially sensitive areas of porous or unmade ground
- vii. Location, depth and construction details of any soakaways receiving surface water discharges
- viii. Location of the mains water supply stopcock and any sprinkler control valves
- ix. Location of hydrants, 'fireboxes' (see Section 5) and pollution prevention materials (e.g. spill kits)
- x. Facilities such as:
 - inspection points for the detection of pollution
 - oil separators
 - retention or balancing tanks
 - fire water retention ponds
 - containment tanks and pollution control devices (e.g. shut-off valves in drains)
 - sites suitable for portable storage tanks or for blocking drains

Provide a brief description of how they operate and ensure such facilities are clearly labelled aboveground.

In many cases, additional plans will be required to provide detailed information. These should be attached to the plan and referenced within it.

**SITE DRAINAGE
PLAN - EXAMPLE**



NOTES:

IN THE EVENT OF SPILLAGE OPERATE THE DRAINAGE SHUT-OFF VALVE INDICATED BY TURNING HAND WHEEL FULLY CLOCKWISE.

1. Sewage Treatment Works serving site = Newtown STW
2. Nearest Foul Sewer Pumping Station = Station Road
3. Booming/ damming point has been identified

POLLUTION INCIDENT RESPONSE PLAN

For:

Nature of Business:

Date of Plan:

Review date:

Approved by:

Date:

Copies to:

Date Sent:

Environment Agency/SEPA/EHS
Fire Authority
Police
Sewer provider
Water supplier
Local Authority
Other

CONTENTS

Page

2. CONTACT DETAILS
3. SITE DRAINAGE PLAN
4. CHEMICAL INVENTORY
5. EMERGENCY PROCEDURES (additional document to pages 1–4)

2. EMERGENCY CONTACT DETAILS

Emergency Services:

999 or 112

Local Police:

Doctor:

Environment Hotline:

0800 80 70 60 (24hr Emergency Hotline)

Environment Regulator (Local Office):

Local authority:

Office Hours

Out of Hours

Sewer provider:

Water supplier:

Gas supplier:

Electricity supplier:

Waste management contractor:

Specialist advice:

Specialist clean-up contractors:

COMPANY CONTACTS: (Out of Hours)

Managing director:

Site manager:

Environmental manager:

Foreman:

Head office contact:

3. SITE DRAINAGE PLAN

4. CHEMICAL, PRODUCT AND WASTE INVENTORY

Maximum Quantities at Peak Times

Trade name	Substance	Solid/liquid/gas or powder	Container size	Maximum quantity

d. Site chemical, product and waste inventory

The inventory should provide an up-to-date record of all substances stored on-site, together with an indication of the maximum quantity likely to be stored. Product data sheets and Control of Substances Hazardous to Health (COSHH) assessments should be attached for any substances posing a risk to health or the environment.

All stores, bulk storage vessels, drums or containers used for storing oils, chemicals or other potentially polluting materials (e.g. milk or other foodstuff) should be marked on the site plan. If oils or chemicals are regularly stored or held away from fixed installations or storage areas in any significant quantity (e.g. in production areas), indicate their whereabouts on the site plan. If there are a number of chemical process lines, it is recommended that an annotated sketch plan of each is included.

e. Emergency procedures

Detailed emergency procedures should be produced in addition to completing the template provided at the end of this guidance. These procedures should define:

- the scope of activities covered
- staff responsibilities
- procedures for dealing with events such as spillages and leaking containers.

The level of response will depend on health and safety issues, staff training, the level of personal protective equipment (PPE) available, the nature of any spilled materials and the types of pollution control equipment available on the site. The appropriate level of response will, therefore, be site-specific. It is important to consider what could happen in the worst case and to take this into account when developing procedures.

A checklist of actions can be useful and should typically address the following issues:

- i. Fire fighting strategy. This should be discussed with the fire service. If 'controlled burn' is an agreed option, this should be clearly stated (see Reference 2 for details).
- ii. Alerting nearby properties, downstream abstractors or environmentally sensitive sites that could be affected by an incident.
- iii. The consequences of an incident at nearby properties.
- iv. Procedures for alerting staff on-site and, where appropriate, adjacent sites. This should include evacuation procedures.
- v. Contacting the emergency services, relevant Agency, local authority and other organisations, and dealing with the media.
- vi. Substances posing particular risks (these should be highlighted in the emergency plan).
- vii. The selection of the appropriate level of PPE.
- viii. The means of making leaking containers safe.
- ix. Procedures for containing leaks, spills and fire-fighting run-off and for the protection of any on-site effluent treatment plant. The location and use of spill kits, drain blockers and other pollution control equipment and the operation of pollution control devices should be clearly documented. Stocks of pollution control equipment and materials held locally by other organisations should be identified and contact details for clean-up companies should be kept up-to-date.
- x. Procedures for the recovery of spilled product and the safe handling and legal disposal of any wastes arising from the incident. PPG18 (Reference 2) contains some useful relevant information.

4. Producing an incident response plan

The effectiveness of any site incident response plan will depend on staff training. All staff and contractors working on-site should be made aware of the plan and should know their role if an incident occurs. Exercises should be carried out periodically to familiarise staff with the operation of the plan and to test its effectiveness. Records of staff training should be maintained.

Training should include:

- awareness of the potential for harm to both personnel and the environment from the materials held on-site;
- awareness of the sensitivity of the environment surrounding the facility;
- use of the correct PPE;
- reporting to the relevant Agency if there is a risk of surface, groundwater or land contamination;
- reporting to the local sewer provider if a discharge to the foul or combined sewer is involved;
- clean-up, safe handling and legal disposal of contaminated materials and wastes resulting from an incident (including arrangements for the use of specialist contractors and services);
- the appropriate decontamination or legal disposal of contaminated PPE.

5. Distribution and revision

If you wish, you may forward a copy of your plan to your local Agency office for comment. Having taken into account any relevant comments, distribute copies of the completed plan to the organisations recorded on the 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.

Any information supplied in such a plan will be treated by the Agency as confidential. However, it may be discussed with other organisations to whom a copy of the plan has been sent (e.g. the fire service) as part of the Agency's incident response planning.

Finally, in order for the plan to remain effective, it is vital that it is reviewed regularly and that any significant changes are reflected in a revised plan. Ensure that revised copies are sent to all plan holders and that old versions are destroyed.

6. References

1. PPG11: Preventing pollution on industrial sites
2. PPG18: Managing fire water and major spillages

Other relevant documents include:

PPG22: Dealing with spillages on highways

PPG26: Storage and handling of drums & intermediate bulk containers

All Pollution Prevention Guidance Notes (PPGs) are available via the Agencies' websites (see below) or from your local Agency office.

These notes are for guidance only and following the good practice described does not remove the reader's obligation to ensure relevant legislation is complied with at all times and that their activities do not result in the release of polluting matter to the environment. Pollution of the environment is a criminal offence and compliance with one or more Guidance Notes is not a defence to such offences. It is recommended that references to other sources of guidance are checked to ensure still current.

ENVIRONMENT AGENCY
GENERAL ENQUIRY LINE

0845 9 333 111

ENVIRONMENT AGENCY
EMERGENCY HOTLINE

0800 80 70 60

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

Pollution Prevention Guidance notes (PPGs) are available to download from the Agencies' websites, see details below.

Environment Agency
www.environment-agency.gov.uk

Scottish Environment
Protection Agency
www.sepa.org.uk

Environment and
Heritage Service
www.ehnsi.gov.uk

HEAD OFFICE
Rio House
Waterside Drive
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