

Guidance for Pollution Prevention

Dewatering underground ducts and chambers: GPP 20

Version 1.2 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 Northern Ireland, Scotland and Wales, this document provides guidance on environmental legislation. These guidelines are not endorsed by the Environment Agency as regulatory guidance in England.

For guidance on environmental regulations in England go to www.gov.uk.
To find the relevant regulations visit www.legislation.gov.uk.

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

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

Contents

Section 1: Introduction	3
1.1 Who is this guidance for?	3
1.2 Legal requirements	3
Section 2: Options that don't involve a discharge to ground or water	5
2.1 By design	5
2.2 By pumping to a foul sewer	5
2.3 By removal to a waste or treatment facility	5
Section 3: Discharge to land or water if no foul sewer available	7
3.1 Check the quality of the water	7
3.2 Oil contamination	7
3.3 Avoid disturbing silt	8
3.4 Use filter strips	8
Section 4: Incident response	9
References	10
Further information	12

Section 1: Introduction

1.1 Who is this guidance for?

Utilities and contractors often need to remove a build-up of water from underground ducts and chambers. The volume of water is usually below 5m³, but can be contaminated with:

- Silt
- Oil
- Various chemicals

If the water is not dealt with correctly there is a risk of pollution to surface waters and groundwater. You should never discharge directly to a watercourse unless this has been agreed with your environmental regulator.

If the water or silt is contaminated it could be classed as hazardous/special waste. Use WM3 to help you classify the resulting waste and to determine whether it is hazardous/special waste. (see Reference 6) You should get advice from your environmental regulator if in doubt about the classification of the materials. Contact details are at the end of this document.

Always take safety precautions when working in confined spaces. (See Reference 1: HSE brief guide to working in confined spaces).

1.2 Legal requirements

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

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

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

1.3 Pollution Prevention

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



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

NOTE: Groundwater is both a pathway and a receptor.

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

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

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

For more information refer to **Section 4**.

Section 2: Options that don't involve a discharge to ground or water

2.1 By design

If possible, design and construct ducts and chambers that prevent the ingress of water. If water is likely to enter the structure you can use a slope on the base of the chamber and include a sump where water can collect. This will make dewatering easier and more effective. It will also make it easier to remove any oily film on the water and remove any silt that settles out. (see Reference 2: CIRIA Publication - Safe access for maintenance and repair).

Surface water drains go directly to a watercourse and therefore should only carry clean uncontaminated rainwater

Never connect ducts or chambers to the surface water drainage system. Don't install automatic pumps as they don't allow the water quality to be checked before it is discharged.

2.2 By pumping to a foul sewer

Any accumulated water should be pumped to a foul sewer if possible. This will ensure that any contamination is treated before it is discharged.

Always check that it is a foul sewer; you must make sure that you do not pump into a surface water drain. If the chambers or ducts are located on an industrial estate or on a business's site then ask to see an up to date, and accurate, drainage plan before beginning to dispose of the water.

You must have a trade effluent consent from the sewerage provider before you discharge anything to sewer.

(See Reference 3: Water and sewer providers).

2.3 By removal to a waste or treatment facility.

If there is no access to a foul sewer, and a sample of the water has either:

- Silt in suspension
- An unusual colour
- An unusual odour

You should have the water removed by pumping to suitable containers or to a tanker. This must then be taken to a licensed waste disposal site. Make sure whoever transports your waste is a suitably licenced waste carrier. (See Reference 4: Public registers of waste carriers)

If you suspect contamination where there is no odour or colour present, for example from metals or organics, you should get it analysed at a lab. The cost of analysis may be less than the cost of unnecessary and expensive tankering. If the analysis proves there is a problem, then you have the analysis to give to the tankering company.

You must comply with the requirements of the Duty of Care Regulations. You have a legal responsibility to ensure that you produce, store, transport and dispose of controlled waste without harming the environment.

This involves:

- Accurately describing your waste, including any hazardous properties
- Safe and secure storage of waste

- Segregation of hazardous/special waste
- The use of a licensed waste carrier to remove waste from your site – see Reference 4 for how to search your relevant Environmental Regulator’s public register. You should also know where the carrier takes your waste for onward management.
- The use of waste transfer notes, or consignment notes (for hazardous/special waste)
- Keeping records – you must keep copies of Waste Transfer Notes (WTN) for a minimum of two years, and Hazardous Waste Consignment Notes (WCN) for a minimum of three years.

Section 3: Discharge to land or water if no foul sewer available

Before discharging water from a duct or chamber it is your responsibility to make a thorough check of the quality of the water. If the water is clean accumulated water without silt and if it is possible to remove light contamination, then you may be able to pump directly to surface waters or to a surface water drain. If possible you should pump water across a grassy strip to remove any silt.

Always contact your environmental regulator (NIEA in Northern Ireland, SEPA in Scotland and NRW in Wales) before making any discharge to the water environment. You may need a consent or authorisation. Contact details are at the end of this document.

3.1 Check the quality of the water

Take a sample of the water. Water sampling should be done according to the correct procedures and standards. (see Reference 8). You may choose to have samples taken by a suitably qualified contractor. The sample should be taken in a transparent container, making sure not to disturb settled silt, and check if it has either:

- Silt in suspension
- An unusual colour
- An unusual odour.

If any of these are present you should have the water removed by pumping to suitable containers or to a tanker. This must then be taken to a licensed waste disposal site. Make sure whoever transports your waste is a suitably licensed waste carrier in accordance with Duty of Care requirements. (see Reference 7).

If you suspect contamination where there is no odour or colour present, for example from metals or organics, you should have the sample analysed at a lab. If the analysis proves there is a problem, the water **should not be discharged** to land or water and should be removed to a treatment facility.

(See Reference 4: Public registers of waste carriers).

Brownfield sites or contaminated land

If you are carrying out dewatering relating to development on brownfield sites or land previously identified as contaminated, you should check with the environmental health department of your local council. You should check any contaminated land risk assessment for the site, to confirm if any contaminants are present that prevents discharge to land or water. Contaminated water may require treatment and removal by a licensed waste carrier to a suitably licensed waste disposal site in accordance with Duty of Care requirements. (see Reference 7).

3.2 Oil contamination

Light contamination by oil (an oily sheen) can be removed from the surface of the water with absorbent materials.

You could also pump the water through an oil separator/ interceptor to remove light contamination. (See Reference 5 GPP 5 Works in or near water).

Even lightly contaminated water can cause harm if discharged, so an appropriate assessment should be made. If necessary, the contaminated water must be removed from site by a licenced contractor.

If there is **heavy contamination** with oil then the contents of the duct or chamber should be pumped out and removed for treatment at a licenced waste site.

If a duct or chamber is regularly contaminated with oil then you can leave absorbent pillows or pads to soak up oil as it seeps in. Used pillows or pads should be taken to a licensed waste disposal site.

Make sure whoever transports your waste is a suitably licensed waste carrier (see reference 4: Public registers of waste carriers) and Duty of Care requirements are followed (see reference 7 Duty of Care). Take steps to find where the oil is coming from and take preventative measures to stop any leak.

Underground oil pipelines should be constructed to prevent pollution. Make sure they are made of materials resistant to corrosion and have a double wall or sleeve.

3.3 Avoid disturbing silt

Make sure you don't disturb silt during pumping. Keep the suction end of the pump above the settled silt. If there are settled solids at the bottom of the duct or chamber then you must remove and dispose of them at a licensed waste site.

If there is silt in the water then you could use a proprietary silt removal system to deal with it before discharging. (See Reference 5: Works in or near water).

3.4 Use filter strips

If the quality of the contained water is suitable, and you intend to pump directly to a watercourse, if possible you should allow the water to flow over grass or other vegetation to filter out any remaining suspended solids.

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

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

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

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

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

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

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

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

References

Reference 1. Health and Safety Executive. A brief guide to working in confined spaces.

<http://www.hse.gov.uk/pubns/indg258.pdf>

HSE Northern Ireland: <https://www.hseni.gov.uk/publications/ni-acop-safe-workconfined-spaces>

Reference 2. CIRIA: Safe access for maintenance and repair. Guidance for designers second edition 2009 (C686D) [http://www.ciria.org/ItemDetail?](http://www.ciria.org/ItemDetail?iProductCode=C686D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef49b09309c1c91)

[iProductCode=C686D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef49b09309c1c91](http://www.ciria.org/ItemDetail?iProductCode=C686D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef49b09309c1c91)

Reference 3. Water and sewer providers

Northern Ireland and Wales – find your water supplier <https://www.water.org.uk/advice-for-customers/find-your-supplier/>

Scotland: Find water company contact details on the Scotland on Tap website <https://www.scotlandontap.gov.uk/suppliers/suppliers>

Reference 4. Public registers for waste carriers

Northern Ireland: <https://www.daera-ni.gov.uk/articles/registered-waste-carriers-transporters>

Scotland: Who is registered? <https://www2.sepa.org.uk/wastecarriers/>

Wales: <https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en>

Reference 5. GPP 5 Works in or near watercourses

<http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgsand-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

Reference 6 WM3 Waste classification technical guidance

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948735/Waste_classification_technical_guidance_WM3.pdf

Reference 7. Duty of Care for Waste

Northern Ireland: NetRegs Duty of Care <https://www.netregs.org.uk/environmental-topics/waste/duty-of-care-your-waste-responsibilities/>

Scotland: <https://www.netregs.org.uk/environmental-topics/waste/duty-of-care-your-waste-responsibilities/>

Wales: NRW Waste Duty of Care <https://naturalresources.wales/guidance-and-advice/environmental-topics/waste-management/waste-duty-of-care/?lang=en>

Wales: Duty of Care Code of Practice <https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice>

Reference 8. Standards for sampling water

Northern Ireland: Sampling must be done in accordance with BS EN ISO 5667-3:2018 – Water quality - Sampling. Part 3: Preservation and handling of water samples, ISBN 978 0 580 96052 9. Refer to the MCerts Document

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/373090/LIT_6695.pdf

Scotland: SEPA, MACS – Measurement Assurance and Certification Scotland

<https://www.sepa.org.uk/media/219592/macs-wat-01.pdf>

Wales: Technical Guidance Note 18 Monitoring of Discharges to water or sewer.

<https://naturalresources.wales/media/2109/technical-guidance-note-m18-monitoring-monitoring-of-discharges-to-water-and-sewer.pdf>

Further information

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

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

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

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

First published January 2018.

Useful contacts

Incident/Pollution hotline: Northern Ireland, Scotland and England

0800 80 70 60 (24-hour service)

Emergency hotline - Wales

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

Floodline – Wales, Scotland and England

0845 988 1188

Flooding incident line - Northern Ireland

0300 200 0100

Natural Resources Wales

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