

GPP 20 Dewatering underground ducts and chambers

These guidelines are produced by Natural Resources Wales, the Northern Ireland Environment Agency, the Scottish Environment Protection Agency. Contact details are available at the end of this document.

Guidance for Pollution Prevention (GPPs) are based on relevant legislation and reflect current good practice. Following these notes will help you 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.

For Northern Ireland, Scotland and Wales, this document provides guidance on environmental legislation. These guidelines are not endorsed by the Environment Agency. For guidance on environmental regulations in England go to www.gov.uk

To find the relevant regulations visit www.legislation.gov.uk

Introduction

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. 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)

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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)

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 licensed 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 consider getting 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.

[Discharge to land or water if no foul sewer available](#)

Before discharging water from a duct or chamber it is your responsibility to check 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 should 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 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.

If you suspect contamination where there is no odour or colour present, for example from metals or organics, you should consider getting it 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.

[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)

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). 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)

[3.3 Use filter strips](#)

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

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-work-confined-spaces>

Reference 2. CIRIA: Safe access for maintenance and repair. Guidance for designers second edition 2009 (C686D)

<http://www.ciria.org/ItemDetail?>

[iProductCode=C686D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91](http://www.ciria.org/ItemDetail?iProductCode=C686D&Category=DOWNLOAD&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91)

Reference 3. Water and sewer providers

Northern Ireland and Wales: [Find contact details for your water company on the Water UK website](#)

Scotland: [Find water company contact details on the Scotland on Tap website](#)

Reference 4. Public registers for waste carriers

[NIEA: Registered carriers database](#)

[SEPA: Who is registered?](#)

[NRW: Check if an organisation is registered as a waste carrier, broker or dealer](#)

Reference 5. GPP 5 Works in or near watercourses

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

England and Northern Ireland and Scotland:

Incident/Pollution hotline: 0800 80 70 60 (24 hrs)

Wales:

Emergency hotline: 0300 065 3000,(24 hrs) (press 1)

Floodline - England, Wales and Scotland: 0345 988 1188

Flooding incident line (NI): 0300 2000 100

Natural Resources Wales
www.naturalresourceswales.gov.uk

HEAD OFFICE
(Ty Cambria)
29 Newport Road,
Cardiff
CF24 0TP

Tel: 0300 065 3000 (Mon-Fri, 9am-5pm)

enquiries@naturalresourceswales.gov.uk

Scottish Environment Protection Agency
www.sepa.org.uk

Strathallan House
The Castle Business Park
Stirling
FK9 4TZ

Tel: 03000 99 66 99

<http://www.sepa.org.uk/contact/>

Northern Ireland Environment Agency
<https://www.daera-ni.gov.uk/northern-ireland-environment-agency>

HEAD OFFICE
Klondyke Building
Cromac Avenue
Gasworks Business Park
Lower Ormeau Road
Belfast BT7 2JA

Tel: 0300 200 7856

nieainfo@daera-ni.gov.uk