

DEWATERING OF UNDERGROUND DUCTS AND CHAMBERS : PPG20

POLLUTION PREVENTION GUIDELINES

These notes are for guidance only and aim to assist those engaged in the dewatering of underground ducts and inspection chambers. They have been produced by the Environment Agency in England and Wales, the Scottish Environment Protection Agency and the Environment and Heritage Service in Northern Ireland, referred to jointly as the Agency or Agencies. By following this advice, it should be possible to avoid causing pollution.

In some instances, however, it may still be necessary to contact the Agency for further advice.

Contact details will be found at the end of these guidelines.

1. GENERAL

The Agencies are responsible for the protection of “controlled waters” from pollution and it is an offence to cause such a pollution, either deliberately or accidentally. “Controlled waters” includes all watercourses, lakes, lochs, coastal waters and water contained in underground strata (groundwater). The formal consent of the Agency is required for many discharges to controlled waters, including both direct discharges to watercourses and discharges to soakaways. Such consents are granted subject to conditions and are not granted automatically. In the case of underground ducts and chambers, it is generally considered to be impractical to issue a formal consent for dewatering discharges of volume less than 5m³, although the Agency reserves the right to do so.

Operators may also be subject to control under waste management regulations. Please also note that dewatering to the foul sewer or to surface water drains requires the prior approval of the local sewerage undertaker or its sewerage agent.

2. INTRODUCTION

It is often necessary for utility companies and their contractors to dewater underground ducts or chambers. Such discharges tend to be of low volume (less than 5m³) and they occur widely. Unfortunately, water that has accumulated within a duct or chamber may be contaminated with substances such as oil, silt and dissolved chemicals, all of which can adversely affect water quality. In order to protect our rivers and groundwater, it is therefore essential to exercise care when pumping out.

3. AVOIDING POLLUTION

a. By design

Ducts and chambers should ideally be designed and constructed so that they are resistant to the ingress of water, thus reducing the need to pump them out periodically. The introduction of a slope to one end and a sump in the construction of chambers will facilitate de-watering.

b. By pumping to foul sewer

Whenever practicable, the operator should dewater the duct or chamber to the foul sewer (subject to the approval of the sewerage undertaker or its sewerage agent) or to a licenced waste disposal site or treatment facility.

c. By controlling quality

If discharge to the foul sewer is not an option, the responsibility lies with the operator to check the quality of the water. If there are any doubts about the quality of the water, it should be contained and removed to a licenced waste disposal site or treatment facility by a licenced waste disposal contractor. Discharging from the duct or chamber to a surface water drain or directly to controlled waters may only proceed subject to the following:

- i. The clarity of the water must first be checked by carefully taking a surface sample in a transparent container. The operator should minimise disturbance of the water in the duct or chamber as this may stir up any settled silt. If the sample is obviously contaminated with silt in suspension, is unnaturally discoloured or has an unusual odour it should not be discharged. The water should be pumped to suitable containers, or removed by vacuum tanker, and then taken to a licenced waste disposal site.
- ii. Any light contamination by oil can be removed from the surface of the water with absorbent materials. Where the water is heavily contaminated with oil, the entire contents of the duct or chamber should be pumped to suitable containers or removed by vacuum tanker and taken to a licenced waste disposal site. If a duct or chamber is susceptible to oil pollution, absorbent pillows or pads can be left in place and removed at the next visit. Pipelines carrying potentially polluting materials such as oil should be constructed of materials resistant to corrosion or should be double walled or sleeved.
- iii. Dewatering should be undertaken carefully in order to minimise silt and other suspended solids in the discharge. The suction end of the pump should be positioned off the bottom of the duct or chamber, as far as possible above the interface between any settled solids and the water. Wherever possible pumped discharges should be directed across grass covered ground to reduce the suspended solids load. If there are any settled solids on the bottom of the duct or chamber, these should be removed and disposed of properly after pumping has been completed.
- iv. Automatic dewatering pumps within ducts and chambers are discouraged as there will be no check on water quality prior to discharge. Similarly, ducts and chambers should not be connected into the surface water drainage system.

All the Agencies' pollution prevention guidance notes are available on the web sites listed below.

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

EMERGENCY HOTLINE

0800 80 70 60



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