

TITLE:	REQUIREMENTS FOR PRESSURE TESTING AND DISINFECTION OF UNDERGROUND PIPES	REF:	DA-G-WRG-05
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PURPOSE:	To provide Essex & Suffolk Water's requirements for testing of underground pipes
SCOPE:	Essex & Suffolk

PRESSURE TESTING (HYDRAULIC ONLY):

Metallic or Barrier type pipe work

1. Pressurise the pipe work under test to 1.5 times the maximum static pressure of the water main, or to the pressure indicated by the Water Company.
2. Apply the required pressure for **30 minutes**.
3. If there is no visible leakage, reduce the pressure to **0.5 times** test pressure and observe for another **30 minutes**.
4. If the pressure maintains a value equal to or greater than **0.5 times** test pressure during this time the system can be regarded as leak tight.

MDPE pipe work

1. Pressurise the pipe work under test to 1.5 times the maximum static pressure of the water main, or to the pressure indicated by the Water Company.
2. Apply and maintain the required pressure for **30 minutes**.
3. After **30 minutes**, stop the pump and note the pressure.
4. Note the pressure again after a further **30 minutes**. If the pressure drop is less than **0.6 bar**, the system can be considered to have no obvious leakage.
5. Continue the test for another **2 hours**. If the pressure drop exceeds **0.2 bar** over this period this will indicate a leak in the system.

IMPORTANT. The pressure must not drop by more than a total of **0.8 Bar** over the **150 minutes** of testing after the pump has stopped. There must also be no sign of visible leakage.

DISINFECTING & SAMPLING:

1. Flush the supply pipe.
2. Chlorinate the supply pipe to 50 mg/l (p.p.m.) & stand for at least 1 hour.
Alternative disinfection methods providing the same degree of effectiveness can be used only if agreed by the Water Company.
3. If the free residual chlorine is less than 30 mg/l after the contact period repeat the disinfection process as stated above.
4. After successful chlorination, neutralise and flush the supply pipe until the free residual chlorine is at the level present in the Water Company main

NOTE :-

If the free residual chlorine consistently falls after re-chlorinating or the samples fail, consideration should be given to swabbing the supply before recommencing the process.

5. Seal the supply pipe and allow the water to stand for 24 hours.
6. Draw off samples, one every 230m or for each take off, for microbiological analysis by a **UKAS accredited Laboratory**.
7. A copy of the results must be sent to us on the Laboratory's letterhead including details of their UKAS accreditation status. **(The free residual chlorine levels must also be included on the documentation supplied to us).**
8. **The pipe is to then remain sealed** until the connection to the Water Company's main.
9. The bacteriological sample results remain valid for **30 days**, after which the pipe must be re-sampled. If the results of the subsequent test are unacceptable, the pipe must be re-chlorinated and then re-sampled to confirm the re-chlorination was successful.
10. Any product used in connection with drinking water must be approved by the Drinking Water Inspectorate. If pipe sterilisation method uses a chemical other than sodium hypochlorite, please consult the Water Regulations Department with a prepared method statement.