

## **TGN6 - TEMPORARY (OVERLAND) MAINS AND SERVICES**

### **Introduction**

As part of a planned work activity, for example where water mains are being renovated or in an emergency situation, there may be a need to install a temporary overland supply. The use of temporary mains presents additional risks to the integrity of the water supply. Therefore, generally, the use of temporary mains should be only for short periods and where there is no other satisfactory means of supply. Water undertakers should have safeguards in place to satisfy themselves that risks from the use of temporary mains are adequately controlled.

### **Good practice**

1. The installation, testing and connection of a temporary main is considered a restricted operation. All staff carrying out such work should be registered under the National Water Hygiene Scheme administered by Energy and Utility Skills and carry the card that provides evidence of registration and should be suitably trained to participate in that activity.
2. The size of the overland supply pipe should be appropriate for the number of customers to be supplied and modelling techniques may be used for this purpose.
3. If the temporary main is laid as part of a pre-planned activity, it should be disinfected, sampled and satisfactory results obtained before being commissioned.
4. Alternatively, prechlorinated lengths of polyethylene pipe may be used to maintain supplies providing they have been sampled and approved for use.
5. If electrofusion joints are used then the main should be treated as if the coil has not been disinfected and further disinfection carried out and samples taken to demonstrate it is suitable to put into use.
6. Temporary service connections (<50mm) do not normally require sampling provided appropriate flushing and/or disinfection has been carried out.
7. All joints and fittings should be disinfected with a fresh solution of 1000mg/L of free available chlorine.
8. Consideration should be given to ensuring that the main and services are suitably protected from physical damage. For example where crossing driveways, footpaths and roads, appropriate measures may include the use of sandbags, ramps and shallow buried sections.
9. The potential for contamination by oil, petrol or solvents should be assessed as these may quickly penetrate plastic pipes. If crossing contaminated land then suitably protected/barrier pipe should be used.
10. Suitable points should be installed to enable the temporary main(s) to be flushed (and if necessary sampled) prior to use.
11. Where temporary mains are required to be used for extended periods, regular checks should be carried out to confirm the integrity of the arrangements.

12. The main should then be connected, flushed and chlorine residuals checked to match normal distribution levels. Further clarity, taste and odour checks should be carried out at the downstream flushing point.
13. After connection, samples should be taken from downstream points for bacteriological indicator parameters. Scientific staff should risk assess an appropriate sampling regime required for the particular installation.
14. Chlorinated water should be discharged appropriately, including dechlorination where necessary (for example when discharging to surface water). Ref: TGN 14.
15. When in use the overland main should be regularly inspected to confirm its integrity and samples should be taken at a frequency determined by risk assessment.
16. In warm weather, consideration should be given to regular flushing to minimise the effects of rises in water temperature.
17. For certain operations, such as mains relining or online replacement, it may be necessary to redeploy bypass mains as the work proceeds. Should this be the case, pipe lengths should be securely capped on disassembly and fittings cleaned. Upon reassembly, and providing that a period of no more than 14 days has elapsed between the two operations, an assessment of the cleanliness of the pipes should be carried out and recorded. Bypass mains assessed as uncontaminated by the move should be disinfected with a 50 mg/l chlorine solution for a period of 30 minutes, flushed and sampled prior to being put into service. Bypass mains that have been out of service for longer than 14 days or where contamination may have occurred should be disinfected in accordance with a company's new mains procedure. In use monitoring procedure should be as detailed above