

## INCIDENT TYPE:

UNDERGROUND GAS PIPE DAMAGE AND FIRE



### What happened

A fire occurred in an underground gas pipe as a result of Scottish Water employees carrying out excavation work on a new housing development site. Investigation of the incident has highlighted the need for safe digging procedures to be carried out AT ALL TIMES when carrying out excavation work and for a greater degree of communication and sharing of information when working on Developer sites.

### What was the cause

A squad were making a connection into a previously laid water main but were unaware that since laying the water main that gas and electrical services had been laid in the same location. The gas main was struck by a mechanical excavator resulting in a leak and approximately 15 minutes later an ignition occurred. This is likely to be due to minor damage to an adjacent electricity cable at the same time as damage to the gas main. The reason for the delayed ignition was possibly due to electrical shorting causing damage to the inner core of the cable and resulting in ignition of the gas. Fortunately no one was injured and the emergency services and the other utility services were required to control the situation.

### Remember

Public Utility Drawings and Detection aids can only help to confirm the presence of underground services; they Do Not confirm that they are not there. It should always be assumed that underground services are present and you must use your combined training, knowledge and experience in establishing the position of underground services. ALWAYS ASK for utility drawings and any other safety related information when working on sites where drawings have not already been provided.

**Buried services are widespread and it should be assumed that they are present until it is proved otherwise. A safe system of work must be adhered to AT ALL TIMES.**



### Lessons learnt

Always follow the safe digging procedures when carrying out ALL excavation work. This will include the following:

#### Utility Damage Avoidance

- Check the utility drawings provided and use as a guide ONLY.
- On Developer sites ALWAYS request utility drawings or where drawings are not available information on the location of underground utilities together with any further safety related information on arrival at site.
- Check that the CAT and Genny are within calibration date and are functioning correctly before use.
- Carry out a thorough search of the area using CAT and Genny in ALL modes prior to excavating and regularly scan the area during excavation.
- Actively search for utilities not shown on the plans.
- Trace services to and from street furniture.
- Mark the position of the utilities using bio-degradable paint or wax crayon.

#### Safe Digging

- Dig trial holes by hand to find the exact position before you use a mechanical excavator.
- Always hand dig 0.5m either side of suspected known utilities.
- Remember that cables and other utilities can be found at any depth, even just below the surface.
- If you find a utility embedded in concrete/hardened material don't try to break it out, seek advice from your Agent or Team Leader.
- If you cannot find utilities shown on the plans never assume that they're not there. Seek advice from your Agent or Team Leader.
- Never dig directly over a utility of unknown depth. If you damage a utility keep everybody clear and contact your Agent/Team Leader and SWS.
- Never attempt to move or repair a utility.
- Treat all utilities as being LIVE.