

# SAFETY ALERT (ALT-007)

## Underground Services



### BACKGROUND

The Health and Safety Executive (HSE) has issued a warning to the Utilities Industry to ensure safe working practices are followed when working near buried electrical cables. A Middlesex company was prosecuted and fined £10,000, plus £5,000 costs, following a cable strike. A 17-year old worker was using a pneumatic breaker to excavate a post-hole when he struck a live 11kV electric cable. He suffered severe burns to his face, arms and neck. The HSE investigating inspector said: *“This was a preventable accident. Work near underground services, including live electrical cables, is a hazardous activity. Although the company had assessed the risks and drawn up a method statement for carrying out the job, they failed to follow it.”*



### PRACTICAL GUIDANCE

#### SAFE SYSTEM OF WORK

When undertaking excavation works near to buried services a safe system of work must be implemented and followed. For hazardous work this will include a permit-to-work system.

A thorough risk assessment of the proposed works should be undertaken and a plan of work formed to eliminate or minimise any hazards identified, such as setting up formal emergency procedures, installing traffic management systems and ensuring the public is protected through the use of barriers or other such methods.

#### OPERATIVES

Only trained and competent operatives should excavate near to underground services and appropriate personal protective equipment should be worn at all times.

Operatives should be able to identify the different types of underground service using the colour coding system agreed between the utility supply companies.

If in doubt, operatives should always assume that an exposed service is live until they receive confirmation otherwise.

If a service becomes damaged then operatives should stop work straight away, report the damage to a supervisor or appropriate authority and not recommence work until informed by the authority that the work area is safe and any damage has been repaired.

#### SERVICE LOCATION

Utility providers should be consulted to obtain reliable service location information, such as through location plans and/or site visits to locate and mark the position of their equipment.

Features such as street lighting, drainage access points, roadside cabinets and marker posts can also help identify the presence of nearby services, but it should not be assumed that they are not present if the features cannot be seen.

Cable location equipment should be used to confirm the locations of those underground services known to be present and to check

for any that may not appear on utility provider documentation.

Hand excavated trial holes should finally be dug to confirm the exact position of the buried services, making regular checks every 0.5m.

#### EXCAVATION PRACTICES

To minimise the risk of damage, excavating by hand should take place alongside the service, exposing it from the side rather than the top, and any tools or equipment used should be insulated and flat edged (not pointed).

When excavating using mechanical equipment, the work should progress slowly and regular checks be taken at least every 0.5m by the operator and/or banksman. On board cable location monitoring equipment may be safer than using a banksman in some instances.

Exposed services should never be used as hand-holds, foot supports or for any other kind of physical support.

Once any excavation works are completed, reinstatement and backfilling should be carried out carefully to avoid damage to services; marker systems, such as warning tapes or tiles, should be reinstated.

Further guidance for training operatives working near to buried services can be found in the OPERC module 'Working Near Underground Services' (available from the OPERC on-line bookshop at: [www.operc.com](http://www.operc.com)) and the HSE publication 'Avoiding danger from underground services' (HSG 47).



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