



**Guidance on
UNDERGROUND CABLES
Safe Digging Practice**

This information is provided as guidance only to be used in conjunction with Safe Digging Practices in the vicinity of underground electricity cables. This is by no mean conclusive.

Accidents may occur, if care and attention is not exercised, when carrying out excavations to locate underground cables. Hand-held power tools and mechanical excavators are the main cause of accidents therefore they shall not be used in close proximity to underground cables. The risk of danger arising can be avoided by following a few basic rules.

GUIDANCE ON SAFE DIGGING PRACTICE TO LOCATE UNDERGROUND CABLES

Before starting work :

- complete an appropriate Risk Assessment safety check
- where suitably authorised, set up the appropriate road signs, barriers and cones as specified in “Safety at Street Works and Road Works, A Code of Practice”.
- wear the appropriate high visibility clothing and other personal protective equipment deemed necessary to carry out your task safely.
- check the cable records to determine the number of cables, voltage rating and physical dimensions of the cable(s).
- use cable records to determine the approximate line of the cables.
- use a cable avoidance tool (C.A.T.) to trace the line of the cables and mark the route of the cables on the ground.
- where no cable or other utility records exist, consult your Supervisor.
- have all other utility drawings on site and mark position of these prior to digging.

On commencement of work:

- avoid the use a hand-held power tool or mechanical excavator within 0.5 m of a known cable or other utility.
- use a mechanical excavator or a power tool only to break the top surface of the footpath or carriageway.
- hand dig, using a round edged spade or shovel. A pick may be used with care to free large sections of stone. A fork or other pointed instrument shall never be used.
- during excavation make repeat checks with the CAT to determine more precisely the position of any cable(s).
- treat all cables found as live, until proven otherwise.

N.B. If in doubt as to the identification of any cable, you must stop work immediately, withdraw and seek advice from your Supervisor. Remember - there may be no apparent physical differences between LV and HV cables - each may have tape or wire armour. In exceptional cases some older LV and HV cables may be un-armoured.

ADDITIONAL GUIDANCE FOR THE LOCATION OF UNDERGROUND CABLES

- when excavating in an enclosed or confined space, test the atmosphere to determine the levels of oxygen, toxic gas or flammable gas.
- where any signs of distress are evident in the cable or a joint e.g. smell, heat, noise, or damage – stop work, withdraw and consult the Supervisor.
- carry out an on site written START assessment and where identified always shore excavations where there is a risk of collapse using materials suitable to prevent dislodgement of the sides of the excavation.
- backfill around cables with a fine material, and not use hardcore as this is likely to cause damage.
- replace any warning tiles or tape that may have been disturbed.
- ensure that material removed from the track or joint bay is positioned in such a manner that it does not pose a threat to you, fellow workers or members of the public.
- treat other utilities equipment e.g. gas, water and telecommunications with respect.
- report any damage sustained to the other services to your Supervisor.
- do not use cables as a convenient step in or out of a track or joint bay.

GUIDANCE ON EXCAVATING UNDER FAULT CONDITIONS

- Where the location of a fault is known or suspected, the top surface (e.g. concrete, tar, or paving slabs) can be removed before the cable is made dead.
- Where the location of a fault is not known, digging can proceed as normal.
- Should any signs of the fault become evident e.g. smell, heat, noise or signs of cable damage – stop work, withdraw and consult their Supervisor immediately;
- **Never - work on a faulty/damaged cable or joint within 1 metre of the damaged section.**

N.B. Remember - if in any doubt - stop work, withdraw and consult your Supervisor IMMEDIATELY.