

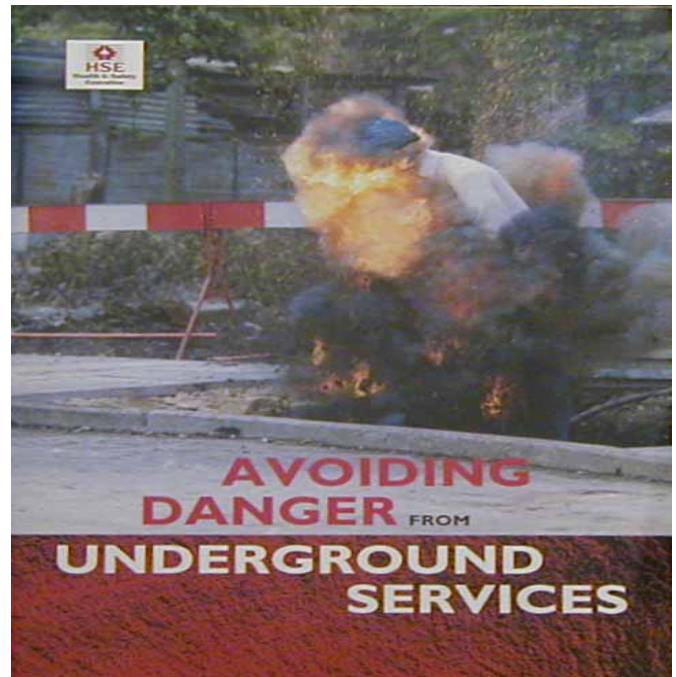
## BURIED ELECTRICAL SERVICES

Buried services present a significant risk because:

- they cannot be seen, and
- they are potentially dangerous if inadvertently damaged.

Buried services include:

- electricity cables
- water pipes
- gas pipelines and
- other services such as telecommunications cable and oil or fuel pipelines.



All present their own particular risks. However, we will deal with buried electrical services.

Whenever an excavation is planned, the presence of buried electrical services must be assumed and suitable precautions taken.

Before any excavation work starts (unless within the delineated quarry extraction area) you must:

- check the site plan for buried services - this may not always be accurate, so if no cables are shown, don't assume that none are there
- obtain utility service drawings from the various service companies prior to carrying out any excavation work
- conduct a walkover survey, looking for any markers that have been placed to identify buried services
- look for cables going underground on adjacent structures or buildings
- never assume cables run in a straight line. A cable uncoiled from a drum into a trench will snake. Cables are often looped below ground to take up excess lengths to avoid trimming at the time of the original installation.

- Complete a scan using a scanning device (CAT – Cable Avoidance Tool - and genny). You must be trained to use a CAT scanner and genny.
- Ground Probing Radar should be considered for the location of cables / services. This will also give an indication of the depth of the service.

If, following a scan, no cables are detected, the absence of cables cannot always be assured.

Before excavation work commences, complete:

- A Risk Assessment of the task, and
- A Permit To Work for the excavation site or area

Identify the hazards you have found, the risks arising from the hazard(s), and how you are going to control them.

If significant risk still remains DO NOT proceed, seek advice from your manager.

Further information about avoiding danger from buried services may be found in the HSE Guidance HSG 47.

### QUESTIONS – (there may be more than one correct answer)

		<b>A</b>	<b>B</b>	<b>C</b>
<b>C</b>	When do you carry out a scan using the CAT scanner and genny?	During excavation work	Before excavation work starts	Not always required
<b>2</b>	What other checks should be carried out?	Check site plan	Walkover survey	None - CAT scanner is 100% reliable
<b>3</b>	Can you assume that cables run in straight lines?	Yes	No	
<b>4</b>	Is a Risk Assessment and Permit to Work always required?	Yes- but only if crossing a vehicle access route	Yes – but only if near a pedestrian access route.	Yes – before work commences
<b>5</b>	The Risk Assessment has identified 'significant' risks that cannot be controlled; what should you do?	Carry out the task, but with extra care	Ask a colleague to help you	Do not proceed. Seek advice from your manager

