

Avoiding concealed services and overhead power lines:

What you need to know as a busy builder

Don't let your building project strike the wrong note. Protect people on your site by following these essential health and safety tips.

- Before excavation starts, consult the utilities suppliers/site owner about buried gas pipes or electrical cables. Get hold of service plans.
- To locate buried services use cable avoidance tools (CATs) and service plans. Mark their route with paint or wooden pegs.
- Don't use mechanical excavators or power tools within 0.5m of the suspected route.
- Take care using power tools to break through paved surfaces above gas pipes and cable routes.
- Work well away from any overhead power lines when handling long items like scaffold poles, or using lifting equipment and MEWPs.
- Or, arrange with the electricity supplier for overhead power lines to be shrouded (covered), or made dead or rerouted.
- Plant working near overhead power lines should not approach closer than:

- 15m (plus length of jib) if the line is suspended from steel towers; or
- 9m (plus length of jib) if the line is supported on wooden poles.

- If unsure where concealed cables are, turn the electricity supply off before drilling into walls etc.

What can happen if health and safety is ignored?

Two experienced ground workers used a pneumatic breaker to dig a shallow trench in a pavement. No services were marked and they hit an 11KV cable. One suffered minor burns and the other serious burns needing treatment in intensive care. Three 11KV cables, two other electricity cables and a gas main were all located beneath the pavement. The construction firm was fined £13 000 and paid £3870 costs.

See over for examples of good and bad practice ...

Working with concealed services:

Good practice



A cable avoidance tool in use

Bad practice



This charred breaker has struck an 11KV cable in a shallow trench



Make sure you know the location of concealed power cables and gas pipes before drilling into walls or floors. If their location is unknown, turn services off before drilling



Overhead power lines

A new employee without proper training parked beneath three overhead 11KV cables when delivering roofing materials. When he moved the jib it struck one of the cables. He died instantly. The company was fined £50 000 and ordered to pay prosecution costs of £20 000

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available at: www.hse.gov.uk/pubns/cis65.pdf.

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The Working Well Together campaign aims to improve health and safety in the construction industry, particularly in small and micro businesses. For more information visit www.wwt.uk.com

