Working Near Services Toolbox Talk

Key points, do's and don'ts, and questions with answers. The attendance sign-off sheet is on the last page.

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Key points to cover

- Before any excavation or ground penetration, obtain up-to-date utility plans from the asset owners and use a cable avoidance tool (CAT) and signal generator (Genny) to locate services
- Treat all located services as live until confirmed otherwise by the asset owner
- Plan and manage any work within 10 metres of an overhead power line, and keep plant out of a safety zone at least 6 metres from the outermost wire on each side of the line (GS6)
- Expose known services with trial holes dug by hand or by vacuum excavation before digging near them, and never use a mechanical excavator within 500mm of a gas pipe
- Mark the location of identified services with paint or markers before work begins
- Use insulated hand tools (spade, pick) when digging near known electrical cables
- Report any damage to underground services immediately, even if apparently minor — gas leaks and cable damage can escalate rapidly

Do's and don'ts

Do

- Obtain up-to-date utility plans from all asset owners before starting any excavation
- Use a CAT and Genny to scan the full work area before breaking ground — even if plans show nothing
- Hand dig trial holes to expose any known or suspected service, using insulated tools near electric cables
- Mark the positions of identified services clearly on the ground
- Keep plant and equipment out of the barriered safety zone — at least 6 metres from the outermost wire on each side of the line, wider if the line owner advises

Don't

- Never assume an area is free of services because plans don't show any — plans can be incomplete or inaccurate
- Never use a mechanical excavator within 500mm of a gas pipe or pipeline — the pipe's owner may advise a bigger distance
- Never use a metal pickaxe or bar near an electrical cable — use insulated hand tools
- Never drive plant or equipment under overhead power lines without a specific risk assessment and goalposts or barriers in place
- Never attempt to repair a damaged service yourself — evacuate the area and call the asset owner

Questions to check understanding

Ask each question and let the crew answer before you read out the answer.

Q1. What is a CAT and Genny and why must they be used before excavation?

Answer: A CAT (Cable Avoidance Tool) is a handheld device that detects electromagnetic signals from underground cables and metallic pipes. A Genny (signal generator) is used with the CAT to apply a signal to a specific service so it can be traced more accurately. They must be used together before any excavation because utility plans alone are not reliable — they can be inaccurate, incomplete, or out of date, and should never be relied on for distances or depths. The CAT and Genny provide on-the-ground confirmation of service locations. Only trained and competent operators should use them.

Q2. How far should plant be kept from overhead power lines?

Answer: HSE guidance GS6 says to manage the risk for any work within 10 metres of an overhead line, and to mark out a safety zone at least 6 metres from the outermost wire on each side of the line — wider if the line owner advises or a jib could reach into it. Physical measures such as goalposts, barriers, and defined crossing points should be installed to prevent plant from breaching the exclusion zone. If work must take place closer, consult the line owner about diverting the line or switching it off — if the work can't be done safely, it shouldn't be done.

Q3. Why must you hand dig to expose a service before using an excavator near it?

Answer: Because mechanical excavators can easily sever or damage buried cables, gas mains, and water pipes, causing electrocution, explosion, flooding, or loss of essential services. Hand digging with insulated tools allows the operative to feel for and carefully expose the service without striking it with force. HSG47 gives two 500mm rules. Never use a mechanical excavator within 500mm of a gas pipe or pipeline. Where practicable, don't use hand-held power tools within 500mm of a service buried in or under a hard surface. Follow each asset owner's instructions as well.

Attendance sign-off sheet: Working Near Services Toolbox Talk

Everyone who attended prints their name and signs to confirm they received this talk.

Date _____ **Time** _____

Site or location _____ **Presented by** _____

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Presenter's signature _____

This is general guidance for UK construction sites. Check it against your own risk assessment, method statement and the site before you deliver it. Toolbox talk from The Site Book, reviewed 7 November 2026. Read it online at thesitebook.co.uk/toolbox-talks/working-near-services.