

Buried and overhead services.

Incidents involving contact with underground and overhead services such as gas, water, electricity and telecommunications lines cause disruption, damage, injury and in the worst case, death.

The HSE advises that on average in the UK 12 deaths and over 600 serious injuries that relate to contact with the UK's electricity network are reported annually.

The monetary cost of such incidents together with reputational damage, injuries to employees and loss of life can all have a significant and sometimes devastating impact on a business. Prosecutions by the HSE are common and employers run the risk of a Corporate Manslaughter charge if they do not pay proper attention to risk management in this area. Through detailed planning, risk assessments and the implementation of suitable control measures, organisations can considerably reduce their own and their employees' exposure to potential hazards.

General best practice standards

- > Ensure that risk assessments and method statements are relevant to the work being undertaken.
- > Implement suitable emergency response procedures to cover an accidental strike - include first aid arrangements, contacts for emergency services and utility providers, precautions to be taken until the location is made safe, etc.
- > Ensure the workforce is adequately trained in detecting underground utilities along with overhead services, and the dangers of damaging such services.
- > Monitor the implementation of agreed working procedures and record the findings by way of site inspections and audits.
- > Record and retain records relating to maintenance, calibration and inspections and any other checks of service detection equipment used, as well as documenting training provided to employees on the use of this equipment.
- > Clearly identify responsibilities for managing work in close proximity to overhead and underground services.

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Recommended actions - buried services

- > Consider using a permit to dig or similar authorisation system ensuring that it is designed to address service plans, service location, safe digging and that it takes into account local conditions.
- > Prior to excavations commencing consult the utilities suppliers/site owner about underground services, obtain copies of service plans.
- > Locate buried services using cable avoidance tools (CATS) or GPR and service plans. Mark out the route of the cable or pipe using paint or wooden pegs and string.
- > Do not use mechanical excavators or power tools within 0.5m of a suspected route.
- > Be careful when using power tools to break through paved surfaces above gas pipes and cable routes.
- > If unsure where pipes or cables are, despite having carried out location identification, ensure local services are isolated by the utility supplier.
- > Adopt safe digging practices such as trial holes using suitable hand tools, excavating alongside a service as opposed to directly above it, horizontal digging, water or high velocity air jetting or vacuum removal.
- > Ensure services are supported once exposed, identify the service type and fulfil any specific reinstatement requirements when backfilling.

QBE Policyholders can access additional information* regarding these risks which consists of a series of risk essentials documents and an online self-assessment questionnaire. This additional information helps QBE Policyholders further improve their overall management of buried services:

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-sample-permit>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-risk-assessment-considerations>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-design-and-sourcing-information>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-competence>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-permitting>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-scanning>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-emergency-procedures>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-performance-benchmarking>

<https://qbееurope.com/document-library/risk-solutions/risk-essential/risk-essential-buried-services-appendix-bsat-competence-framework>

*Please note that these documents are password protected. If you don't have a password and would like to access any restricted content please speak to your contact at QBE, or alternatively send us an email at enquiries@uk.qbe.com

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Recommended actions – overhead services

- > Ensure that work is well away from overhead power lines (OHPLS) when handling long items such as scaffold poles or using lifting equipment and MEWPS.
- > Arrange with the electricity supplier for OHPLS to be shrouded, disconnected or rerouted.
- > Find out the maximum height and reach of all site equipment (include the height of radio aerials or flashing beacons in the measurements).
- > Create alternative access routes or work areas to avoid OHPLS entirely where possible.
- > Use barriers and overhead goalposts to control access and traffic routes.
- > Contact the Distribution Network Operator (DNO) to obtain the safe clearance distance. (The DNO can usually supply stickers describing emergency procedures and containing contact numbers that can be stuck in the cabs of vehicles likely to be used near overhead power lines.)
- > Retract booms of telescopic handlers and lower crane jibs when they are moving on site.
- > Plant working near OHPLS should not approach closer than 15m (plus length of jib) if the power line is suspended from steel towers; or 9m (plus length of jib) if the line is supported on wooden poles.
- > Consider the risk of a flashover occurring between the power line and site equipment; actually, touching the line is not necessary for an incident to occur and can be fatal. Safety can be achieved by a combination of measures – planning and preparation; eliminating the danger; controlling access; and controlling the work. Supervision of employees and contractors is also critical to ensure they are following the safety procedures in place.

Guidance and useful information

The Health and Safety at Work Act, the Management of Health and Safety at Work Regulations and the Construction (Design and Management) Regulations apply to work in this area.

For further information the HSE has also produced excellent guidance in the form of:

HSG 47 – Avoiding Danger from Underground Services:
<http://www.hse.gov.uk/pubns/books/hsg47.htm>

GS6 – Avoiding Danger from Overhead Power Lines:
<http://www.hse.gov.uk/pubns/g6.htm>

There is also a BSI PAS available: **PAS 128:2014 – Specification for underground utility detection, verification and location.**

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