3 recent high potential incidents involving underground cable strikes

WHAT HAPPENED

Contractors working for us on construction projects have struck buried HV cables while digging trenches on three separate occasions in the last 6 months. In all three incidents risk assessments and method statements (RAMS), buried services plans and Permits to Work (PtW)) were in place.

On the first occasion the scan with a cable avoidance tool (CAT) wasn't sufficient for the ground conditions and didn't identify the presence of the cable.

In the other two cases, cables were identified by the CAT scans and were initially located by hand digging with insulated tools

- First incident the CAT scan had identified an earthing cable, but not the HV cable below, which was struck when the trenching works continued with an excavator.
- Second incident, the operator decided to expose the cable at a second point using his machine, striking the cable, in contravention of the RAMS and PtW.



KEY FINDINGS

- **Safe Systems** - The contractors had suitable RAMS and Permits to Work; however, they were not readily available / communicated in one of the incidents, where the operator chose to deviate from safe working practices to save time and effort.
- **Cable Plans** - Buried service plans were available but were not suitably updated in all instances.
- **Cat Scanning** - CAT scanning conducted improperly.
- **Permit to Work** - High Risk Permit does not cover breaking ground.
- **Communication** - Lessons learned from the incidents was not fully communicated by the contractors.

LEARNING POINTS / ACTIONS TAKEN

HOW COULD THEY HAVE BEEN AVOIDED

- Correct use of Cable Avoidance Tools, in one case the tool was only used in “Power” mode, restricting its sensitivity.
- Compliance with RAMS, exposing cables at crossing points by hand
- More explicit “Permit to Dig” process with none working supervision in place.
- Additional heavier duty marking of buried services during installation.

KEY REVIEW POINTS

- Are good practices followed when installing new buried services, with ‘Tile Tape’ utility marking as standard for all services, accurate (DGPS) survey control, and updated records?
- Are excavations for trenches, etc. controlled under a specific Permit to Work / Permit to Dig?
- Are CAT scans carried out by specifically trained and competent personnel in accordance with good practices?
- Do we ensure close and effective direct supervision of works near buried services and other high-risk tasks?

KEY RESOURCES

This short and shocking video clip which shows operatives engulfed in flames following a cable strike reinforces why following the correct procedures is so important.

HSE has produced guidance on the avoidance of underground electric cables that can be viewed via this link

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LOCATION:	**CONSTRUCTION/DELIVERY SITE**	**ALERT STATUS:**	**High Potential**
ACTIVITY:	**CONTRACTING**	**DATE ISSUED:**	**29/11/2023 11:00:49**
SUB ACTIVITY:	**NO SUB ACTIVITY AVAILABLE**	**INCIDENT No:**	**03679**