



Description of Event

Pavement coring was undertaken close to 2 275kV cables which were unmarked on the utility plans

Population at Risk

Construction and Maintenance Workers

Hazardous Activity and Residual Risk Description

- Construction Workers on site were exposed to the serious risk of being electrocuted or damaging equipment and the potential of doing so has an assessed risk of an almost certain likelihood of potentially multiple fatalities.
- Coring was undertaken within 1m of high-voltage cables which had not been identified by the design team during the pre-construction phase or construction team on site.

Potential consequences of this event

- HSE reported that yearly there are over 1000 received injuries with 30 being fatal relating to electricity.

Safety Hub [Alert Database](#)

- Sub-category 1 Electrical Safety with sub-category 2 Electrocutation and sub-category 2 Unsafe Act/Condition has 19 incidents with 4 fatalities and 7 injuries.

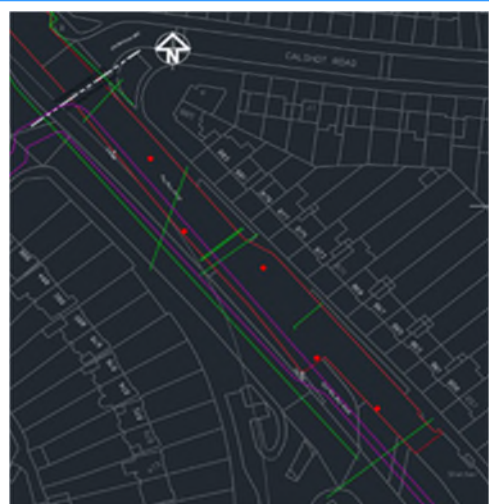


Photo of Plans for the Cores with Nation Grid cables (Purple) added.

Potential Mitigation Measures



Design

- Carry out gap analysis to identify missing data.
- Undertake site investigation to obtain and verify data.
- Use non-invasive methods for pavement testing where possible.
- Always follow the hierarchy in PAS 128 and NRSWA procedures.
- Drawings and 3D models should contain hazard markers.
- Provide comprehensive Preconstruction Information

Construction

- Safe Systems of Work should include a permit to dig/excavate.
- Undertake detection survey (PAS 128) by scanning/trial holing and recording results.
- Review results against the task to be carried out to verify data.

Maintenance / Operations

- Follow procedures as identified above under construction.
- When receiving as-built information as part of project Handover ensure the information has been reviewed and checked by the Principal Designer and Principal Contractor before transferring to the H&S File and databases.
- As-built records should always be checked in line with the NRSWA procedures.

Further Guidance and Reading

- [RtB 9](#) – Utility Avoidance
- [RtB 26](#) – Safety by Design
- [New Roads and Street Works Act 1991](#)
- [PAS 128](#) – Specification for underground utility detection
- [NUAR](#) – Government asset register



Please send ideas for Whole Life Design safety shares to wellbeing@nationalhighways.co.uk

LEAN

Reduced Plant

Alternative Plant

Reduced Labour

Reduced Transport

Improved end user benefits

Reduced Activity Duration

Reduced Defects

Reduced Reportable Accidents