ROAD RESTORATION WORKS – IDENTIFYING UNDERGROUND SERVICES

WLD.017

Description of Event

A medium pressure Gas Main was struck due inadequate information (low cover - 70mm).

Population at Risk

Construction Workers, Maintenance Workers and Members of Public

Hazardous Activity and Residual Risk Description

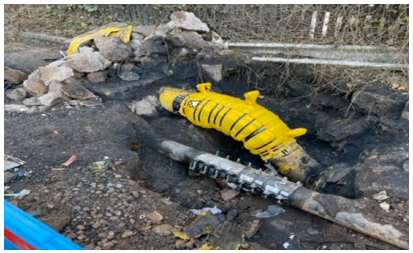
- Road works were conducted without identifying the exact location of the medium pressure gas main which resulted in it being struck.
- Existing service had a very low cover (70mm).
- Striking of an unidentified asset causing it to rupture has an assessed residual risk of a likely likelihood of serious harm.

Potential consequences of this event

- The nearby student accommodation was left without gas for 3 days while a temporary fix was put in place. A nearby water main was also struck during excavation of the gas main although the water was re-routed around the incident.
- The residual risk requires the location of utilities to be confirmed prior to excavation work beginning.

Safety Hub Alert Database

- Filtering by text “gas main” in subject description has 8 safety alerts.
- Filtering by text “water main” in subject description has 5 safety alerts, including 3 with injury.



Repairs made to excavated Gas and Water Mains

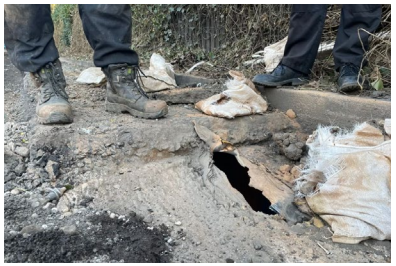


Image of Burst Gas Main once Planer was removed

Potential Mitigation Measures

Design

- Refer to PAS128 survey methodology to obtain information on utilities.
- Designers should consult asset records (structures) for existing hazards.
- Designer should utilise clash detection modelling to identity potential areas of conflict between existing utilities and the proposed works and, where possible, alter the design to avoid utilities to reduce risk.
- Where utilities cannot be avoided, consideration should be given to diverting them during the construction stage.

Construction

- Where a designer has identified existing utilities within the site, additional time should be added to the programme to allow the location(s) to be verified.
- Hand dig/ trial holes should be used to confirm location of utilities prior to larger scale excavation works.

Maintenance / Operations

- Apply the above design and construction mitigation measures prior to undertaking maintenance operations.
- Enquiries should be made with utility companies to attain updated utility location information prior to beginning maintenance works.

Further Guidance and Reading

- CS 229 – Data for Pavement Assessment
- RtB 9 – Utility Avoidance
- PAS128 – Methodology for Delivery Utility Surveys
- Positioning and Colour Coding of Underground Utilities’ Apparatus

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

LEAN								Improved end user benefits	Reduced Activity Duration	Reduced Defects	Reduced Reportable Accidents