

SAFETY ALERT



10kV Electrical Service Strike

Document No: PS-HSQE-SA-78

Revision: 1.0

Approved By: Maura Kilcommons

1. What Happened?

While undertaking watermain leak repair works a general operative (GO) came into contact with a 10kV Medium Voltage (MC) electrical cable. During the work, what appeared to be a 4" brown/orange wavin pipe was found and subsequently damaged. At the time of the incident the operative was attempting to cut away a section of the damaged pipe, in doing so the operative cut into the electric cable which was unknowingly contained within the pipe. The GO did not sustain any physical injuries as a result of the incident.

GIS survey was referenced during the planning for the work which did not indicate any electrical service in the vicinity of the water leak. However, scanning of the area by cable avoidance tool did identify an electrical service (voltage unknown) in the area. The assumption was made that it was below the 4" pipe.

Key findings from the investigation include:

- Mechanical excavation was used around services without adequate protection or verification.
- The exact location of the electrical service was not physically verified using trial holes (Note: as outlined by the H.S.A code of practice for avoiding danger from underground services.)
- The control measure identified in the RAMS was not implemented i.e. Any excavation in the immediate area of the location of such services to be undertaken by hand to prevent damage to the service.



Photo1: Pipe & Cable post incident



Photo 2: Condition of hand saw post incident.

2. Immediate Actions

- The area was made safe, and the GO was escorted to hospital for check-up and monitoring.
- ESB were notified of the incident, they subsequently attended and took control of the site.
- All necessary notifications were undertaken, and an Investigation commenced.
- A toolbox walk was undertaken with both water and drainage crews on the incident.

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3. Further Actions

When planning excavation works the following must be addressed:

- GIS & Utility drawings must be reviewed to assess the types of services at the work location.
- Where necessary the utility owner must be contacted in advance of the works
- All known services must be located by a trained and competent person using a calibrated cable avoidance tool.
- During the site scanning, further visual checks must be undertaken to identify the presence of other services e.g., kiosks, gullies, manholes, light poles, gas connections, boundary boxes, reinstatements in pavements etc. The area must be clearly spray painted/marked, identifying the type of service, upon completion of scanning.
- The area must be continuous scanned during excavation works.
- The physical location of all known scanned services must be verified by means of trial holes using either hand digging or non-destructive digging (NDD) techniques.
- Where an electrical service is identified on a scan - assume all services are electrical until confirmed otherwise.
- Only when known services are physically verified and adequate protection measures are in place to prevent impact, can mechanical excavation commence. A spotter (safety observer) should be in place to assist and warn the operator if they are coming too close to the identified services.
- Always proceed with caution and assume that more services might be present, ensure the excavation is continually scanned throughout the works, flat bucket attachments and insulated tools only should be used.

4. Further Information

Please refer any queries to hsqe@water.ie or directly to your Uisce Éireann H&S support team.

5. Distribution list

Internal		
All UÉ Staff <input type="checkbox"/>	Asset Operations <input checked="" type="checkbox"/>	Infrastructure Delivery <input checked="" type="checkbox"/>
Asset Management <input checked="" type="checkbox"/>	Fleet & Facilities <input type="checkbox"/>	Scientific & Technical Services <input type="checkbox"/>
Other Please Specify _____		
External		
Local Authority <input checked="" type="checkbox"/>	DBO <input checked="" type="checkbox"/>	Resident Engineers <input checked="" type="checkbox"/>
3 rd Party Inspectors <input checked="" type="checkbox"/>	3 rd Party Contractor: Infrastructure Delivery <input checked="" type="checkbox"/> Operations <input checked="" type="checkbox"/> Facilities <input checked="" type="checkbox"/>	
Other Please Specify _____		

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