

Safety Bulletin

Safety in Chambers

Very recently one of our colleagues had a serious accident whilst working in one of our chambers and suffered significant burns as a result of exposure to a damaged live power cable.

What happened?

An employee had been tasked with checking a meter due to a suspected fault. The chamber was located in a footpath in the Aztec West business park and contained a water supply used for watering the gardens. The footpath had several covers and lamp posts suggesting that numerous other types of services were in the same footpath.



Due to the age of the meter (circa 20 years) the two-person crew decided to replace the meter as it was due for replacement and this may have fixed the suspected fault. Working as a team, they lifted the chamber cover to reveal a blue poly pipe and meter partially encased in spoil. The spoil was type 1 aggregate and had hardened over time and could not be removed with a scoop. One of the team obtained their insulated grafting tool to loosen the aggregate whilst the other team member completed the details of the job in the work management system. As the employee gently loosened the material, a bang and a flashover occurred causing a partial thickness burn (second degree burn) to his forearm, slight burns to his face and hair as well as burning the high visibility jerkin that he was wearing and scorching his trousers. Our colleague had struck an 11,000 volt electrical cable that was just below the surface of the aggregate and was below the water supply pipe. He was taken to Southmead hospital and treated for burns.



It was thought that this may have been a one-off incident however following this accident, a hazard has been reported where another meter chamber has been found to contain a power supply cable directly beneath a water supply pipe. Discussions with other water companies has highlighted that the potential for other services to be located in water meter chambers is not as uncommon as you would think and may be on the increase due to the installation of meter chambers by third parties.



What can we learn from this incident?

The accident is still under investigation to identify the root cause however we need to make the assumption that all our water meter chambers have the potential to contain other underground services particularly power cables as these have the potential to cause the most harm. As a minimum, you must carry out a dynamic risk assessment. Your risk assessment will help to determine what risks are present. Meter chambers should be scanned using a Cable Avoidance Tool (CAT) **and** signal generator prior to any work being carried out. You should also check the surrounding area for external street furniture to give you a guide that underground services may be present. If underground services are detected, your line manager must be contacted and a request made for a full utility pack which includes drawings to enable you to locate any services. No breaking of ground or scooping with metal scoops should take place until you have established all the risks and you have obtained permission from your line manager.

The employee that was exposed to the flash over was wearing a fire retardant hi visibility jerkin which melted rather than ignited. His injuries could have been significantly worse if it had been non-fire retardant and burst into flames. Please ensure that your hi vis jerkin is fire retardant especially if you are likely to come into contact with underground services or electricity. You can do this by checking the label inside the jerkin. It should have both the symbol of the garment and the fire symbol (highlighted by a red circle above) Underneath the fire symbol it should have EN533:1997 printed on it. If your hi vis jerkin is not fire retardant ie. does not have EN533 on it, speak to your line manager who can order a replacement from Barrow Logistics.

For ease, here are the part numbers:

Size:	Part no:	Size:	Part no:
XXXL	52691	L	52683
XXL	52681	M	52682
XL	52684		

Record of Internal Training/Awareness

Name of person providing awareness:		
Topics:		Document Reference Number
Safety Bulletin – Safety in Chambers		
Name of Attendee and employer details if not Bristol Water		Signature
1		
2		
3		
4		
5		
6		
7		
8		
9		
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11		
12		

Signature of person providing awareness:
Name:
Job Title :
Date:

Please scan and email the completed record of awareness to handsteam@bristolwater.co.uk for uploading into Cascade. Thank you.