

# HEALTH AND SAFETY BULLETIN

## Tilbury Douglas— Electrical Service Strike

Recently a buried 230v electrical service was struck whilst undertaking soil sampling with a 9 Tonne excavator to determine if asbestos was present.

The area had no known services within it and non were shown on the supplied drawings.

Tilbury Douglas undertook a Ground Penetrating Radar Survey, a CAT and Genny Survey and a RD8000 Cable Detection Survey and no services were detected.

A ground disturbance permit was issued.

The overarching failure to detect the service was that service avoidance and detection scans were performed with the sensitivity of the equipment reduced owing to interference from a metal chain link fence and buried metal posts which were in close proximity.

The interference from this fence resulted in the sensitivity of the detection equipment being reduced to such an extent that the service was only detectable when within 50mm of it.

The service was buried at a depth between 250-350mm and although the excavation was rechecked at the first cut of 150mm the cable was outside of the detection window and was struck when the next 150mm was removed.

A further contributory factor was that the service was contained within a duct, running to a pump which the Genny could have been clamped to and signal generation would have detected this service (this was achieved at incident reconstruction), but was missed as vegetative growth had obscured it.



**Pictures show:** ZERO detection at 50mm above the energised service (post repair).

**Action:** Ensure a full visual inspection of the work area and its immediate surroundings occurs. High vegetative growth means you cannot do this so is a **STOP POINT** until it is safely reduced (Strim down with a nylon corded strimmer not a metal blade cutter).

**Action:** If significant interference is encountered whilst attempting to use service detection and service avoidance tools this is a **STOP POINT** and contact should be made with your Regional Health and Safety Advisor.

**Awareness:** Ground Penetrating Radar Surveys can be unreliable in previously disturbed ground when attempting to detect small services.

**Awareness:** Interference can render cable avoidance and detection tools ineffective .

**Awareness:** Ensure correct PPE is worn (ARC or flame resistant).

**IF IN ANY DOUBT STOP AND CONTACT THE HEALTH AND SAFETY ADVISOR ALLOCATED TO YOUR PROJECT.**