

SAFETY ALERT

236 – Impacting Underground Services

Background

Over recent months there has been an increase in the number of incidents where underground services have been damaged during excavation or drilling activities. Whilst these have not resulted in significant consequences, these types of events have the potential to cause serious harm to people, property and the environment.

There have been a variety of contributing factors that have led to these incidents however a primary cause in each event can be attributed to a lack of planning and investigation undertaken to identify and locate underground services.

How to prevent these events

Job Planning & Investigative Methods

Prior to commencing any mechanical excavation, trenching or penetration activities, adequate investigation should be undertaken to identify and positively locate underground services.

This should consist of:

- Reviewing Site Plans / As Built Drawings
- Undertaking Ground (Subsurface) Scanning
- Obtaining Service Authority Information - Dial Before You Dig (DBYD)
- Obtaining any necessary permits

Whilst the processes listed above can be effective at determining what services are present in the area, there are some limitations when used in isolation. These include:

- Site Plans / As Built Drawings and DBYD information may not be current
- Ground scanning may not identify all services or provide an exact location, type or depth of the identified services.

Given the above limitations, it is important to use a combination of these measures to minimise the risk.

Focus on Ground Scanning

In line with Australian Standards (AS 5488), there are four recognised quality levels (QL) of information for subsurface utility locating, ranging from Quality Level A (highest) through to D (lowest), explained below.

Quality Levels – Subsurface Scanning

Quality Level D

QL-D is the most basic form of information available. Usually relies on verbal recollections and existing utility records. It is often used for route selection and project planning.

Quality Level C

Takes QL-D information and correlates it with a survey of any visible above-ground utility facilities.

Quality Level B

Applies ground scanning to determine existence and horizontal position of utilities through geophysical methods.

Quality Level A

Following ground scanning the physical exposure of subsurface utilities (potholing). This is usually achieved through hydro-vacuuming or digging to establish the horizontal and vertical positioning of services and allows for precise planning and profile mapping.

Determining what method to apply

The application of these scanning methods outlined above should be discussed prior to work commencing and preference given to applying the highest standard.

This will be dependent on the work environment and potential risk that may be present. Where uncertainty exists, contact the HSE team for assistance.

For more information regarding this incident please contact:

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Date of Issue:	16/07/2021

Report all incidents and near misses

Please display on Safety Noticeboards and raise this matter at the next Toolbox Talk or Safety Meeting.