

Utility surveying is a professional service defined in Australia by the Australian Standard, Classification of subsurface utility information AS5488.1:2019.

Cable Locates & Consulting provides all utility investigations in accordance with the Australian standard. This standard identifies four quality levels and specifies the following tolerances:

- QL-A +/- 50mm
- QL-B +/- 300mm horizontal and +/- 500mm vertical
- QL-C - Tolerance does not apply
- QL-D - Tolerance does not apply

Quality Level A

(Meets location accuracy standards for minimum risk when excavating)

Quality Level A is the highest quality level detailed within AS5488. It is the only quality level that defines a subsurface utility to be 'validated'. This level involves the exposure of underground utilities through non-destructive methods (vacuum potholing). The utility type, size and material will all be confirmed.

Quality Level B

(Significant risk reduction)

Quality Level B provides the horizontal position of underground utilities through surface geophysical methods. Traditionally, electromagnetic detection (EMI) is used for conductive utilities and ground penetrating radar (GPR) is primarily used for non-conductive utilities. Both methods have limitations and can be affected by the following, but not limited to:

- Depth of the utility.
- Close proximity of utilities.
- Soil/geological conditions.
- Material conductivity and other geological anomalies that may distort EMI and GPR frequencies.
- Terrain onsite i.e., surface condition, vegetation cover, reinforced concrete, surface water etc.

The effectiveness of GPR is highly dependent on the ground conditions. Cable Locates cannot guarantee GPR will be effective on all sites/projects however this will be communicated to advise on a solution if GPR is unsuccessful.

Quality Level C

(Low accuracy and a high risk of damage)

Quality level C is best described as a surface feature correlation or an interpretation of the approximate location and attributes of a subsurface utility asset using a combination of existing records and site survey of visible evidence for example you can see the pit lids shown on the plan but the actual position of underground connection between pits is still assumed.

Quality Level D

(The least accurate level and if used on its own has a high risk of damage)

Quality level D information is generally obtained from existing records provided by utilities as a result of a Before You Dig enquiry being lodged. In many cases the asset depicted on the plan is in a schematic format only and intended only to indicate its presence.