AS 5488.2019

Maintaining integrity of data under the Australian Standard
Quality Level D (QL-D) is the lowest of the four quality levels. The attribute information and metadata of a subsurface utility may be compiled from any, or a combination of –

(a) Existing records;
(b) Cursory site inspection; and
(c) Andecdotal evidence
质量等级C（QL-C）是指对表面特征的关联或对地下设施资产的近似位置和属性的解释，使用现有记录（和/或口传证据）、现场调查的可见证据、和/或方法来显示一个未定义的实体的存在。

QL-C的最低要求是相对空间位置。
Quality Level B (QL-B) provides relative subsurface feature location in three dimensions by tracing (see Clause 1.4.32) or physical measurement that does not satisfy the spatial tolerance of Quality Level A. The minimum requirement for Quality Level B is relative spatial position.

1.4.32 trace
physically locate a known service by applying an electromagnetic signal along the utility to a known point/visible point, not limited to the area of interest where practical
Quality Level A (QL-A) is the highest quality level and consists of the positive identification of the attribute and location of a subsurface utility at a point to an absolute spatial position in three dimensions. It is the only quality level that defines a subsurface utility as “validated”.

Where the whole line segment cannot be verified by line of sight, Quality Level A shall not be attributed to the line segment between validated points.
DESIGN
• QL-B (EMI) and QL-C (GPR) survey of entire scope
• QL-A to acquire depths where QL-B/QL-C is not possible

PLANNING
• On-site markup of QL-B and QL-C survey
• QL-A survey at designed utility clash points to establish potential risk/delay
• Localised design adjustments to avoid utility clashes

CONSTRUCTION
• Localised QL-B markup performed prior to excavation works
• Non-destructive excavation performed to ensure visibility of utilities during excavation
• Cable avoidance tools/techniques
Key Data Loss Points

1. Poor understanding of the definition and application of the Quality Levels
2. Insufficient depth marking during locates
3. Poor communication between locators and surveyors
4. Client misconceptions regarding QL-C and QL-D
Solutions

• Collect data at highest possible Quality Level
• Use AS 5488.2019 to classify the data
• Maintain positional data integrity
• Actively engage with professional utility locators to ensure communication pathways are maintained