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# Utility Excavations (Category 1) - Locate Utility Services

This document details the **minimum** training and assessment specification, as agreed by industry employers, required for those working to safely detect utility services using recognised and approved detection methods. This does not preclude employers and providers from adding to the specification in their own training programmes.

This specification has been derived from the National Occupational Standards –

- EUSMUNC06 Locate and Avoid Services for Utilities Network Construction
- EUSEPUS044 Location and Identification of Underground Utility Services in the Electricity Power Utilities

The specification incorporates the relevant requirements of HSE guidance documents HS(G) 47 Avoiding Danger from Underground Services and HS(G) 150 Health and Safety in Construction.

All work should be carried out to approved procedures and practices and in compliance with statutory Health, Safety and Environmental requirements.

**Skills and knowledge, which demonstrate effective performance**

You must show you are able to:

- Interpret utility drawings and line search documents
- Use locating equipment to locate underground services
- Identify the dangers and hazards associated with underground services

## Performance Criteria

### You need to be able to

### Plan to locate and identify services

1. Determine the work location using company documentation and work instructions

2. Plan the work activity to comply with health, safety and environmental legislation and company policies and procedures

### Prepare resources to locate and identify services

3. Inspect and prepare locating equipment required to complete work activity.

4. Wear required personal protective equipment to complete work activities in accordance with safe systems of work

### Locate and detect services

5. Use utility plans and line search documents to determine the extent of the work site area where services are to be located

6. Carry out a site-specific risk assessment (SSRA), recording findings and making recommendations to minimise risks

7. Use utility plans in conjunction with electronic locating equipment to enable services to be located and marked. (Electronic locating equipment to be used in Power and Radio modes and using the Signal Generator in direct connection, induction and nulling out modes)

8. Mark and record the position of services and sub-structures on the work site in accordance with company procedures

## Knowledge and Understanding

### In relation to the identification and locating of utilities you need to know and understand:

### General

K1 Your responsibilities regarding health, safety and the environment whilst at work

K2 The health and safety guidance governing work including HSG47 and GS6

K3 The range and use of personal protective equipment for the work

K4 The requirements of a site specific risk assessment and control measures in relation to utility locating activities

### Locating and detecting services

K5 How to interpret utility drawings and line search documents to identify services and apparatus

K6 The typical depths of the range of underground services

K7 Methods of marking out services and excavations e.g. identification tape

K8 The hazards associated with different services and actions to take in the case of damage

K9 The persons or organisations to be notified in the case of damage to services or other underground structures

K10 The potential outcomes of incorrect marking out of services and excavations, including injury, costs, loss of time, and material wastage

K11 The roles and responsibilities of persons within the site/highways operations team

K12 Methods of visually locating and identifying overhead and underground services including: markers, signs and features, use of

existing records

K13 The principles of operation and method of use of electronic locating equipment. Including the use of electronic locating equipment in Power and Radio modes and using the Signal Generator in direct connection, induction and nulling out modes

K14 How to use Signal Generator induction loop, three pin plug adaptors and approved attachments

K15 How to interpret the results obtained by the use of electronic locating equipment

K16 The possible effects of external influence on electronic locating equipment readings and reduce the effects e.g. metal fencing, reinforced concrete

K17 The procedure for recording and communicating details of the position and type of services and sub-structures (eg who, when, why)

K18. The importance of reporting deviations in the position of equipment and identification of other structures e.g. street furniture