

## Locate and excavate to expose buried utility services

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### Overview

This standard is about interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and equipment, locating, exposing by excavation and protecting buried utility services

This standard is for people working in the occupational area of construction and can be used by operatives, technicians, supervisors and managers

Locate and excavate to expose buried utility services

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**Performance criteria**

- You must be able to:*
- P1 interpret the given information relating to the work and resources to confirm its relevance
  - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
  - P3 select the required quantity and quality of resources for the methods of work
  - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
  - P5 comply with the given contract information to carry out the work efficiently to the required specification
  - P6 complete the work within the allocated time, in accordance with the programme of work

Locate and excavate to expose buried utility services

## Knowledge and understanding

*You need to know and understand:* **Performance Criteria 1**

### **Interpretation of information**

K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented

K2 the types of **information**, their source and how they are interpreted

K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

### **Performance Criteria 2**

#### **Safe work practices**

K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied

K5 the types of **fire extinguishers** and how and when they are used

K6 how **emergencies** should be responded to and who should respond

K7 the organisational **security procedures** for tools, equipment and personal belongings

K8 what the accident reporting procedures are and who is responsible for making the report

K9 why, when and how **health and safety control equipment** should be used

K10 how to comply with environmentally responsible work practices to meet current **legislation and official guidance**

### **Performance Criteria 3**

#### **Selection of resources**

K11 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified

K12 how the **resources** should be used and how any **problems**

## Locate and excavate to expose buried utility services

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associated with the **resources** are reported

K13 the organisational procedures to select **resources**, why they have been developed and how they are used

K14 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

### Performance Criteria 4

#### Minimise the risk of damage

K15 how to **protect work** from damage and the purpose of protection

K16 why **disposal of waste** should be carried out safely and how it is achieved

### Performance Criteria 5

#### Meet the contract specification

K17 how **methods of work**, to meet the specification, are carried out and **problems** reported

K18 how **maintenance** of tools and equipment is carried out

### Performance Criteria 6

#### Allocated time

K19 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

**Scope/range****Performance Criteria 1**

1 interpretation of drawings, specifications, schedules, risk assessments, method statements, survey and utility company information and manufacturers' information related to the work to be carried out

**Performance Criteria 2**

2 avoidance of risk by complying with the given information relating to the following

- 2.1 methods of work
- 2.2 safe use of health and safety control equipment
- 2.3 safe use, storage and handling of materials, tools and equipment
- 2.4 specific risks to health
- 2.5 working with and around utility services
- 2.6 safe use of access equipment
- 2.7 working in excavations
- 2.8 others affected by the work

**Performance Criteria 3**

3 selection of resources associated with own work

- 3.1 materials and components
- 3.2 tools and equipment
- 3.3 electronic location instruments

**Performance Criteria 4**

4 protection of the work and its surrounding area from damage

- 5 maintain a clear and tidy work space
- 6 disposal of waste in accordance with current legislation

**Performance Criteria 5**

7 demonstration of work skills to measure, locate, expose, mark out,

Locate and excavate to expose buried utility services

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position, protect and secure

8 use and maintain hand tools, power tools, ancillary equipment and electronic instruments

9 locate and excavate to expose buried utility services to given working instructions

10 apply protection measures to utility services

**Performance Criteria 6**

11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

Locate and excavate to expose buried utility services

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**Scope/range related  
to knowledge and  
understanding**

**Disposal of waste**

1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

**Emergencies**

2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with

2.1 fires, spillages, injuries, damage to utilities apparatus and sub-structures

2.2 emergencies relating to occupational activities

**Fire extinguishers**

3 water, CO<sub>2</sub>, foam, powder and their uses

**Hazards**

4 those identified by risk assessment, methods of work, manufacturers' technical information, statutory regulations and official guidance

**Health and safety control equipment**

5 identified by the principles of prevention for occupational use, types and purpose of each type, work situations and general work environment

5.1 collective protective measures

5.2 personal protective equipment (PPE)

5.3 respiratory protective equipment (RPE)

**Information**

6 drawings, specifications, schedules, risk assessments, method statements, permits, verbal, written and graphical instructions, organisational and manufacturers' information and current regulations and official guidance governing utility services

**Legislation and official guidance**

Locate and excavate to expose buried utility services

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7 this relates to the operative's responsibilities regarding potential accidents, health hazards and the environment whilst working in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials and by manual handling and mechanical lifting

**Maintenance**

8 operative care of hand tools, power tools, ancillary equipment and electronic instruments

**Methods of work**

9 application of knowledge for safe and healthy work practices, procedures and skills relating to the method and area of work and materials used to:

9.1 confirm the area and location of work, the operations, safety and security requirements including temporary traffic management and immediate area protection

9.2 ensure electronic equipment is calibrated

9.3 conform to agreed specification and local utility services providers requirements

9.4 identify utility services by electronic locators, trial holes and visually

9.5 recognise criteria for operating location equipment and their limitations

9.6 confirm the type of service including: gas, fuel, electric, communication, water, sewage

9.7 liaise with utility services organisations

9.8 recognise identification markers for utility types

9.9 excavate by hand and with the assistance of plant or machinery

9.10 work with, in close proximity to and around plant and machinery

9.11 recognise the criteria for directing and guiding the operations and movement of plant and machinery

9.12 work around street furniture and ironwork

9.13 work in excavations, including the need for excavation supports, edge protection and access equipment

9.14 provide for the recognition and protection of the utility services, sub-structure and the natural environment during operational activities



## Locate and excavate to expose buried utility services

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- 9.15 install supports for exposed utility services
- 9.16 recognise and determine when specialist skills and knowledge are required and report accordingly
- 9.17 use hand tools, power tools and equipment including specialist equipment
- 9.18 use access equipment
- 9.19 work at height
- 10 team work and communication
- 11 needs of other occupations associated with with locating and excavating to expose buried utility services

### **Problems**

- 12 those arising from information, resources and methods of work
  - 12.1 own authority to rectify
  - 12.2 organisational reporting procedures

### **Programme**

- 13 types of productivity targets and tie scales
- 14 how times are estimated
- 15 organisational procedures for reporting circumstances which will affect the work programme

### **Protect work**

- 16 protect work against damage from general workplace activities, other occupations and adverse weather conditions

### **Resources**

- 17 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and specialist:
  - 17.1 electronic instruments
  - 17.2 marking and protection materials

Locate and excavate to expose buried utility services

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17.3 excavation plant and machinery

17.4 hand tools, power tools and equipment including specialist tools (insulated and non-sparking tools)

17.5 ancillary equipment

18 identify by calculation, length, volume and area associated with the method and procedure to locate and excavate to expose buried utility services

**Security procedures**

19 site, workplace, company and operative

## Locate and excavate to expose buried utility services

<b>Developed by</b>	Construction Skills
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<b>Status</b>	Original
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<b>Suite</b>	Road building and Maintenance
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