

Form and finish excavations manually

Overview

This standard is about forming and finishing excavations manually including excavating around services, interpreting information, adopting safe, healthy and environmentally responsible work practices, selecting and using materials, components, tools and equipment

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

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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

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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 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** 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 related to performance criteria

Performance Criteria 1

1 interpret drawings, specifications, schedules, risk assessments, method statements, manufacturers' and suppliers' information related to the work to be carried out

Performance Criteria 2

2 avoid risk by complying with the given information relating to at least five of the following:

- 2.1 methods of work
- 2.2 safe use of health and safety control equipment
- 2.3 working with and around utility services including ground penetration
- 2.4 safe use of access equipment
- 2.5 safe use, storage and handling of materials, tools and equipment
- 2.6 specific risks to health

Performance Criteria 3

3 select resources associated with own work:

- 3.1 materials and components
- 3.2 tools and equipment

Performance Criteria 4

- 4 protect the work and its surrounding area from damage
- 5 maintain a clear and tidy work space
- 6 dispose of waste in accordance with current legislation

Performance Criteria 5

- 7 demonstrate work skills to check, locate, measure, mark out, excavate and secure
- 8 use and maintain hand and power tools
- 9 form and finish excavations manually to given working instructions
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***Performance Criteria 6**

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

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

2.2 emergencies relating to occupational activities

Fire extinguishers

3 water, CO₂, foam, powder and their uses

Hazards

4 those identified by risk assessment, methods of work, manufacturers' and suppliers' 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 local exhaust ventilation (LEV)

5.3 personal protective equipment (PPE)

5.4 respiratory protective equipment (RPE)

Information

6 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, verbal and written instructions, sketches, electronic data, permits, current legislation and official guidance associated with forming and finishing excavations manually

Legislation and official guidance

7 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 by manual handling and mechanical lifting

Maintenance

8 operative care of hand and power tools

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:

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- 9.1 locate, position, identify and confirm the type of surface and sub-surface composition including ground water
- 9.2 conform to agreed specifications
- 9.3 plan, prepare, set out and mark out excavations
- 9.4 remove surface courses, street furniture and sub-surface structures
- 9.5 protect and monitor adjacent structures
- 9.6 excavate, form and finish ground manually
- 9.7 recognise changes in ground conditions, ground water conditions, soil types and excavation stability
- 9.8 recognise the dangers of loads and structures at the edge of excavations
- 9.9 identify and locate utility services, excavate around services and protect
- 9.10 monitor and check accuracy during progress and on completion of work
- 9.11 recognise inspection and test criteria for excavations
- 9.12 identify and store excavated and reusable materials
- 9.13 confirm the disposal of unusable materials
- 9.14 recognise the need for positioning, securing and removing excavation supports
- 9.15 provide for access and egress
- 9.16 work with, around and in close proximity to plant and machinery
- 9.17 recognise and determine when specialist skills and knowledge are required and report accordingly
- 9.18 use hand and power tools
- 9.19 use access equipment
- 9.20 work at height
- 10 team work and communication
- 11 needs of other occupations associated with the formation and finishing of excavations manually

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*Problems**

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

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*Programme**

- 13 types of productivity targets, time 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

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*Resources**

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17 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and specialist:

17.1 digging equipment

17.2 hand and power tools

18 how to confirm resources and materials conform with the given specification

19 methods of calculating quantity, length, area, volume and wastage associated with the method and procedure to form and finish excavations manually

Security procedures

20 site, workplace, company, operative and vehicles

Behaviours

When performing to this standard you are likely to demonstrate the following behaviours:

- 1 **Work safely:** consider the safety of yourself and those around you, challenge unsafe behaviour
- 2 **Effective communication:** oral, written, electronic, listening, body language, presentation
- 3 **Respect:** apply equality, diversity and inclusion in dealing with others.
- 4 **Team work:** work effectively and safely with others with limited supervision.
- 5 **Independent working:** take responsibility for safe completion of your own work.
- 6 **Logical thinking:** use clear and valid reasoning when making decisions to safely undertake the work instructions.
- 7 **Working effectively:** undertake the work in a reliable, safe and productive manner.
- 8 **Time management:** use own time effectively to complete the work instructions to schedule, take the time to be safe.
- 9 **Adaptability:** be able to adjust to changes to the work instructions, put safety first

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Developed by	Construction Skills
Version Number	6
Date Approved	31 Dec 2020
Indicative Review Date	31 Dec 2025
Validity	Current
Status	Original
Originating Organisation	CITB
Original URN	VR373
Relevant Occupations	Construction Operatives, Road Construction Operatives
Suite	Construction and Civil Engineering Operations (Construction)
Keywords	Sub-surface structures; Digging equipment; Excavations; Excavation supports