

Install, maintain and remove temporary excavation support

Overview

This standard is about installing, maintaining and removing temporary excavation support, 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

Install, maintain and remove temporary excavation support

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

Install, maintain and remove temporary excavation support

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

Install, maintain and remove temporary excavation support

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

Install, maintain and remove temporary excavation support

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 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, components and fixings
- 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 measure, mark out, prepare, position, fit, support, fix, secure, dismantle and remove
- 8 use and maintain hand and power tools
- 9 install, maintain and remove temporary excavation support to given working instructions relating to at least one of the following:
 - 9.1 a proprietary system
 - 9.2 open and closed support systems
 - 9.3 piling systems
 - 9.4 bespoke support systems

Performance Criteria 6

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

Install, maintain and remove temporary excavation support

**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, method 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, current regulations and official guidance associated with installing, maintaining and removing temporary excavation support

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

Install, maintain and remove temporary excavation support

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 recognise types of temporary support for excavations

9.2 conform to agreed specifications

9.3 plan, prepare and set out for the installation of the excavation support and edge protection

9.4 remove surface courses, ironwork, modular components, street furniture and sub-surface structures

9.5 recognise changes in ground conditions, ground water conditions, soil types and excavation stability

9.6 recognise the dangers of loads and structures at the edge of excavations

9.7 identify and locate utility services, excavate around services and protect

9.8 recognise inspection and test criteria for excavation support systems

9.9 provide for safe access and egress into the excavation and around the temporary excavation support

9.10 protect and monitor adjacent structures

9.11 excavate manually for the installation, maintenance and removal of excavation supports

9.12 construct, erect and install temporary excavation support as excavations progress and on completion including:

☐ proprietary systems including, but not limited to: drag box, trench box and manhole

☐ open and closed support systems

☐ piling systems including, but not limited to: diaphragm wall, trench sheets, sheet piles, secant support and contiguous support

☐ bespoke support systems

9.13 monitor and check accuracy at start, during progress and on completion of work

9.14 work with, around and in close proximity to plant and machinery including lifting equipment

9.15 inspect and maintain the integrity and safety of the temporary support structures

9.16 dismantle and remove the excavation support structure

9.17 recognise and determine when specialist skills and knowledge are required and report accordingly

9.18 use hand and power tools

9.19 work at height and in confined spaces

9.20 use access equipment

10 team work and communication

11 needs of other occupations associated with installing, maintaining and removing temporary excavation support

Install, maintain and remove temporary excavation support

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 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

Resources

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

17.1 proprietary systems

17.2 open and closed support systems

17.3 piling systems

17.4 bespoke support systems

17.5 fixing devices

17.6 hand and power tools

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

19 methods of calculating quantity, length, area and wastage associated with the method and procedure to install, maintain and remove temporary excavation support

Security procedures

20 site, workplace, company, operative and vehicles

Install, maintain and remove temporary excavation support

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

Install, maintain and remove temporary excavation support

Developed by	Construction Skills
---------------------	---------------------

Version Number	5
-----------------------	---

Date Approved	31 Dec 2020
----------------------	-------------

Indicative Review Date	31 Dec 2025
-------------------------------	-------------

Validity	Current
-----------------	---------

Status	Original
---------------	----------

Originating Organisation	CITB
---------------------------------	------

Original URN	VR370
---------------------	-------

Relevant Occupations	Construction Operatives, Road Construction Operatives
-----------------------------	---

Suite	Construction and Civil Engineering Operations (Construction)
--------------	--

Keywords	Drag-box; Trench-box; Diaphragm wall; Secant support; Open and closed boarding; Sheet piles; Manhole box
-----------------	--
