
Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing for, installing and testing new and/or replacement drainage

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

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

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **health and safety control equipment** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Install drainage

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

K13 how to **protect work** from damage and the purpose of protection

K14 why **disposal of waste** should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

You need to know and understand:

K15 how **methods of work**, to meet the specification, are carried out and **problems** reported

K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, specifications, schedules, risk assessments, method statements 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 at least four of the following
 - 2.1 methods of work
 - 2.2 safe use of health and safety control equipment
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment
 - 2.5 specific risks to health

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components and fixings
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with current legislation

Performance Criteria 5

- 7 demonstration of work skills to measure, mark out, lay, position, fit, level, plumb, align, secure and test
- 8 use and maintain hand tools, portable power tools and ancillary equipment
- 9 install and test new and/or replacement, foul and/or surface water drainage for at least two of the following to given working instructions
 - 9.1 pipework (e.g. clay, concrete, metal, or plastic)
 - 9.2 inspection chambers (e.g. brick, concrete, metal or plastic)
 - 9.3 surface water systems (e.g. cells, culverts, high capacity, linear, balancing ponds, interceptors, recycling equipment, soak-a-ways, sustainable urban drainage systems)
 - 9.4 foul water systems (e.g. cess pools, septic tanks, reed beds, treatment plants)

Performance Criteria 6

- 10 completion of 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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Health and safety control equipment

- 4 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
 - 4.1 collective protective measures
 - 4.2 personal protective equipment (PPE)
 - 4.3 respiratory protective equipment (RPE)
 - 4.4 local exhaust ventilation (LEV)

Information

- 5 drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and regulations governing the installation and construction of drainage systems

Legislation and official guidance

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

Maintenance

- 7 operative care of hand tools and/or portable power tools and ancillary equipment

Methods of work

- 8 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
 - 8.1 excavate trenches and provide trench support
 - 8.2 confirm ground conditions, site and excavations are suitable for the drainage installation work
 - 8.3 prepare bedding for pipework
 - 8.4 determine levels and gradients
 - 8.5 identify the differences between surface and foul water drainage
 - 8.6 lay, position, level, plumb, align, fit, fix and secure new and replacement drainage systems
 - 8.7 construct structures of a drainage system (storm alleviation, culverts, inspection chambers, lateral drains, overflows, sumps, filter drains, sustainable urban drainage systems)
 - 8.8 assemble pre-cast components (metal, concrete, clay and plastic) of a drainage system structure (inspection chambers, street iron work)
 - 8.9 connect and seal new systems to existing systems
 - 8.10 conduct smoke, water, ball, air mandrel and close circuit television tests on drainage systems
 - 8.11 work with plant and machinery
 - 8.12 use hand tools, power tools and equipment
 - 8.13 work at height and below ground level
 - 8.14 use access equipment
- 9 team work and communication
- 10 needs of other occupations associated with installing drainage

Problems

- 11 those arising from information, resources and methods of work
 - 11.1 own authority to rectify
 - 11.2 organisational reporting procedures

Programme

- 12 types of progress charts, timetables and estimated times
- 13 organisational procedures for reporting circumstances which will affect the work programme

Protect work

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

Resources

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

15.1 pipes, fittings and ancillary components

15.2 pre-cast (metal, concrete, clay or plastic) components

15.3 bricks, blocks and sandbags

15.4 granular materials, aggregates, cement, concrete, mortars and sand

15.5 sealant materials (adhesives, compounds, solvents)

15.6 hand and/or powered tools and ancillary equipment

16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install drainage

Security procedures

17 site, workplace, company and operative

COSVR639

Install drainage

Developed by	ConstructionSkills
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Date approved	October 2012
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Validity	Current
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Status	Original
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Originating organisation	ConstructionSkills
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Original URN	VR639
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Relevant occupations	Construction Operatives
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Suite	Trowel Occupations (Construction); Construction Operations and Civil Engineering Services (Construction); Building Maintenance Multi-trade Repair and Refurbishment Operations
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Key words	Pipework; Manholes; Inspection chambers; Culverts; Soak-a-ways; Cess pools; Septic tanks; Reed beds; Overflows; Treatment plants; Interceptors; Air mandrel
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