

<b>Level:</b>	2
<b>Value for TQT:</b>	211
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
1 Interpret the given information relating to the work and resources when installing drainage.	1.1 Interpret and extract relevant information from: <ul style="list-style-type: none"> <li>– drawings</li> <li>– specifications</li> <li>– schedules</li> <li>– risk assessments</li> <li>– method statements</li> <li>– manufacturers' information</li> <li>– suppliers' information.</li> </ul>
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4 Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>– drawings</li> <li>– specifications</li> <li>– schedules</li> <li>– risk assessments</li> <li>– method statements</li> <li>– manufacturers' information</li> <li>– verbal and written instructions</li> <li>– sketches</li> <li>– electronic data</li> <li>– permits</li> <li>– current regulations</li> <li>– official guidance.</li> </ul>
2 Know how to comply with relevant legislation and official guidance when installing drainage.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>– in the workplace</li> <li>– below ground level</li> <li>– in confined spaces</li> <li>– at height</li> <li>– with tools and equipment</li> <li>– with materials and substances</li> <li>– with the movement and storage of materials by manual handling and mechanical lifting.</li> </ul>

<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
2 continued	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: <ul style="list-style-type: none"> <li>– site</li> <li>– workplace</li> <li>– company</li> <li>– operative</li> <li>– vehicles.</li> </ul>
	2.3 Explain what the accident reporting procedures are and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available and describe how and when they are used: <ul style="list-style-type: none"> <li>– water</li> <li>– CO<sub>2</sub></li> <li>– foam</li> <li>– powder.</li> </ul>
3 Maintain safe and healthy working practices when installing drainage.	3.1 Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements.
	3.2 Demonstrate compliance with given information and relevant legislation in relation to at least three of the following: <ul style="list-style-type: none"> <li>– working with and around utility services including ground penetration</li> <li>– safe use of access equipment</li> <li>– safe use, storage and handling of materials, tools and equipment</li> <li>– specific risks to health.</li> </ul>
	3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE)</li> <li>– local exhaust ventilation (LEV).</li> </ul>
	3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.

<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
3 continued	3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with: <ul style="list-style-type: none"> <li>– fires, spillages, injuries</li> <li>– other task related activities.</li> </ul>
4 Select the required quantity and quality of resources for the methods of work to install drainage.	4.1 Select resources associated with own work in relation to: <ul style="list-style-type: none"> <li>– materials, components and fixings</li> <li>– tools and equipment.</li> </ul>
	4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>– pipes, fittings and ancillary components</li> <li>– pre-cast (metal, concrete, clay or plastic) components</li> <li>– bricks, blocks and sandbags</li> <li>– granular materials, aggregates, cement, concrete, mortars and sand</li> <li>– sealant materials (adhesives, compounds, solvents)</li> <li>– hand and power tools.</li> </ul>
	4.3 Describe how to confirm that the resources and materials conform to the specification.
	4.4 Describe how the resources should be used correctly and how problems associated with the resources are reported.
	4.5 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.6 Describe any potential hazards associated with the resources and methods of work.
	4.7 Describe how to calculate quantity, length, volume, area and wastage associated with the method and procedure to install drainage.
5 Minimise the risk of damage to the work and surrounding area when installing drainage.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a clear and tidy work space.
	5.3 Dispose of waste in accordance with current legislation.
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
5 continued	5.4 Describe how to protect work from damage and the purpose of protection in relation to:

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	<ul style="list-style-type: none"> <li>- general workplace activities</li> <li>- other occupations</li> <li>- adverse weather conditions.</li> </ul>
	<p>5.5 Explain why the disposal of waste should be carried out safely in accordance with:</p> <ul style="list-style-type: none"> <li>- environmental responsibilities</li> <li>- organisational procedures</li> <li>- manufacturers' information</li> <li>- statutory regulations</li> <li>- official guidance.</li> </ul>
<p>6 Complete the work within the allocated time when installing drainage.</p>	<p>6.1 Demonstrate completion of the work within the estimated, allocated time.</p> <p>6.2 Describe the purpose of the work programme and explain why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> <li>- types of progress charts, timetables, productivity targets and time scales</li> <li>- how times are estimated</li> <li>- organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>
<p>7 Comply with the given contract information to install drainage to the required specification.</p>	<p>7.1 Demonstrate the following work skills:</p> <ul style="list-style-type: none"> <li>- checking</li> <li>- measuring</li> <li>- marking out</li> <li>- cutting</li> <li>- laying</li> <li>- positioning</li> <li>- fitting</li> <li>- joining</li> <li>- levelling</li> <li>- plumbing</li> <li>- aligning</li> <li>- securing</li> <li>- testing.</li> </ul> <p>7.2 Use and maintain hand and power tools.</p>

<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
7 continued	7.3 Lay bedding materials, install and test pipework and drainage structures for new or replacement, foul or surface water drainage for at least one of the following to given working instructions: <ul style="list-style-type: none"> <li>– inspection chambers</li> <li>– surface water systems</li> <li>– foul water systems</li> <li>– surround pipe with specified materials</li> <li>– place backfill to trench using given work instructions for both compacted and free drainage materials.</li> </ul>
	7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>– excavate trenches and provide trench support</li> <li>– confirm ground conditions, site and excavations are suitable for the drainage installation work</li> <li>– recognise the dangers of loads and structures at the edge of excavations</li> <li>– deal with groundwater</li> <li>– work around other utility services</li> <li>– install geotextile materials</li> <li>– prepare different granular and cementitious bedding</li> <li>– determine levels and gradients</li> <li>– identify the differences between surface and foul water drainage</li> <li>– measure, mark and cut drainage materials</li> <li>– lay, position, level, plumb, align, fit, join, fix and secure new and replacement drainage systems</li> <li>– lift and transport assembled drainage systems</li> <li>– construct structures of a drainage system (storm alleviation, culverts, inspection chambers, lateral drains, overflows, sumps, filter drains, soak-a-ways, cess pools, reed beds or treatment plants)</li> <li>– install pre-cast components (metal, concrete, clay and plastic) of a drainage system structure (inspection chambers, septic tanks and street iron work)</li> <li>– connect and seal new systems to existing systems</li> </ul>

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<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
7 continued	<ul style="list-style-type: none"> <li>– prepare for conducting tests on drainage systems</li> <li>– work with, around and in close proximity to with plant and machinery including lifting plant</li> <li>– store and dispose of removed drainage components</li> <li>– follow specified hygiene procedures particularly when dealing with foul water draining systems</li> <li>– recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>– determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>– use hand and power tools</li> <li>– work at height and below ground level</li> <li>– use access equipment.</li> </ul>
	7.5 Describe the needs of other occupations and how to communicate effectively within a team.
	7.6 Describe how to maintain the tools and equipment used.

<b>Behaviours</b>	
When performing to this standard you are likely to demonstrate the following behaviours.	1 <b>Work safely:</b> Consider the safety of yourself and those around you, challenge unsafe behaviour.
	2 <b>Effective communication:</b> Oral, written, electronic, listening, body language, presentation.
	3 <b>Respect:</b> Apply equality, diversity and inclusion in dealing with others.
	4 <b>Team work:</b> Work effectively and safely with others with limited supervision.
	5 <b>Independent working:</b> Take responsibility for safe completion of your own work.
	6 <b>Logical thinking:</b> Use clear and valid reasoning when making decisions to safely undertake work instructions.
	7 <b>Working effectively:</b> Undertake the work in a reliable, safe and productive manner.
	8 <b>Time management:</b> Use own time effectively to complete the work instructions to schedule, take the time to be safe.
	9 <b>Adaptability:</b> Be able to adjust to changes to the work instructions, put safety first.

<b>Additional information about this unit</b>	
Assessment Guidance	<p>This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.</p> <p>Workplace evidence of skills cannot be simulated.</p> <p>This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.</p>
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	106
Assessment hours	10