



## Regulated Qualifications Unit and Assessment Specification

<b>Unit title</b>	Preparing and Operating 180 Degree Excavators to Extract and Excavate Ground and Loose Materials in the Workplace
<b>Regulator unit code</b>	R/616/7315
<b>SQA unit code</b>	HE5H 68
<b>SSC Ref</b>	VR 388 Bv3

## History of changes

**Publication date:** June 2016

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<b>Version number</b>	<b>Date</b>	<b>Description</b>	<b>Authorised by</b>
02	September 2017	Unit Specification updated to reflect current Ofqual terminology	Qualifications Officer

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## Regulated qualifications unit specification

<b>Title</b>	Preparing and Operating 180 Degree Excavators to Extract and Excavate Ground and Loose Materials in the Workplace	
<b>Level</b>	2	
<b>Credit value</b>	80	
<b>Learning outcomes</b>	<b>Assessment criteria</b>	
<b>The learner will:</b>	<b>The learner can:</b>	
1 Interpret the given information relating to the preparation and use of 180 degree excavators for extracting and excavating operations.	1.1 Interpret and extract relevant information from drawings, specifications, schedules, risk assessments and manufacturers' information.	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, specifications, schedules, method statements, risk assessments, manufacturers' information, and current regulations governing the operation of 180 degree excavators for extraction and excavation work.</li> </ul>
2 Organise with others the sequence and operation in which extracting and excavating operations using 180 degree excavators are to be carried out.	2.1 Organise the work according to given information or instructions.	2.2 Describe how to communicate ideas between team members.
	2.3 Organise and communicate with team members and other associated occupations.	2.4 Describe how to organise resources prior to and during extracting and excavating operations using 180 degree excavators.

<b>Learning outcomes</b>	<b>Assessment criteria</b>
<p><b>The learner will:</b></p> <p>3 Know how to comply with relevant legislation and official guidance when carrying out extracting and excavating operations using 180 degree excavators.</p>	<p><b>The learner can:</b></p> <p>3.1 Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working:</p> <ul style="list-style-type: none"> <li>◆ 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.</li> </ul> <p>3.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p> <p>3.3 Explain what the accident reporting procedures are and who is responsible for making reports.</p>
<p>4 Maintain safe and healthy working practices when preparing for and carrying out extracting and excavating operations using 180 degree excavators.</p>	<p>4.1 Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements during extracting and excavating operations.</p> <p>4.2 Demonstrate compliance with given information and relevant legislation when carrying out extracting and excavating operations using 180 degree excavators in relation to two or more of the following:</p> <ul style="list-style-type: none"> <li>◆ safe use and storage of plant or machinery</li> <li>◆ safe use and storage of tools and equipment</li> <li>◆ specific risks to health.</li> </ul>

Learning outcomes	Assessment criteria
<p><b>The learner will:</b></p>	<p><b>The learner can:</b></p> <p>4.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to 180 degree excavator use, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:</p> <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> <p>4.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.</p> <p>4.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.</p>
<p>5 Request and select the required quantity and quality of resources to prepare for and carry out extracting and excavating operations using 180 degree excavators.</p>	<p>5.1 Request and select resources associated with 180 degree excavators in relation to consumables, materials, attachments, tools, ancillary equipment and/or accessories.</p> <p>5.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to:</p> <ul style="list-style-type: none"> <li>◆ consumables, lubricants and fuels</li> <li>◆ attachments and extraction/excavation aids</li> <li>◆ hand tools, ancillary equipment and accessories.</li> </ul> <p>5.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.</p>

<b>Learning outcomes</b>  <b>The learner will:</b>	<b>Assessment criteria</b>  <b>The learner can:</b>
	<p>5.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.</p> <p>5.5 Describe any potential hazards associated with the resources and methods of work.</p> <p>5.6 Describe how to identify weight, quantity, length and area associated with the method/procedures to carry out extracting and excavating operations using 180 degree excavators.</p>
<p>6 Minimise the risk of damage to the work and surrounding area when preparing to and extracting and excavating materials.</p>	<p>6.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.</p> <p>6.2 Prevent damage and maintain a clean work space.</p> <p>6.3 Dispose of waste in accordance with current legislation.</p> <p>6.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.</p> <p>6.5 Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.</p>

<b>Learning outcomes</b>  <b>The learner will:</b>	<b>Assessment criteria</b>  <b>The learner can:</b>
<p>7 Complete the work within the allocated time when preparing to and extracting and excavating materials.</p>	<p>7.1 Demonstrate completion of the work within the allocated time.</p> <p>7.2 Describe the purpose of the work programme and describe why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> <li>◆ types of progress charts, timetables and estimated times</li> <li>◆ organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>
<p>8 Comply with the given contract information to extract materials using 180 degree excavators to the required specification.</p>	<p>8.1 Demonstrate the following work skills when preparing for and extracting and excavating loose materials and ground using 180 degree excavators:</p> <ul style="list-style-type: none"> <li>◆ checking, adjusting, communicating, manoeuvring, positioning, extracting, excavating, forming, removing and loading.</li> </ul> <p>8.2 Use and maintain hand tools, ancillary equipment and/or accessories.</p> <p>8.3 Prepare, position, set up and operate 180 degree excavators to given working instructions:</p> <ul style="list-style-type: none"> <li>◆ extract loose materials and/or different types of ground</li> <li>◆ load and/or stockpile loose materials and ground</li> <li>◆ excavate different types of ground.</li> </ul> <p>8.4 Shut down and secure 180 degree excavators.</p> <p>8.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:</p> <ul style="list-style-type: none"> <li>◆ identify the characteristics of the 180 degree excavator used for the extraction and excavation operation</li> </ul>

Learning outcomes	Assessment criteria
<p><b>The learner will:</b></p>	<p><b>The learner can:</b></p> <ul style="list-style-type: none"> <li>◆ carry out function checks for the extraction and excavation operation</li> <li>◆ prepare, set up and adjust for operational requirements</li> <li>◆ identify the area to be extracted/excavated</li> <li>◆ carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area</li> <li>◆ identify geological, environmental and material changes and report</li> <li>◆ check to avoid damage to structures and utilities service apparatus.</li> </ul> <p>8.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:</p> <ul style="list-style-type: none"> <li>◆ recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>◆ extract, excavate, remove and load materials safely and securely</li> <li>◆ form stockpiles</li> <li>◆ be on the public highway</li> <li>◆ shut down and secure 180 degree excavator</li> <li>◆ use hand tools, ancillary equipment and accessories.</li> </ul> <p>8.7 Describe the needs of other occupations and how to effectively communicate within a team when preparing to and carrying out extracting and excavating operations.</p> <p>8.8 Describe how to maintain the plant and machinery, hand tools, ancillary equipment and accessories used to extract and excavate materials.</p>



<b>Additional information about the unit</b>
<b>Unit purpose and aim(s)</b>
The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing and operating 180 degree excavators to extract and excavate ground and loose materials in the workplace within the relevant sector of industry.
<b>Unit start date</b>
01 June 2016
<b>Details of the relationship between the unit and relevant national occupational standards (if appropriate)</b>
This unit is based on the National Occupational Standard 'Operate plant or machinery to extract' (VR 388 Bv3)
<b>Details of the relationship between the unit and other standards or curricula (if appropriate)</b>
N/A
<b>Assessment requirements specified by a sector or regulatory body (if appropriate)</b>
<p>This unit must be assessed in a work environment, in accordance with:</p> <ul style="list-style-type: none"> <li>◆ the Additional Requirements for Qualifications using the title NVQ</li> <li>◆ the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</li> </ul> <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>
<b>Endorsement of the unit by a sector or other appropriate body (if required)</b>
ConstructionSkills
<b>Location of the unit within the subject/sector classification system</b>
5.2 Building and Construction
<b>Name of the organisation submitting the unit</b>
ConstructionSkills
<b>Guided Learning Hours</b>
302

## Regulated qualifications assessment specification

### Assessment (evidence) requirements

Learners are required to produce evidence to confirm that they have achieved all learning outcomes and assessment criteria outlined in this unit. Learner training and assessment should take place in as realistic an environment as possible to that of a live working site. Performance evidence is required to demonstrate that the learner has achieved the standard specified in the learning outcomes and assessment criteria. Performance evidence must be produced at an appropriate point in training under supervised conditions once the learner has developed the necessary skills and knowledge required to carry out the assessment. This performance evidence must be supplemented with a completed assessor observational/operational checklist. As part of the assessment for this unit, the learner may be required to produce evidence of a method statement and a completed risk assessment for a specified training activity. Oral or written evidence of knowledge and understanding may be demonstrated by the learner during practical assignments set for all learning outcomes and noted at the time by the training assessor.

### Guidance on instruments of assessment

Centres may use the method of assessment which they consider to be most appropriate. It is expected that learners will have to demonstrate current knowledge and understanding of safe working practice and risk assessment methods, etc prior to being set the assessment tasks. Opportunities for integrated assessment of this unit may be possible with all mandatory units. Knowledge and understanding of the processes involved in removing and replacing components should be assessed before any practical assignments are carried out by learners. This will include assessment of a learner's ability to prepare the work area for removing and replacing components. Practical assignments should be carried out under supervised conditions and recorded in an assessor observation/operational checklist. Assessments should confirm that a learner has the ability to remove and replace components using designated machinery or equipment correctly and safely, whilst adhering to current statutory health and safety regulations and legislation. Adherence to current statutory working regulations and health and safety procedures will be observed during the practical exercise carried out by the learner towards all learning outcomes.