

## EXECUTE EXTERNAL WORKS

**UNIT CODE: CON/OS/BUT /CR/07/5/A**

### UNIT DESCRIPTION:

This unit describes the competencies required to execute external works. It involves performing landscaping, constructing drainage system, laying external paving, and constructing gates and fences.

### ELEMENTS AND PERFORMANCE CRITERIA

<b>ELEMENT</b> These describe the key outcomes which make up workplace functions	<b>PERFORMANCE CRITERIA</b> These are assessable statements which specify the required level of performance for each of the elements <i>(Bold and italicized terms are elaborated in the range)</i>
1. Perform landscaping	1.1 Area for landscaping is determined in accordance with the site layout 1.2 Landscaping ground is prepared as per design specifications 1.3 vegetative features are planted as per the landscape design 1.4 Irrigation method is determined as per landscape design 1.5 <b>Beautification</b> is carried out as per design specifications
2. Construct drainage system	2.1 Drainage drawings are interpreted as per the design requirement 2.2 <b>Drainage channels</b> are excavated as per the drawing 2.3 Backfilling, Levelling and compacting is done as specification 2.4 <b>Drainage pipes</b> are laid as per civil engineering drawings 2.5 Drainage channels and collection chambers are constructed according to civil engineering drawings
3. Lay external paving	3.1 Ground is surveyed to determine topography 3.2 Ground is excavated to the required depth according to engineers' specification. 3.3 The base is prepared in accordance with civil engineers' specifications 3.4 Levelling dust is spread in accordance with civil engineers' specifications 3.5 Kerbs stones and channels are laid as per the specification. 3.6 <b>External paving</b> is laid as per civil engineers' specifications. 3.7 Marking is done as per directional requirement.
4. Construct gates and fences	4.1 Gate location and orientation is determined according to site layout. 4.2 Gate measurements are determined according to the specifications 4.3 <b>Gate supporting systems</b> are constructed according to codes of practice 4.4 Gate is procured and installed as per design measurements

	4.5 <i>Perimeter fence</i> is constructed as per design requirement. 4.6 Essential services (CCTVS cameras security lighting razor wire, Electric fence) are installed as per design requirement.
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## RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. 1. <i>Beautification</i> include but are not limited to:	<ul style="list-style-type: none"> <li>• Ornamental trees</li> <li>• Grassing</li> <li>• Flowers</li> <li>• Shrubs</li> <li>• Ground cover</li> <li>• Garden furniture</li> <li>• Garden lighting</li> </ul>
2. Drainage channels include but are not limited to:	<ul style="list-style-type: none"> <li>• Open channels</li> <li>• Closed channels</li> </ul>
3. Drainage pipes include but are not limited to:	<ul style="list-style-type: none"> <li>• concrete pipes</li> <li>• PVC pipes</li> <li>• GI pipes</li> <li>• PPR pipes</li> </ul>
4. External paving include but are not limited to:	<ul style="list-style-type: none"> <li>• Tarmac</li> <li>• Concrete blocks</li> <li>• Clay</li> <li>• Ceramic</li> <li>• Rubble stones</li> <li>• Paving slabs</li> </ul>
5. Perimeter fence include but are not limited to:	<ul style="list-style-type: none"> <li>• Masonry walls</li> <li>• Live fence</li> <li>• Reinforced concrete walling</li> <li>• Wooden post and chain link/barbed wire</li> <li>• Steel post and chain link</li> <li>• Concrete post and chain link</li> </ul>

## REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

- Occupational Health and Safety
- Technical Drawing
- Building Drawing
- Mensuration
- Construction plants and equipment
- Construction materials

- General Building Construction
- Physical planning
- Carpentry and Joinery

### Required skills

The individual needs to demonstrate the following skills:

- Communication skills
- Problem solving skills
- Analytical skills
- Numeracy skills
- concrete mixer operation
- Critical thinking
- Construction tools handling skills

### EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Prepared landscaping ground as per design specifications</li> <li>1.2 Performed beautification as per design specifications</li> <li>1.3 Excavated drainage channels as per the drawing.</li> <li>1.4 Laid drainage pipes as per civil engineering drawings.</li> <li>1.5 Laid external paving as per civil engineers' specifications.</li> <li>1.6 Constructed gate supporting systems according to codes of practice.</li> <li>1.7 Constructed perimeter fence as per design requirement.</li> <li>1.8 Installed security equipment as per design requirement</li> </ul>
2. Resource implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Access to relevant workplace where assessment can take place.</li> <li>2.2 Appropriately simulated environment where assessment can take place.</li> <li>2.3 Resources relevant to proposed activity or task.</li> </ul>
3. Methods of assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Practical assignment</li> <li>3.2 Written</li> <li>3.3 Oral interview</li> <li>3.4 Demonstrations</li> <li>3.5 Observation</li> </ul>

4. Context of assessment	Competency may be assessed: 4.1 On-the-job 4.2 In a simulated workplace setting
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector and workplace job role is recommended.

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