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## BCCCM1001C Follow OH&S policies and procedures

<b>Unit Descriptor</b>	<p>This unit specifies the competency required to work safely on a civil construction site adhering to OH&amp;S policies and procedures. It includes the minimum criteria for competency assessment.</p> <p>This unit includes emergency procedures, identification of hazards applicable to civil construction workplaces and basic risk assessment.</p>
<b>Employability Skills</b>	The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<b>Element</b>	<b>Performance Criteria</b>
Elements define the essential outcomes of a unit of competency.	Performance criteria specify the level of performance required to demonstrate achievement of the element.
1 Follow safe work practices	<p>1.1 Tasks are performed in a safe manner and in accordance with legislative requirements, enterprise policies and procedures</p> <p>1.2 Organisation of duties, tools, equipment and materials are performed in accordance with enterprise procedures</p> <p>1.3 Personal protective equipment and clothing is worn, used and stored according to enterprise procedures</p> <p>1.4 Plant and equipment guards are used in accordance with manufacturers specifications and regulations</p> <p>1.5 Safety signs and symbols are identified and followed</p>
2 Assess risks	<p>2.1 Hazards in the work area are identified, assessed and reported to designated personnel</p> <p>2.2 OH&amp;S issues and risks in the work area are identified, assessed and reported to designated personnel</p> <p>2.3 Safe workplace procedures and safe work instructions are followed for controlling risks</p> <p>2.4 OH&amp;S, hazard, accident or incident reports are completed according to workplace procedures and State/Territory legislation</p>
3 Follow emergency procedures	<p>3.1 Appropriate personnel are identified in the event of an emergency</p> <p>3.2 Safe workplace procedures for dealing with accidents, fires and emergencies are followed within scope of responsibilities</p> <p>3.3 Emergency and evacuation procedures are practiced and carried out when required</p>

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Safe working practices are to include day to day observation of OH&S policies and procedures, hazard identification, risk assessment, organisational evacuation and emergency procedures

Legislative requirements include Federal, State and Territory legislations applicable to Workplace/Occupational Health and Safety

Personal protective equipment is to include clothing, safety footwear, high visibility vest, jacket, gloves, safety glasses/goggles, hard hat, cap, dust mask/respirator, ear muffs/plugs

Appropriate personnel to be contacted in case of an emergency, accident, fire or to report a risk are designated safety officers, determined by the enterprise, who have undertaken specific safety response training, supervisors, managers or other senior personnel

Safety signs and symbols are to include but not be limited to hazard identification, site safety, directional, traffic and warning signs and symbols

Safe work procedures are to include site specific induction, workplace safety plans, work method statements, material safety data sheets, organisational policies and procedures.

Hazards must include chemical spills, gases, liquids under pressure, mobile plant machinery small plant and equipment, trenches and excavations, electrical equipment and safety, ladders, hazardous materials, work at heights, work in confined spaces, high temperatures, noise, dust, vapours, fires, protrusions, sharp equipment, overhanging beams and traffic

Emergency procedures are to include responding to accidents, fire, emergency response and evacuation procedures

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations (including general safety/industry induction requirements)

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

<b>Environmental Requirements</b>	Environmental requirements are to include but not be limited to waste management, stormwater protection and clean-up management
<b>Quality Assurance</b>	Quality assurance requirements may include but not limited to relevant International Standards Organisation (ISO) and Australian Standards, internal company quality assurance policy and standards, risk management strategy, Environment Protection Authority (EPA) requirements, the site safety plan, workplace operations and procedures
<b>Statutory/Regulatory Authorities</b>	Statutory/regulatory authorities may include statutory/regulatory Government authorities and Local Government statutory authorities
<b>Equipment</b>	Tools and equipment are to include but not be limited to first aid kits, and personal protective equipment
<b>Materials</b>	Materials are to include but not be limited to first aid materials
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, phone, facsimile, computer, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent</p> <p>Regulatory/legislative requirements</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality assurance requirements

Undertake two separate basic risk assessment activities which include, hazard identification, assessment of the risk(s) and the implementation of control measures.

Participation in a simulated workplace accident in accordance with organisational policies and procedures

Participation in a simulated workplace fire incident in accordance with organisational policies and procedures

Evacuation of a site through simulated response to an emergency complying with workplace procedures

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

**Relationship to other units**

Nil.

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Commonwealth and/or State/Territory OHS legislation
- Civil construction worksite hazards
- Site and equipment safety requirements
- Personal protective equipment and clothing
- Worksite Signage
- Accidents and injuries
- Company procedures
- Regulations
- OH&S policies and procedures
- Induction procedures
- Emergency response and evacuation procedures
- Materials Safety Data Sheets and materials handling methods
- Quality assurance systems and standards
- Communication devices
- Civil Construction Terminology
- JSA's/Safe work method statement

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to following OH&S policies and procedures
- equipment appropriate to following OH&S policies and procedures
- specifications and work instructions
- research resources including systems information and data
- Relevant Commonwealth, State and/or Territory Legislation

**... End ...**

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## **BCCCM1002B**

### **Unit Descriptor**

## **Conduct workplace communication**

This unit specifies the competency required to communicate effectively with other workers in a civil construction workplace environment. It includes the minimum criteria for competency assessment.

This unit includes gathering, conveying and receiving information through verbal and written forms of communication.

### **Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### **Element**

Elements define the essential outcomes of a unit of competency.

### **Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- |   |  |
|---|--|
| 1 Gather, convey and receive information        | 1.1 Verbal and written instructions are gathered, received and responded to with correct actions |
|   | 1.2 Instructions are conveyed accurately   |
|   | 1.3 Work signage is responded to with correct action   |
|   | 1.4 Information is conveyed in simple English and message is confirmed                           |
|   | 1.5 Questions are used to gain additional information and to clarify understanding               |
| 1. Carry out face-to-face routine communication | 2.1 Routine instructions and messages are received and followed                                  |
|   | 2.2 Workplace procedures are carried out to company requirements                                 |
|   | 2.3 Information from a range of sources is accessed and interpreted                              |
|   | 2.4 Information is selected and sequenced correctly  |
|   | 2.5 Verbal and written reporting is completed where required                                     |



- |    |   |  |
|----|---|--|
| i. | Apply visual communications                     | 3.1 Visual communications are used following accepted industry practices or social conventions<br>3.2 The attention of the communicating parties is obtained, confirmed and/or acknowledged<br>3.3 The intention of the visual communication is clarified and confirmed at each step<br>3.4 Visual communications which are unclear or ambiguous are questioned or visually cancelled<br>3.5 Instances of unclear visual communications are followed up to avoid repeated problems |
| 4  | Participate in simple on site meeting processes | 4.1 Correct process for on site meetings are identified and followed to pre-determined or agreed procedures<br>4.2 Responses are sought and provided to others in the group<br>4.3 Constructive contributions are made<br>4.4 Goals or outcomes are identified and/or recorded   |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Communication is carried out as an integral part of routine work

Communication with others is to include but not be limited to supervisors, contractors, co-workers, trainers and may include the public

Communication modes are to include active listening, group interaction, questioning, verbal, written, meetings and interpreting of signage

Communication transfer is to include the use of telephones (including mobile) and written communications and may include email, facsimile, internet, two-way radios

Interpretation of signage is to include site safety signs, directional signs, traffic signs, facility or location signs and hazards

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<b>Unit scope (continued)</b>	Interpretation of information is to include company procedures, regulations, OH&S requirements, induction procedures, industrial agreements, checklists, instructions, delivery dockets, MSDS, workplace policies, quality requirements, bulletins, maps, work schedules and emergency procedures
<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p>
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, phone, facsimile, computer, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, plans, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS), diagrams or sketches and graphics</p> <p>Safe work procedures or equivalent</p> <p>Regulatory/legislative requirements</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation's work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Interpretation of all signage accurately, complete five tasks successfully following instructions, convey at least five pieces of information to other workers, fill out at least three workplace documents accurately and ask one question at an on site meeting

Safe and effective operational use of communication equipment

Communication and working effectively and safely with others

### Relationship to other units

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

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**What specific knowledge is required to achieve the performance criteria?**

A knowledge of

- Site and equipment safety requirements
- Signage
- Company procedures
- OH&S requirements
- Checklists
- Work instructions
- Delivery dockets
- Workplace policies
- Bulletins
- Memos
- Maps and Sketches
- Emergency procedures
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Communication devices
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- specifications and work instructions

**... End ...**

**BCCCM1003B****Unit Descriptor****Plan and organise work**

This unit specifies the competency required to plan allotted tasks to maximise personal productivity on a civil construction site. It includes the minimum criteria for competency assessment.

This unit includes pre-work planning and the safe and efficient sequencing of work.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

## 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied
- 1.2 Safety requirements are obtained from the site safety plan, other regulatory specifications or legal obligations and applied
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Material appropriate to the work application are identified, safely handled and located ready for use
- 1.6 Civil construction employment conditions, responsibilities and obligations are identified and clarified
- 1.7 Environmental protection requirements are identified from the project environmental management plan or appropriate regulatory specifications and applied

## a. Sequence work safely

- 2.1 Work plan is determined, modified and performed in a logical and efficient sequence
- 2.2 Tasks are completed to meet design specifications or supervisors instructions

- |   |          |  |
|---|----------|--|
| 3 | Clean up | 3.1 Work area is cleared and materials disposed of or recycled in accordance with state or territory legislation   |
|   |          | 3.2 Machinery, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Pre-work planning is to include but not be limited to correctly selecting the tools and equipment for the task, the materials for the task, the personal protective equipment for the task and plan the logical sequence for the performance of task

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Work sequencing may include but not be limited to receiving instructions, organising for the task, performance of the task and clean up after completing the task

Civil construction industry employment conditions are to include coverage of:

- Enterprise agreement(s)
- Workplace agreement(s)
- Industrial award(s)
- Bulleting and newsletters
- Industry/workplace codes of practice
- Enterprise procedures for handling industrial disputes
- Enterprise procedures for handling grievance

Work application applies to all sectors of the Civil Construction industry

<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations and may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p> <p>Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead service lines, dangerous materials, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but not be limited to waste management, stormwater protection and clean-up management</p>
<b>Quality Assurance</b>	<p>Quality assurance requirements may include but not limited to relevant International Standards Organisation (ISO) and Australian Standards, internal company quality assurance policy and standards, risk management strategy, Environment Protection Authority (EPA) requirements, the site safety plan, workplace operations and procedures</p>
<b>Statutory/Regulatory Authorities</b>	<p>Statutory/regulatory authorities may include statutory/regulatory Government authorities and Local Government statutory authorities</p>
<b>Tools and equipment</b>	<p>Tools and equipment are to include but not be limited to those to be selected for the task at hand</p>
<b>Materials</b>	<p>Materials are to include but not be limited to those to be selected for the task at hand</p>
<b>Communications</b>	<p>Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p>



**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS), diagrams or sketches and graphics

Safe work procedures or equivalent related to planning and organising work

Regulatory/legislative requirements pertaining to planning and organising work

Manufacturers' specifications and instructions

Organisation work specifications and requirements

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

**Evidence Guide**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality assurance requirements

The location and identification of site employment conditions and the source of these conditions

Selection of the necessary tools, materials, personal protective equipment and work sequence for a minimum of five separate tasks

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"> <li>- Site and equipment safety requirements</li> <li>- Operational and maintenance procedures</li> <li>- Civil construction principles</li> <li>- Relevant industrial awards and agreements</li> <li>- Relevant legislative provisions covering discrimination and equal employment opportunity</li> <li>- Basic diagnostic techniques</li> <li>- Equipment types, characteristics, technical capabilities and limitations</li> <li>- Processes for the calculation of material requirements</li> <li>- Materials Safety Data Sheets and materials handling methods</li> <li>- Quality assurance systems and standards</li> <li>- JSA's/Safe work method statement</li> </ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to the tasks being planned and organised
- hand and power tools, plant and equipment appropriate to the tasks being planned and organised
- specifications and work instructions

**... End ...**

**BCCCM1004B****Unit Descriptor****Carry out measurements and calculations**

This unit specifies the competency required to carry out measurements and perform simple calculations to determine task and material requirements for a job in a civil construction work environment. It includes the minimum criteria for competency assessment.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- |   |                                 |  |
|---|---------------------------------|--|
| 1 | Plan and prepare                | 1.1 Work instructions are confirmed and applied  |
|   |                                 | 1.2 Safety requirements are obtained from the site safety plan, other regulatory specifications or legal obligations and applied   |
|   |                                 | 1.3 Measuring and calculating equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported |
| 2 | Obtain measurements             | 2.1 Method of obtaining the measurement is selected and applied  |
|   |                                 | 2.2 Measurements are obtained using a rule or tape, accurate to 1mm  |
|   |                                 | 2.3 Measurements are confirmed and recorded  |
| 3 | Perform calculations            | 3.1 Appropriate calculation method is selected for achieving the required result   |
|   |                                 | 3.2 Material quantities for the project are correctly calculated using the appropriate factors   |
|   |                                 | 3.3 Results are confirmed and recorded   |
| 4 | Estimate approximate quantities | 4.1 Calculations for determining material requirements are taken   |
|   |                                 | 4.2 Appropriate formulas for calculating quantities are selected   |
|   |                                 | 4.3 Quantities are estimated from the calculations taken   |
|   |                                 | 4.4 Material quantities for the project are calculated, confirmed and recorded within enterprise tolerances  |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Calculation factors are to include but not be limited to length, area, weight, height, width, depth, volume, mass, scales, ratios, perimeters, quantities, numbers, grade, percentages, addition, subtraction, multiplication and division

Areas and volumes are to include but not be limited to calculating of regular and irregular shapes such as rectangles, squares, circles, triangles, trapeziums, cubes, cones, pyramids and cylinders that represent calculations taken in a civil construction environment

Material quantities are to be calculated in either bank, loose or compacted states and converted to volumes in the other states

Measurements are to be in metric scale and cover all necessary calculations

Calculations to be performed are to include but not be limited to manually and with the aid of a calculator

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Emergency procedures related to equipment operation are to include but may not be limited to emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation

<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Equipment</b>	Equipment is to include but not be limited to rulers, tape measures, trundle wheels, calculators and may include laser equipment
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, phone, facsimile, computer, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, plans, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS), diagrams or sketches and graphics</p> <p>Safe work procedures or equivalent</p> <p>Regulatory/legislative requirements</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation's work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Completion of measurements, calculations and determination of quantities for at least three different projects of varying complexity

Calculate each of the following using a realistic civil construction task or example:

- length
- perimeter
- circumference
- area
- volume
- number
- ratio
- percentage
- conversion of metres to millimetres and millimetres to metres
- measure using a rule or tape measure five separate tasks within 1mm accuracy

Safe and effective operational use of tools and equipment

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"><li>- Site and equipment safety requirements</li><li>- Measuring, calculating, geometry and determination of quantities</li><li>- Tolerances</li><li>- Calculators</li><li>- Company procedures</li><li>- Project quality requirements</li><li>- Communication devices</li><li>- Processes for care of measuring equipment</li><li>- Civil construction terminology</li><li>- JSA's/Safe work method statement</li></ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>



**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- equipment appropriate to measuring and calculating

**... End ...**

## **BCCCM1005B Handle construction material and safely dispose of non-toxic materials**

<b>Unit Descriptor</b>	<p>This unit specifies the competency required to handle construction material and safely dispose of non-toxic materials. It includes the minimum criteria for competency assessment.</p> <p>The unit covers planning and preparation for work, the manual handling, sorting and stacking of materials, the mechanical handling of materials, the removal of waste and the area clean up.</p>
<b>Employability Skills</b>	<p>The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.</p>
<b>Element</b>	<b>Performance Criteria</b>
Elements define the essential outcomes of a unit of competency.	Performance criteria specify the level of performance required to demonstrate achievement of the element.
1      Plan and prepare	<ul style="list-style-type: none"><li>1.1    Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task</li><li>1.2    Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task</li><li>1.3    Signage requirements are identified and obtained from the project traffic management plan and implemented</li><li>1.4    Tools and equipment selected to carry out tasks that are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported</li><li>1.5    Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task</li></ul>

- |   |   |     |   |
|---|---|-----|---|
| 2 | Manually handle, sort and stack construction material | 2.1 | Common construction materials are identified and selected for sorting and stacking/stockpiling  |
|   |   | 2.2 | Handling characteristics of materials are identified and appropriate handling techniques applied to complete tasks                            |
|   |   | 2.3 | Specific handling requirements are applied for hazardous materials  |
|   |   | 2.4 | Materials are stored, stacked/stockpiled and protected so they are easily identifiable, retrievable and not damaged                           |
|   |   | 2.5 | Appropriate signage and barricades are erected to isolate stored materials from workplace traffic or access                                   |
| 3 | Mechanically handle materials                         | 3.1 | Materials are stacked/banded for mechanical handling in accordance with type of material and plant/equipment                                  |
|   |   | 3.2 | Dogman/rigger is assisted with loading, unloading, moving and locating materials  |
|   |   | 3.3 | Materials are shifted safely with assistance of mechanical-manual handling aids   |
| 4 | Handle and remove waste                               | 4.1 | Material safety data sheets and requirements of regulatory authorities are complied with  |
|   |   | 4.2 | Hazardous materials are identified for separate handling  |
|   |   | 4.3 | Correct procedures are used to remove non-toxic materials   |
|   |   | 4.4 | Dust suppression procedures are used to minimise health risks to work personnel and others  |
| 5 | Clean up  | 5.1 | Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |
|   |   | 5.2 | Unused materials are safely stored/stacked for future use   |
|   |   | 5.3 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                           |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Hazardous waste are those wastes that pose a health risk to humans and animals or cause irreversible damage to the environment and may include toxic chemicals, asbestos and radioactive materials

Non toxic wastes are those wastes that do not pose a health risk through poisoning to humans and animals and may include excavated material that exceeds requirements and off cuts of construction materials such as timber

Construction materials may include but not be limited to bricks and concrete masonry, mortar components (cement, coarse aggregate and sand), timber, structural steel sections/components, concrete, scaffolding components, pipe sections, plywood and particle board, metal sheeting, steel reinforcement, insulation, glass, paints and sealants, plaster sheeting, copper and PVC piping, lead sheet, roof sheeting, roof tiles, ducting, guttering and downpipes, gravels, bitumen, asphalts, road furniture, culverts, pre-cast concrete units and soils

Waste material and debris may include but not be limited to banding straps, packing pieces, broken or damaged goods, cardboard, plastic, paper, loose material and construction materials

Protection of stacked/stored materials may include but not be limited to covering, tying or banding, barricades, signs and secure areas (hazardous material)

Dust suppression procedures may include but not be limited to spraying with water, covering, and use of vacuum cleaners

Tools and equipment may include but not be limited to brooms, hoses, shovels, rakes, wet and dry industrial vacuum cleaners, wheelbarrows, pallet trolley, materials hoists and forklifts

<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p> <p>Emergency procedures related to equipment operation are to include but may not be limited to emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</p>
<b>Quality Requirements</b>	<p>Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</p>
<b>Statutory/Regulatory Authorities</b>	<p>State/Regulatory Authorities may include Federal, State and Local Authorities</p>
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, plans, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures related to handling construction material and waste

Regulatory/legislative requirements pertaining to handling construction material and waste

Manufacturers' specifications and instructions

Organisation's work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

**Evidence Guide**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information

Compliance with OH&S site safety plan, regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

The completion of three construction material handling tasks requiring the handling of a range of not less than five significant construction materials and the disposal of three different waste materials generated

Communication and working effectively and safely with others

**Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria****A knowledge of**

- The types, characteristics, uses and packaging systems for commonly used construction materials
- The most commonly encountered waste materials on a construction site
- Environmental management requirements
- Hazardous goods handling in accordance with company procedures
- Systems for packing and securing materials for movement
- Systems and equipments or materials for the short term protection of stacked/stored materials
- Methods of dust suppression
- Site and equipment safety requirements
- Site isolation and traffic control responsibilities and authorities
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions

(real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource  
requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- realistic tasks covering the mandatory task requirements
- appropriate mechanical handling equipment or support
- work instructions

**... End ...**





**BCCCM2001B****Unit Descriptor****Use civil construction hand and power tools**

This unit specifies the competency required to safely and effectively identify, select and use hand and power tools to aid in the completion of tasks. It includes the minimum criteria for competency assessment.

This unit includes basic maintenance, checking and reporting of damage or faults

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- |   |                           |     |   |
|---|---------------------------|-----|---|
| 1 | Plan and prepare          | 1.1 | Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task |
|   |                           | 1.2 | Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task                               |
|   |                           | 1.3 | Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported            |
|   |                           | 1.4 | Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task                                 |
| 2 | Select and use hand tools | 2.1 | Hand tools are selected consistent with needs of the job  |
|   |                           | 2.2 | Tools are checked for serviceability and safety, and faults reported  |
|   |                           | 2.3 | Materials are clamped or fixed in position  |
|   |                           | 2.4 | Hand tools are used safely and effectively according to their intended use  |
|   |                           | 2.5 | Hand tools are safely located when not in immediate use   |

- 
- |   |                            |  |
|---|----------------------------|--|
| 3 | Select and use power tools | 3.1 Power tools, leads and hoses are selected consistent with needs of job in accordance with standard work practice, and any faults reported                |
|   |                            | 3.2 Power leads/hoses are visually checked for serviceability/safety in accordance with the site safety plan   |
|   |                            | 3.3 Route for safe placement of leads/hoses is cleared of identified hazards   |
|   |                            | 3.4 Electrical power leads are run to power supply so they are clear of traffic or covered where possible  |
|   |                            | 3.5 Electric power leads are connected to the power board or direct to power tool  |
|   |                            | 3.6 Air hoses are run out to the compressed air supply and covered where potential trip hazards exist  |
|   |                            | 3.7 Hose is connected to power tool and air supply   |
|   |                            | 3.8 Material is clamped or fixed in position for power tool application where applicable   |
|   |                            | 3.9 Power tools are safely and effectively used in application processes   |
|   |                            | 3.10 Power tools are safely located when not in use  |
| 4 | Clean up                   | 4.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                                      |
|   |                            | 4.2 Machinery, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Planning and preparation is to include but not be limited to worksite inspection, checking of electrical safety/inspection tag for currency, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Power tools are to include but not be limited to those powered by 240 volt electricity and may include those powered by compressed air, battery driven power tools and hydraulic

Operation of hand and power tools are to be consistent with site activities in the civil construction industry. It involves their identification, their correct application and their effective operation

Site location for work application may be any location or site associated with any of the sectors of the civil construction industry

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Emergency procedures related to equipment operation are to include but may not be limited to emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation

### Environmental Requirements

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	<p>Hand tools and equipment are to include but not be limited to cramps, vices, adjustable spanners, crow bars, pinch bars, bolt cutters, brooms, chisels, hacksaws, handsaws, hammers, measuring tapes, axes, rakes, hand augers, picks, mattocks, pliers, shovels, spades, sledge hammers, spanners, wrenches, spirit levels and wire cutters</p> <p>Power tools and equipment are to include kanga hammers, cut off saws, drills, screwdrivers, angle grinders, pneumatic wrenches, impact hammers, tampers, rotary hammers/drills, circular saws, planers, sanders and scalers</p> <p>Equipment is to include power leads and safety switches and may include air hoses</p>
<b>Materials</b>	Materials are to include but not be limited to those associated with the use of hand and power tools
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to using hand and power tools</p> <p>Regulatory/legislative requirements pertaining to using hand and power tools</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Completion of tasks to the required dimensions and specifications, safely and effectively select and use all of the mandatory construction hand and power tools specified in the Unit Scope for their designated purpose

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria****A knowledge of**

- Site and equipment safety requirements
- Hand tools
- Portable power tools
- Power sources
- Civil industry materials
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- Electrical and compressed air safety
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to using hand and power tools
- hand and power tools and equipment appropriate to using hand and power tools
- specifications and work instructions

**... End ...**





## **BCCCM2002C**

### **Unit Descriptor**

## **Use small plant and equipment**

This unit specifies the competency required to use a range of small plant and equipment commonly employed in civil construction activities and sites. It includes the minimum criteria for competency assessment.

The unit covers the selection of the most appropriate equipment, the planning and preparation for work, the conduct of checks, the use of the plant or equipment and the post operational maintenance and clean up.

### **Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### **Element**

Elements define the essential outcomes of a unit of competency.

### **Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### **1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job
- 1.4 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |                                |   |
|---|--------------------------------|---|
| 2 | Conduct pre-operational checks | <p>2.1 Fuel and lubricants are selected according to manufacturers' specifications</p> <p>2.2 Fuel, oil, hydraulic fluid and water levels are checked and adjusted according to manufacturers' manual</p> <p>2.3 Bolts, nuts, guards and attachment couplings are secured/tightened and maintained in accordance with manufacturers' instructions</p> <p>2.4 Function of controls and gauges are checked and adjusted where necessary to comply with manufacturers' manual</p> <p>2.5 Standard start-up and shut down procedures are conducted according to requirements of operators' manual</p>   |
| 3 | Use small plant and equipment  | <p>3.1 Site hazards associated with small plant and equipment operations are identified and appropriate controls established in accordance with the requirements of the site safety plan</p> <p>3.2 Operating techniques for small plant and equipment are identified and applied to achieve optimum output in accordance with manufactures' design specifications while maintaining specified tolerances</p> <p>3.3 Machine is operated to produce results within design specifications to meet specified tolerances</p> <p>3.4 Plant and equipment are safely located when not in immediate use</p> <p>3.5 Responsibility of self direction to achieve finished product to job/design specifications is assumed</p> |
| 4 | Carry out operator maintenance | <p>4.1 Plant/equipment is shut down and prepared for maintenance as per manufacturers' manual and organisational requirements</p> <p>4.2 Inspection and fault finding are conducted in accordance with manufactures' specifications and/or organisational requirements</p> <p>4.3 Defective parts are removed and replaced safely and effectively according to manufacturers' manual and organisational requirements</p> <p>4.4 Regular programmed maintenances tasks are carried out in accordance with manufacturers' and/or organisational requirements</p>  |

- |   |          |     |  |
|---|----------|-----|--|
| 5 | Clean up | 5.1 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                                  |
|   |          | 5.2 | Plant, equipment and tools are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## **Range Statement**

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

**Unit scope**

Small plant and equipment are classed in the following categories:

Pneumatic powered (jackhammers, trench rammers or wacker tamping rammers)

Electrically powered (alternators/generators, battery chargers, compressors, circular saws, concrete mixers, hammer drills or lighting sets)

Petrol or diesel driven (brush cutters, compressors, concrete mixers, emulsion screed boards, masonry concrete saws, post hole diggers, telescopic tree pruners, vibrator concrete pencil or water pumps)

Other (solar powered sign boards, small pedestrian manually operated rollers)

Power sources may include 240 volt electricity, compressed air and petrol/diesel motors and hydraulics

Operator maintenance is to include cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public

**Safety (OH&S)  
(continued)**

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Emergency procedures related to equipment operation are to include but may not be limited to emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation

**Environmental  
Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

**Statutory/Regulatory  
Authorities**

State/Regulatory Authorities may include Federal, State and Local Authorities

**Materials**

Materials associated with the use of small plant and equipment may include but are not limited to water, clays, silts, stone, gravel, mud, rock, sand, topsoil, bituminous mixes, timber, fuels and oils, power leads, replacement parts and consumables

**Communications**

Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task

On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues

## Information

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures related to the operation of small plant and equipment on construction sites

Regulatory/legislative requirements pertaining to small plant and equipment operations and the environment

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

The completion of realistic site based tasks using at least one small plant item from two different categories listed in the unit scope.

The application of emergency procedures

The conduct of authorised operator maintenance

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"><li>- Small plant and equipment types, characteristics, technical capabilities and limitations</li><li>- Basic soil types and characteristics</li><li>- Site and equipment safety requirements</li><li>- Small plant and equipment operating techniques related to essential tasks</li><li>- Processes for interpreting engineering drawings and sketches</li><li>- Operational, maintenance and basic diagnostic procedures</li><li>- Site isolation and traffic control responsibilities and authorities</li><li>- Materials Safety Data Sheets and materials handling methods</li><li>- Project quality requirements</li><li>- Civil construction terminology</li><li>- Processes for compaction of concrete, soils and granular materials</li><li>- JSA's/Safe work method statement</li></ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated construction site</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>
<b>Methods of assessment</b>	<p>Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p>



Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource  
requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- operational small plant and equipment with appropriate support materials
- realistic tasks covering the mandatory task requirements
- maintenance materials appropriate to the small plant and equipment
- specifications and work instructions

**... End ...**

**BCCCM2003B****Unit Descriptor****Read and interpret plans and specifications**

This unit specifies the competency required to read and interpret plans and specifications relevant to civil construction operations. It includes the minimum criteria for competency assessment.

The unit covers the identification of types of plans and drawings and their functions, the recognition of commonly used symbols and abbreviations, the identification of key features and specifications on a site plan, the comprehension of written job specifications and the recognition of document status and amendment detail.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- |   |   |  |
|---|---|--|
| 1 | Identify types of drawings and their functions    | 1.1 Main types of plans and drawings used in the civil construction sector of the industry are identified<br>1.2 Key functions of each type of drawing are identified<br>1.3 Quality requirements of company operations are recognised and adhered to<br>1.4 Environmental controls are identified from the job plans, specifications and environmental plan |
| 2 | Recognise amendments                              | 2.1 Title panel is checked to verify latest amendments to drawing<br>2.2 Amendments to specifications are checked to ensure currency of information  |
| 3 | Recognise commonly used symbols and abbreviations | 3.1 Civil construction symbols and abbreviations are recognised<br>3.2 Legend is located on project drawings, symbols and abbreviations are correctly interpreted  |
| 4 | Locate and identify key features on a site plan   | 4.1 Orientation of the plan with the site is achieved<br>4.2 Key features of the site are identified and located<br>4.3 Access to site is gained and services, main features, contours and datum are identified  |

- |   |                                       |   |
|---|---------------------------------------|---|
| 5 | Identify project requirements         | 5.1 Existing surface level and finished surface level are identified                          |
|   |                                       | 5.2 Dimensions for earthworks for nominated locations are identified                          |
|   |                                       | 5.3 Invert level and depth to invert offsets percent fall are identified                      |
|   |                                       | 5.4 Batter slopes and gradients for nominated locations are identified                        |
|   |                                       | 5.5 Drainage type and location is identified  |
|   |                                       | 5.6 Pavement types and dimensions for nominated locations are identified                      |
|   |                                       | 5.7 Environmental controls and locations are identified                                       |
|   |                                       | 5.8 Location, dimensions and tolerances for ancillary works are identified                    |
| 6 | Read and interpret job specifications | 6.1 Job specifications are identified from drawings, notes and descriptions                   |
|   |                                       | 6.2 Standards of work, finishes and tolerances are identified from the project specifications |
|   |                                       | 6.3 Material attributes are identified from specifications                                    |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Civil construction activities include tunnels, bridges, culverts, earthworks, roadworks, roadmarking, railway construction, pipelaying and dams

Drawings may include site plans, locality plans, cross sectional plans, longitudinal plans, structural detail and specification providing illustrations and dimensions and project plans, drawings, specifications, illustrations, dimensions and notes

Specifications may include detail relating to materials and quality of work, quality assurance, nominated sub-contractors, provision of site access/facilities, details relating to performance including:

- Standards of work
- Tolerances
- Material types
- Characteristics
- Treatments and finishes

Key features of plans and specifications may include type of product/service, quantities, characteristics, sizes, pattern dimension, location, surfaces and compatibility

Material attributes include types, characteristics, compaction requirements, treatments and finishes

Project documentation includes contract, drawings, specifications, supplementary specifications, work schedules, schedule of rates, standard procedures and practices

<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p> <p>Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</p>
<b>Quality Requirements</b>	<p>Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</p>
<b>Statutory/Regulatory Authorities</b>	<p>State/Regulatory Authorities may include Federal, State and Local Authorities</p>
<b>Communications</b>	<p>Communications are to include but not be limited to written and verbal instructions and may include two way radio, hand signals, mobile phone, site specific instructions, or instructions related to job/task</p>

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS), diagrams or sketches and graphics

Safe work procedures related to construction site operations

Regulatory/legislative requirements pertaining to operations and the environment

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

For a minimum of two different projects, the reading and interpretation of the project plans including:

- Confirmation of amendment status and drawings confirmed 'For Construction'
- Orientation of plans to the ground
- Six key features on both the plan and the ground
- Six drainage dimensions, levels and locations from the project plans
- Confirmation of six items of information from the title block of the project plans
- Six earth works dimensions, levels and locations from the project plans
- Six pavement dimensions, levels and locations from the project plans
- Six culvert dimensions, levels and locations from the project plans
- Six ancillary works dimensions, levels and locations from the project plans

For a minimum of two formal specifications, identify the dimensions, material requirements and processes to be followed and/or the quality tests to be applied

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"><li>- Features of plans and elevations including direction, scale, key, contours, symbols and abbreviations</li><li>- Commonly used civil construction symbols and abbreviations</li><li>- The processes for application of scales in plan preparation/interpretation</li><li>- Techniques for orienting/confirming the orientation of a plan</li><li>- Key features of formal job specifications</li><li>- Site and equipment safety requirements</li><li>- Project quality requirements</li><li>- Civil construction terminology</li><li>- Basic calculations of heights, areas, volumes and grades</li><li>- Drawing conventions</li><li>- JSA's/Safe work method statement</li></ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated construction site</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>



**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- project plans and specifications
- realistic tasks covering the mandatory task requirements

**... End ...**

**BCCCM2004B****Unit Descriptor****Drain and dewater site**

This unit specifies the competency required to drain and/or dewater civil construction project sites for environmental protection purposes and the control of water which may effect construction. It includes the minimum criteria for competency assessment.

This unit includes the drainage of surface water and the dewatering of trenches, excavations, pits, wells, ponds and coffer dams.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |  |     |  |
|---|--|-----|--|
| 2 | Position<br>sedimentation control                      | 2.1 | Sedimentation controls are positioned according to project environmental management plan   |
|   |  | 2.2 | Sedimentation control barriers are constructed in accordance with the environmental management plan  |
|   |  | 2.3 | Geo-fabrics and/or woven wire is positioned according to specification and to the environmental management plan                                      |
| 3 | Remove surface water                                   | 3.1 | Temporary drainage systems are established to drain or divert surface and sub-surface water to the storm water drainage system                       |
|   |  | 3.2 | Slab and site surface water are removed and/or directed to the temporary drainage system   |
|   |  | 3.3 | Surface holes and depressions are filled   |
|   |  | 3.4 | Surface water is drained to drainage system using adequate fall  |
| 4 | Construct sump/wells                                   | 4.1 | Sump and/or well is located at the lowest point to be drained to maximise pump efficiency  |
|   |  | 4.2 | Sumps and/or wells are constructed to work instructions  |
| 5 | Remove water from<br>sumps/wells, trenches<br>and pits | 5.1 | Surface or submersible pumps are installed   |
|   |  | 5.2 | Surface pump is located as close as practicable to the sump or well  |
|   |  | 5.3 | Water is pumped to temporary drainage system according to the project environmental management plan  |
|   |  | 5.4 | Discharged water is dispersed using approved procedures  |
| 6 | Clean up   | 6.1 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                                  |
|   |  | 6.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Drainage is to include but not be limited to graded surface level gutters and ditches excavated manually or by machine and various types of plastic piping

Areas to be dewatered and/or drained are to include but not be limited to control of surface water, bores, coffer dam, springs, creeks, wetland water, seepage water in trenches and pits and low lying natural ground where water may not escape

Dewatering techniques are to include but not be limited to sumps, wells, submersible pumps, vacuum pumps, surface pumps and sludge pumps

Traffic signs and devices are to include but not be limited to temporary warning signs, regulatory and traffic cones. Signs and devices may include highway traffic signs, site safety signage, guide signs, warning signs, barriers, hazard markers, portable traffic signals, bollards, arrow boards, vehicle mounted signs, flashing lights, barricades, and traffic conditions signage

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Site locations are to include but not be limited to road construction sites, excavation projects and construction sites in close proximity of wetlands or active water

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground services, other machines, personnel, traffic control, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Emergency procedures related to equipment operation are to include but may not be limited to emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation

**Environmental Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

**Statutory/Regulatory Authorities**

State/Regulatory Authorities may include Federal, State and Local Authorities

**Tools and equipment**

Tools and equipment are to include but not be limited to hoses, shovels and pumps

**Materials**

Materials are to include but not be limited to various types of plastic piping, silt fences, rocks or straw bales

## **Communications**

Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task

## **Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures or equivalent related to draining and dewatering sites

Environmental requirements pertaining to draining and dewatering sites

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## **Evidence Guide**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

As a minimum, drain surface water from a site using surface drains and dewater a trench or pit, using at least one type of pump on two separate projects

Establishment of sedimentation controls for at least one project

Construct a sump

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

**Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Drainage and dewatering
- Sedimentation controls
- Grading and levelling
- Free water
- Pumps
- Environmental considerations
- Construction principles
- Processes for interpreting engineering drawings
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of

Assessment methods must confirm the ability to access and



correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials required to drain and dewater a site
- hand and power tools, small plant and equipment appropriate to drain and dewater a site
- specifications and work instructions

**... End ...**

**BCCCM2005B****Unit Descriptor****Carry out manual excavation**

This unit specifies the competency required to carry out safe and effective manual excavation for situations requiring basic benching and battering but not requiring formal shoring. It includes the minimum criteria for competency assessment.

The unit includes preparation for work, the digging and cleaning of the excavation, excavation of post holes, the application of basic collapse prevention techniques, the isolating of the immediate area and the final clean up.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Prepare for work**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and observed
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- 
- |   |                                     |   |
|---|-------------------------------------|---|
| 2 | Dig small excavations by hand       | 2.1 The location and specifications of the intended excavation are confirmed on the ground before commencing work                                     |
|   |                                     | 2.2 Service markers or taped areas are identified   |
|   |                                     | 2.3 Location of underground services is determined or confirmed to avoid damage or interference   |
|   |                                     | 2.4 Hand tools are correctly used to safely dig post holes, small pits and trenches to the required dimensions  |
|   |                                     | 2.5 Trench collapse prevention procedures are undertaken in accordance with legislative and site requirements, where excavation is in unstable ground |
|   |                                     | 2.6 Barricades are placed around the excavation   |
| 3 | Complete and isolate the excavation | 3.1 Loose material is cleaned out of excavation using hand tools  |
|   |                                     | 3.2 The excavation is checked for confirmation with the specification or work instruction   |
| 4 | Clean up                            | 4.1 Loose material is cleared away from edge of excavation  |
|   |                                     | 4.2 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                               |
|   |                                     | 4.3 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices     |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Manual excavations are to include trenches and post-holes and may include pits and the levelling of the work area

Underground services may include but not be limited to power, water, gas, telephone, sewerage

Site conditions are to include dry, wet, mud, dust and varying day/night visibility

Maintenance is to include cleaning, servicing and recording and reporting of faults with tools and equipment

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, underground services, buildings, traffic, embankments, cuttings, structures and hazardous materials

<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	Statutory/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include picks, crow-bars, shovels, hand augers, string lines, pegs, levels and tape measures and may include jack hammers and scabblers
<b>Materials</b>	<p>Materials may include but are not limited to clays, silts, stone, gravel, mud, rock, sand and topsoil</p> <p>Rock types may include metamorphic, igneous and sedimentary</p>
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures related to manual excavation</p> <p>Regulatory/legislative requirements pertaining to manual excavation</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements.</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

A minimum of two separate manual excavations in different dirt types requiring:

- the location, marking and avoidance of underground services
- trenching
- post-holing to services depth
- basic trench collapse prevention techniques including benching and battering, and
- the isolation of the excavation sites

The maintenance of tools and area clean up

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge  
required to achieve the  
performance criteria**

A knowledge of

- The types, uses, limitations and maintenance requirements of manual excavation tools
- Techniques for the safe and effective use of manual excavation tools
- Basic principles of soil technology for civil works
- Basic trench collapse prevention techniques including benching and battering
- Site safety requirements
- Processes for interpreting engineering drawings and sketches
- Site isolation and traffic control responsibilities and authorities
- Project quality requirements
- Civil construction terminology
- Concreting tools, plant and equipment
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace locations or simulated workplaces
- realistic tasks covering the mandatory task requirements
- specifications and work instructions

**... End ...**





**BCCCM2006B****Unit Descriptor****Support plant operations**

This unit specifies the competency required by a spotter to support plant operations on a construction site. It includes the minimum criteria for competency assessment.

The unit covers planning and preparation for work, the identification and protection of services, the direction and guidance of plant operations, and the manual finishing and clean up of jobs.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

**2 Identify and protect services**

- 2.1 Services are located from plan
- 2.2 Service markers are located during machine operations and operators advised of location to prevent damage
- 2.3 Services are exposed, marked and barriers erected to prevent damage

- |   |                       |   |
|---|-----------------------|---|
| 3 | Support the operators | 3.1 Unsafe conditions or potential damage to property are notified to operator<br>3.2 Pegs and levels are checked and advice given to machine operator for compliance with job requirements<br>3.3 Delivered/relocated materials are delivered to correct location and checked for quality and quantity<br>3.4 Delivery plant/trucks are directed to required location for loading/unloading<br>3.5 Guidance is provided to assist machine operator with spreading of materials to specified levels<br>3.6 Guidance is provided to assist machine operator with compaction of materials in layers<br>3.7 Excavation jobs are finished by hand to specifications<br>3.8 Damage to access roads is reported to supervisor |
| 4 | Clean up              | 4.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan<br>4.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices  |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Plant may include but not be limited to trucks, dozers, graders, scrapers, tractors, excavators, front end loaders, rollers, water carts and pavers

Spotters tasks are to include the direction of plant to load/unload points, the checking of levels, checking of line and level for excavation and spread rates

Maintenance is to include cleaning and authorised servicing and the monitoring, recording and reporting of faults with tools and equipment

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures, hazardous materials, traffic and plant operations

Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, extinguishing fires, organisational first aid requirements and evacuation

**Environmental Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and Equipment</b>	Tools and equipment may include but not be limited to a tape measure, string line, plumb bob, batter boards, levelling devices/instruments and two way radio and may include barriers/barricades
<b>Materials</b>	<p>Construction site materials may include but are not limited to clays, silts, stone, gravel, mud, rock, sand, topsoil and bituminous mixes</p> <p>Rock types may include metamorphic, igneous and sedimentary</p>
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures related to the operation of plant on construction sites</p> <p>Regulatory/legislative requirements pertaining to plant operations and the environment</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements.</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

The completion of four standard shifts requiring the spotting for a minimum of two separate activities involving excavation, fill, spreading of imported material and trimming

The application of emergency procedures

The maintenance of tools and the area clean up

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Plant types, characteristics, technical capabilities and limitations
- Basic soil types and characteristics
- Plant and main attachment operating techniques related to loading, unloading, spreading and compaction
- Site and equipment safety requirements
- Processes for interpreting engineering drawings and sketches
- Site isolation and traffic control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace locations or simulated workplaces
- operational plant with appropriate attachment(s)
- measuring and levelling equipment
- realistic tasks covering the mandatory task requirements
- project plans and specifications

**... End ...**





**BCCCM2007B****Unit Descriptor****Spread and compact materials manually**

This unit specifies the competency required to spread and compact soils and aggregate with hand tools, hand tampers and small compaction equipment. It also includes the minimum criteria for competency assessment.

The unit covers planning and preparation for work, directing the placement and spreading by machine plus the manual spreading and compaction of soils and aggregates and site clean up.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

**2 Conduct compaction machine operational checks**

- 2.1 Pre-start, start up and shut down procedures are carried out in accordance with manufacturers' and/or site specific requirements
- 2.2 Machine controls and functions are checked for serviceability and any faults are rectified or reported

- 
- |   |                              |  |
|---|------------------------------|--|
| 3 | Spread and compact materials | 3.1 Material type is identified  |
|   |                              | 3.2 Trucks are directed to required location for loading/dumping   |
|   |                              | 3.3 Delivered/relocated materials are directed to correct location   |
|   |                              | 3.4 Manufactured material is checked for segregation   |
|   |                              | 3.5 Field test is conducted to ensure material moisture is suitable  |
|   |                              | 3.6 Machine operator is directed to spread materials to specified levels   |
|   |                              | 3.7 Materials are finished by hand to specified levels   |
|   |                              | 3.8 Materials are consolidated into layers by hand held mechanical compaction equipment  |
|   |                              | 3.9 Field test is conducted to ensure compaction has been achieved in restricted locations   |
| 4 | Clean up                     | 4.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                          |
|   |                              | 4.2 Plant and equipment is cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Materials are to include soils and aggregates and may include but not be limited to clay, sand, gravel, stabilised material, pre mix, cold mix and hot mix

Tools and equipment are to include rakes, shovels and mechanical compaction equipment

Operator maintenance is to include cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements

Basic field identification test for materials are to be in accordance with project specifications and Australian Standards and are to include the visual and feel identification test for material type identification, the visual identification test for material segregation, the visual and feel identification test for material moisture content, project specification testing requirements for material compaction and may include the speedie moisture content test

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement

<b>Safety (OH&amp;S) (continued)</b>	<p>Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</p> <p>Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	Statutory/Regulatory Authorities may include Federal, State and Local Authorities
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures related to the operation of compaction equipment on construction sites</p> <p>Regulatory/legislative requirements pertaining to compaction equipment operations and the environment</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements.</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to

confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

A minimum of three separate operations requiring the hand spreading and the mechanical (hand operated) compaction of two different material types to site specification

The conduct of authorised operator maintenance

Communication and working effectively and safely with others

**Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge  
required to achieve the  
performance criteria**

A knowledge of

- Basic principles of soil technology for civil works
- Basic soil compaction theory including the effects of moisture and mechanical interlock
- Hand operated mechanical compaction machine types, characteristics, technical capabilities and limitations
- Site and equipment safety requirements
- Processes for interpreting engineering drawings and sketches
- Site isolation and traffic control responsibilities and authorities
- Project quality requirements
- Civil construction terminology
- Practical field tests for moisture content, shrinkage and compaction
- Processes for sampling, soil and compaction tests
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- operational mechanical (hand operated) compaction equipment
- appropriate hand tools, support plant and materials
- realistic tasks covering the mandatory task requirements
- maintenance materials appropriate to the compaction equipment
- project plans and specifications

**... End ...**



## BCCCM2008B

### Unit Descriptor

## Carry out basic levelling

This unit specifies the competency required to carry out basic levelling including the establishment of earthwork alignment and the transfer of heights from the survey control. It includes the minimum criteria for competency assessment.

The unit covers planning and preparation for work, the establishment of alignment, the set up and use of levelling devices and the recording of outcomes.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and observed
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Levelling equipment is checked for serviceability, within specified tolerances and any faults are reported
- 1.6 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |                                   |     |   |
|---|-----------------------------------|-----|---|
| 2 | Establish offsets for civil works | 2.1 | Offset and recovery pegs are established from survey controls to plans and drawings to meet project requirements                                |
|   |                                   | 2.2 | Earthwork and pavement control lines are re-established from offsets and/or recovery pegs in accordance with plans, drawings and specifications |
|   |                                   | 2.3 | Drainage offsets are established from survey control in accordance with plans, drawings and specifications                                      |
| 3 | Set up and use levelling device   | 3.1 | Heights to be transferred/established are identified from project plans or instructions   |
|   |                                   | 3.2 | Levelling instruments are set-up and correctly used in accordance with standard operating procedures and manufacturers' guidelines              |
|   |                                   | 3.3 | Heights are transferred from the known to the required  |
|   |                                   | 3.4 | Results of levelling procedure are documented and closed out to organisational requirements   |
| 4 | Clean up                          | 4.1 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                             |
|   |                                   | 4.2 | Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices   |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Basic levelling activities may include transferring levels/heights for formwork, earthwork, roadwork, pipework and drainage works, positioning offsets and recovery pegs

Levelling devices are to include spirit levels, laser levels, string lines, tape measures, automatic levels, survey pegs, levelling staffs and plumb bobs

Levelling devices may include optical square, inclinometers, batter pegs/boards

Heights or levels may be indicated by drawing/sketch, verbal or written instructions, datum/survey peg, chalk or nail mark and mark on vertical surface

Levelling equipment/device tolerance checks are to include a two peg test for automatic level and reverse readings for spirit level

Levelling procedures may include open or closed traverse utilising height of instrument or rise and fall methods of reduction

Operator maintenance is to include cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

<b>Safety (OH&amp;S) continued</b>	Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, structures, hazardous materials, confined space, plant and traffic
<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and Equipment</b>	Tools and equipment may include but not be limited to levelling devices, wooded/steel pegs, straight edges, hammers and chalk line
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, charts and hand drawings, memos, maps and diagrams or sketches</p> <p>Safe work procedures related to performing of levelling</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements.</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

The conduct of a minimum of three different levelling tasks, at least one utilising an automatic level. One of the tasks must include closed traverse utilising either the height of instrument or rise and fall method of reduction

The conduct of a two peg test with an automatic level, to confirm instrument meets manufacturers' tolerances

The accurate recording of the results of each levelling procedure to organisational requirements

Communication and working effectively and safely with others

### Relationship to other units

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria****A knowledge of**

- Basic civil construction processes
- Civil construction plan, symbols and construction terminology
- Levelling device types, characteristics, technical capabilities and limitations
- Levelling techniques related to essential tasks
- Basic mathematical techniques associated with levelling
- Site and equipment safety requirements
- Processes for interpreting engineering drawings and sketches
- Site isolation and traffic control responsibilities and authorities
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- operational levelling equipment
- realistic levelling tasks covering the mandatory task requirements
- maintenance materials appropriate to the levelling equipment
- project plans and specifications

**... End ...**





## BCCCM2009B

## Work in confined spaces

### Unit Descriptor

This unit specifies the competency required to work in a confined space (enclosed or partially enclosed) for the purpose of carrying out work or inspections. It includes the minimum criteria for competency assessment.

This unit includes entry and exit procedures, assessment of associated risks and how to operate safely in a confined space which is at atmospheric pressure during occupancy.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Authorisation (entry permit) to enter the confined space is obtained in accordance with regulatory requirements
- 1.4 Emergency response procedure is confirmed with the stand-by person
- 1.5 Signage and barrier requirements are identified and obtained from the project plan and implemented
- 1.6 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.7 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task
- 1.8 Rescue equipment as required by the entry permit is positioned close to the point of entry

- |   |                                      |     |   |
|---|--------------------------------------|-----|---|
| 2 | Enter and work in the confined space | 2.1 | Access cover is removed or opened as required   |
|   |                                      | 2.2 | Confined space is entered according to agreed procedure   |
|   |                                      | 2.3 | Atmosphere is tested and monitored for harmful elements in accordance with organisations procedures   |
|   |                                      | 2.4 | Communication is maintained with the stand-by person  |
|   |                                      | 2.5 | Designated work in confined space complies with entry permit requirements   |
|   |                                      | 2.6 | Allocated entry time is monitored and adhered to  |
| 3 | Exit confined space                  | 3.1 | Confined space is exited according to agreed procedure  |
|   |                                      | 3.2 | Tools, equipment and materials are recovered from the confined space  |
|   |                                      | 3.3 | Access cover is replaced or closed as required  |
|   |                                      | 3.4 | Tagging and lock-out procedures are applied as required   |
|   |                                      | 3.5 | Confined space entry log is completed   |
| 4 | Clean up                             | 4.1 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                           |
|   |                                      | 4.2 | Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |
|   |                                      | 4.3 | Barriers and signs are removed, cleaned and stored  |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Confined space work permits are to include but not be limited to location of work, duration of work, size of work crew, atmospheric testing requirements, personal protective equipment, hot work, stand-by personnel and rescue arrangements, other precautions (signs, barriers) and authorisation

Risks associated with confined spaces may include but not be limited to restricted means of entry and exit, atmosphere which contains potentially harmful levels of contaminant, unsafe oxygen levels or engulfment

Confined spaces may include but not be limited to culverts, storm water systems, access chambers, gully pits, live or inactive sewer mains, environmental traps and tanks, trenches, box girders and bridge voids

Respiratory protection devices are to include but not be limited to air purifying respirators and may include self contained compressed air breathing apparatus, supplied airline breathing apparatus and escape breathing apparatus and atmospheric monitoring devices

Signage may include but not be limited to site safety signage, temporary signage for the benefit of motorists and pedestrians and barricades

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with working in confined spaces, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to fires, underground services, excavations, traffic, hazardous materials, contaminated atmosphere and toxic gases

**Environmental Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

**Statutory/Regulatory Authorities**

Statutory/Regulatory Authorities may include Federal, State and Local Authorities

**Tools and equipment**

Tools and equipment are to include but not limited to harness and lifeline, respirator apparatus, atmospheric testing equipment, signs, barricades, communication devices, tools and equipment relevant to the work to be performed

**Communications**

Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures or equivalent related to working in confined spaces

Regulatory/legislative requirements pertaining to working in confined spaces

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Safe preparation, entry and exit is performed applying all appropriate approval and testing procedures for a minimum of three different confined space projects

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Confined space entry and exit procedures, risks and regulations
- Underground services
- Air contaminants and toxic gases
- Breathing apparatus and limitations
- Processes for interpreting engineering drawings
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Site isolation and site control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- State and Territory interpretations of a confined space
- Atmospheric monitoring devices
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- work instructions and entry permits
- workplace location or simulated workplace
- materials relevant to entry, working and exit of confined spaces
- plant and equipment appropriate to entry, working and exit of confined spaces

**... End ...**



## BCCCM2010B

### Unit Descriptor

## Install trench support

This unit specifies the competency required to shore a trench to prevent the collapse of trench walls and provide safety to personnel working in the trench. It includes the minimum criteria for competency assessment.

This unit includes the set out, installation and removal of shoring.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |                        |     |  |
|---|------------------------|-----|--|
| 2 | Install trench shoring | 2.1 | Plant operator is communicated with to ensure excavation of trenches comply with site plan, line and depth |
|   |                        | 2.2 | Shoring method is determined and prepared  |
|   |                        | 2.3 | Positioning of shoring is set out to specifications  |
|   |                        | 2.4 | Shoring is positioned or erected within the trench   |
|   |                        | 2.5 | Shoring is secured in position and checked to ensure structural conformity with regulations                |
|   |                        | 2.6 | Excavation is cleaned out by hand to job requirements  |
|   |                        | 2.7 | Ladders provided for access and egress to site safety plan requirements                                    |

- |   |                       |  |
|---|-----------------------|--|
| 3 | Remove trench shoring | 3.1 Jacking mechanisms are released and ladders removed  |
|   |                       | 3.2 Shoring is checked and prepared for lifting from the trench  |
|   |                       | 3.3 Shoring is removed from trench and stored on site in accordance with organisational requirements   |
| 4 | Clean up              | 4.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                                  |
|   |                       | 4.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Trench support is to include trenches of at least 1.5 metres in depth and may include trenches less than 1.5 metres deep

Trench shoring is to include one of the following:

- Fixed and/or adjustable trench boxes
- Drag boxes
- Hydraulic vertical shoring
- Close timber shoring
- Aluminium shoring shields
- Powerbrace
- Lite box aluminium panels
- Slide rails

Trench shoring mechanisms may include but not be limited to closed timber sheeting, soldier sets, segmental sections and trench shields

Shoring securing mechanisms may include but not be limited to footings, needles, anchors, sole plates, struts and brackets

Excavations to be shored are to include but not be limited to trenches and may include wells and pits

<b>Unit scope (continued)</b>	<p>Traffic control signage may include but not be limited to site safety signage, temporary signage for the benefit of motorists and pedestrians, barricades, and traffic conditions signage</p> <p>Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements</p>
<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p> <p>Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with safe loading procedures, underground services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public</p> <p>Hazards and risks may include but not be limited to confined space, excavations, trench collapse, ladders, underground powerlines, falling objects, plant, traffic and hazardous materials</p> <p>Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement</p> <p>Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</p>

<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to shoring systems, levelling equipment, hand and power tools, measuring equipment, shovels, picks and may include scaffolding, elevated work platforms, slings and chains
<b>Communications</b>	Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to the installation of trench support</p> <p>Regulatory/legislative requirements pertaining to the installation of trench support</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements.</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Installation of trench support on two projects in trenches deeper than 1.5 metres requiring the trench support to be installed, moved along or within the trench and removed from the trench

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Excavation techniques
- Shoring methods and systems
- Working in confined spaces
- Construction techniques
- Processes for interpreting engineering drawings
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials and equipment relevant to the installation of trench support
- ladders and lifting equipment
- hand and power tools, plant and equipment appropriate to the installation of trench support
- project plans and specifications

**... End ...**



## BCCCM2011B gates

### Unit Descriptor

## Erect and dismantle temporary fencing and gates

This unit specifies the competency required to install temporary fencing and gates to isolate equipment and materials and prevent accidents due to unauthorised access. It includes the minimum criteria for competency assessment.

This unit includes preparation, erection, anchoring, maintenance and dismantling of temporary fencing and gates.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |               |     |  |
|---|---------------|-----|--|
| 2 | Erect fencing | 2.1 | Fence line and anchoring structure positions are set out to requirements of plans and specifications |
|   |               | 2.2 | Fence posts are erected in place and plumbed to alignment in accordance with specifications          |
|   |               | 2.3 | Fence rails and cladding or mesh are fixed to posts in accordance with specifications                |
|   |               | 2.4 | Fencing and gates are maintained to completed construction condition                                 |

3	Erect gates and signage	3.1	Gates are fitted and secured to requirements of site drawings and specifications
		3.2	Signage is installed at entry gates in accordance with site safety plan and security requirements
4	Remove and make good	4.1	Gates and fencing are dismantled and removed from site as required
		4.2	Area is made good to work specification
5	Clean up	5.1	Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan
		5.2	Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Fencing and gates are to include but not be limited to metal mesh fences and gates and may include timber cladding fences and gates

Anchoring of posts is to include but not be limited to cement blocks, anchor bolts and may include sand bags

Fence and gate signage is to include but not be limited to site safety information and security access information

Fencing is erected to prevent potential accidents which may occur by unauthorised access, protect valuable machinery and prevent materials from being contaminated

Traffic control signage may include but not limited to on unit signage, escort vehicle, highway traffic signs, site safety signage, temporary signage for the benefit of motorists and pedestrians, and traffic conditions signage

**Unit scope (continued)**

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Traffic conditions may include but not be limited to congested urban environments, low traffic rural areas, off-road un-trafficked areas, buildings, parking sites and pedestrian areas

Site locations may include but not be limited to new construction sites, on site locations, off site in an external paddock environment and existing fencing situations

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with traffic, high voltage power lines, uneven/unstable terrain, trees, pits, poles, trip hazards, dirt mounds, overhead service lines, surrounding buildings, obstructions, structures, facilities, dangerous materials, recently filled trenches, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Emergency procedures related to this unit are to include but may not be limited to extinguishing fires, organisational first aid requirements and evacuation

<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	State/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to measuring tapes, rulers, hammers, socket wrenches, fencing strainers, pliers and wire cutters, pop riveters, levelling equipment and may include docking saws, drop saws, jigs, stops, power drills, screwdrivers, bits and drills, clamps, squares, and nail guns
<b>Materials</b>	Materials are to include but not be limited to fencing mesh, fencing wire, metal posts, metal rails, concrete fencing materials, anchor bolts and may include timber posts, rails, pickets, palings, cladding and sand bags
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to the erecting and dismantling of fencing and gates</p> <p>Regulatory/legislative requirements pertaining to the erecting and dismantling of fencing and gates</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Completion of the erection and dismantling of fencing to enclose an area of at least 100m<sup>2</sup> including at least one gate to specifications

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Fencing systems
- Anchoring systems
- Site safety and security isolation
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Processes for the calculation of material requirements
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to the erection of fencing and gates
- hand and power tools, plant and equipment appropriate to the erection of fencing and gates
- specifications and work instructions

**... End ...**



## BCCCM2012B

### Unit Descriptor

## Carry out concrete work

This unit specifies the competency required to carry out concreting work on civil construction projects to foundations, slabs and retaining structures. It includes the minimum criteria for competency assessment.

This unit includes setting out, reinforcing, erecting and dismantling formwork, placing, finishing and curing concrete

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

#### 1 Plan and prepare

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |                  |     |   |
|---|------------------|-----|---|
| 2 | Select materials | 2.1 | Location of steel reinforcement and formwork is determined from drawings and reinforcement schedule |
|   |                  | 2.2 | Reinforcement is checked against reinforcement drawings and specifications                          |
|   |                  | 2.3 | Formwork components/materials are selected consistent with job                                      |
|   |                  | 2.4 | Fixing/fasteners are selected and used consistent with requirements of the job                      |

3	Set out for concrete work	3.1	String lines are set accurately from existing pegs
		3.2	Grades are checked to ensure correct fall
		3.3	Services are identified and protected to prevent damage
4	Construct and fit reinforcement	4.1	Reinforcing fabric and bars are cut and bent as required to project drawings and specifications
		4.2	Fabric and bars are tied/fixed to configuration from project drawings and specifications
		4.3	Stiffening rods are attached to panels as required to facilitate handling
		4.4	Reinforcement material is located in formwork and placed on bar chairs/spacers as determined from drawings, noting clearance from formwork
		4.5	Cast-ins are located and secured
5	Erect formwork	5.1	Work area is cleared and surface prepared for safe erection of formwork
		5.2	Formwork is set out to requirements of drawings and specifications
		5.3	Formwork is assembled/erected and braced to specifications
		5.4	Expansion joints are positioned to specification and to relevant Australian Standard
		5.5	Dowel joints are positioned to specification
		5.6	Debris, sawdust and other waste material are removed from formwork
		5.7	Release agent is applied to manufacturers' specifications
6	Carry out concrete work	6.1	Concrete is placed correctly to specified levels and grades
		6.2	Concrete is compacted to specification using immersion vibrator or other specified method
		6.3	Concrete is screeded, finished and curing process applied to specifications
		6.4	Concrete surface is adequately covered and protected

- |   |                |  |
|---|----------------|--|
| 7 | Strip formwork | 7.1 Edge boxing and braces are removed sequentially  |
|   |                | 7.2 Timber components are denailed, cleaned and stored or stacked  |
|   |                | 7.3 Steel components are cleaned, oiled and stored or stacked  |
|   |                | 7.4 Damaged formwork components are discarded after stripping  |
|   |                | 7.5 Screens are safely cleaned before movement where applicable  |
| 8 | Clean up       | 8.1 Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan                                  |
|   |                | 8.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit:

### Unit scope

Concreting work is to include but not be limited to site slabs and may include footpaths, repairing of kerb and channel, gully pits, culvert end structures, foundations, head walls, wing walls, aprons, plinths, drains and hardstands

Transporting of concrete may include but not be limited to pre-mix truck, crane and kibble and wheelbarrow

Placing methods of concrete may include but not be limited to wheelbarrows, pumping equipment, kibble, chute, tremmie, truck placed, shovelling and includes vibrating

Finishing techniques for concrete are to include two of the following but not be limited to steel trowel, mechanical trowelling machine, broom finished, wood float, bull float and brushed

Curing may include but not be limited to flooding, coating with a membrane, applied moisture, steam, curing agents or plastic sheeting

**Unit scope (continued)**

Methods to avoid segregation are to include but not be limited to minimising the height of a vertical drop and may include using a tremmie or the flexible hose of a concrete pump

Reinforcement components are to include but not be limited to mesh, reinforcement bars and ligatures

Cast in items include services and fixtures tied to the reinforcement

Formwork may include steel shutters, timber and plywood

Traffic control signage may include but not be limited to escort vehicle, highway traffic signs, site safety signage, temporary signage for the benefit of motorists and pedestrians, barricades, and traffic conditions signage

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Traffic conditions may include but not be limited to congested urban environments, low traffic rural areas, off-road un-trafficked areas, buildings, parking sites and pedestrian areas

Site locations are to include but not be limited to any rural or urban civil construction project

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

<b>Safety (OH&amp;S) (continued)</b>	<p>Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</p> <p>Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</p>
<b>Quality Requirements</b>	<p>Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</p>
<b>Statutory/Regulatory Authorities</b>	<p>Statutory/Regulatory Authorities may include Federal, State and Local Authorities</p>
<b>Tools and equipment</b>	<p>Tools and equipment may include but not be limited to floats, trowels, edging tools, screeds, wheelbarrows, tremmies, chutes, vibrators, rakes, short handle shovels, rods, hammers, hoses, buckets, sponges, tarpaulins, curing agent applicator, kibbles, nips, bolt cutters, reinforcement benders, mesh guillotines, steam generators, shutters and brushes</p>
<b>Materials</b>	<p>Materials are to include but not be limited to concrete, steel reinforcing, formwork components, curing agents, plastic membranes, water and sand</p>
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p>

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures or equivalent related to undertaking concreting

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

**Evidence Guide**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Completion of at least three concreting projects (totalling a minimum of 2m<sup>3</sup> of concrete), incorporating a minimum of two different finishes. All to be completed to job specifications

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

**Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria****A knowledge of**

- Site and equipment safety requirements
- Steel reinforcement characteristics
- Concrete characteristics and properties
- Concreting principles
- Structural technology
- Formwork
- Processes for interpreting engineering drawings
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements



**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to undertaking concreting work
- hand and power tools, plant and equipment appropriate to undertaking concreting work
- specifications and work instructions

**... End ...**



**BCCCM2013C****Unit Descriptor****Control traffic with a stop-slow bat**

This unit specifies the competency required to control traffic on public roads and construction sites for the protection of site workers and the general public, including the minimum criteria for competency assessment.

This unit includes operating a radio and using a stop-slow bat.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks that are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan confirmed and applied to the allotted task

- |   |                    |  |
|---|--------------------|--|
| 2 | Coordinate traffic | <ul style="list-style-type: none"><li>2.1 Temporary traffic signs and barriers are positioned or confirmed in accordance with State or Territory regulations</li><li>2.2 Traffic is directed in accordance with site traffic plan and away from services or areas of potential damage or danger</li><li>2.3 Vehicles and pedestrian traffic within the work site are controlled to ensure safety of workers through traffic</li><li>2.4 Traffic is monitored, adjustments made for changing conditions, and waiting vehicles positioned to allow for smooth traffic flow</li><li>2.5 Hand held stop/slow bats are used in accordance with State or Territory regulatory authority approved procedures</li><li>2.6 Hand signals are used in accordance with State or Territory regulatory authority approved procedures</li><li>2.7 Traffic offenders are reported in accordance with State or Territory regulatory authority approved procedures</li></ul> |
| 3 | Operate radio      | <ul style="list-style-type: none"><li>3.1 Radio controls are adjusted for optimum reception/transmission results</li><li>3.2 Messages are transmitted concisely and in accordance with operating procedures or best practice</li><li>3.3 Radio power supply is maintained in accordance with manufacturers recommendation</li><li>3.4 Radio contact is checked after nominated period of non contact and in accordance with operating procedures</li></ul>   |
| 4 | Clean up           | <ul style="list-style-type: none"><li>4.1 Signs and devices are removed or covered sequentially to provide warning to motorists during shutdown</li><li>4.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices</li></ul>  |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Traffic control applies to and includes but is not limited to worksite preparation activities, worksite traffic, through traffic, machine operator support, services protection and identification, worksite traffic co-ordination

Radio transmissions are to include but not be limited to VHF and UHF

Traffic signs and devices are to include but not limited to temporary warning signs, regulatory and traffic cones and may include vehicle mounted signs and flashing lights, guide signs, warning signs, barriers, hazard markers, bollards and arrow boards

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Traffic conditions may include but not be limited to congested urban environments, low traffic rural areas, off-road un-trafficked areas, buildings, parking sites and pedestrian areas

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations (including general safety/industry induction requirements), organisational safety policies and procedures, and project safety plan.

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with uneven/unstable terrain, trees, pits, poles, trip hazards, dirt mounds, overhead service lines, bridges, surrounding buildings, obstructions, structures, facilities, dangerous materials, recently filled trenches, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

	Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement
	Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials
<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection noise vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not be limited to dimensions, tolerances, standards of work and materials standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	Statutory/regulatory authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to radio, stop-slow bat, high visibility vest, traffic cones, signage and may include warning lights and beacons, arrow boards
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, stop-slow bats, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to controlling traffic with a stop-slow bat</p> <p>Regulatory/legislative requirements pertaining to controlling traffic with a stop-slow bat</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in

conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

As a minimum, control traffic complying with State/Territory regulations on three separate live traffic projects and one project controlling site construction vehicles

Safe and effective operational use of equipment

Communication and working effectively and safely with others

**Relationship to other units**

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Traffic controlling
- Traffic management plans
- Traffic control signage and barricades
- Radio operations
- Equipment types, characteristics, technical capabilities and limitations
- Operational and maintenance procedures for equipment
- Site isolation and traffic control responsibilities and authorities
- Affects of travel speed and vehicle mass on stopping distances
- Quality requirements
- Civil Construction terminology
- JSAs/Safe work method statement

<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>
<b>Methods of assessment</b>	<p>Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p> <p>Assessment must be by direct observation of tasks, with questioning on underpinning knowledge.</p> <p>Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency, including those listed above</p>
<b>Specific resource requirements for this unit</b>	<p>The following resources should be made available:</p> <ul style="list-style-type: none"> <li>- workplace location or simulated workplace</li> <li>- equipment appropriate to control traffic with a stop-slow bat</li> <li>- work instructions</li> </ul> <p>... End ...</p>



**BCCCM2014B****Identify, locate and protect underground services****Unit Descriptor**

This unit specifies the competency required to identify, locate and protect underground services in preparation of a site for construction operations. It includes the minimum criteria for competency assessment.

This unit includes searching for known or potential services or utilities which may exist under the surface of a specified excavation site.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task
- 1.6 Information for search requirements is obtained and prepared prior to making contact with the service provider (dial before you dig)
- 1.7 Location, alignment direction, level and grade of services and/or utilities are determined from the plans and location details

- |   |                             |     |   |
|---|-----------------------------|-----|---|
| 2 | Locate underground services | 2.1 | Services and utilities location details are obtained from the site owners   |
|   |                             | 2.2 | Emergency numbers, contact details and procedures for types and owners of the services and/or utilities are determined  |
|   |                             | 2.3 | Owners of the services and/or utilities are contacted to obtain plans and location details  |
|   |                             | 2.4 | Plant/equipment appropriate to the task is selected to excavate safely in search of the services and/or utilities where they may be impacted upon by the construction |
|   |                             | 2.5 | Visual or physical determination (pothole) of the services and/or utilities is undertaken prior to construction commencing  |
|   |                             | 2.6 | Services and/or utilities are moved, protected and supported from the construction process in conjunction with the service and/or utility owner                       |
|   |                             | 2.7 | Damage to services/utilities during physical determination (potholing) is reported to asset owner in accordance with asset owners' requirements                       |
| 3 | Clean up                    | 3.1 | Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan   |
|   |                             | 3.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices                  |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Services and utilities are to include but not be limited to water, power, gas, oil, communications, drains, stormwater and sewerage

Owners of services and utilities are to include but not be limited to telecommunication companies, energy companies or government agencies, gas companies or authorities, water authorities and local governments

Excavation may include but not be limited to excavating by hand or excavating with machinery

Traffic control signage may include but not be limited to escort vehicle, highway traffic signs, site safety signage, temporary signage for the benefit of motorists and pedestrians, barricades, and traffic conditions signage

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Site location may include but not be limited to any site where a vertical or horizontal structure is intended for construction

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

<b>Safety (OH&amp;S) continued</b>	<p>Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead and underground services, other machines, personnel, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</p> <p>Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement</p> <p>Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials</p> <p>Emergency procedures related to this unig are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation</p>
<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection noise vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	Statutory/Regulatory Authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to shovels, picks and may include tip trucks, excavators, backhoes and front end loaders
<b>Communications</b>	Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task

## Information

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures or equivalent related to establishing the presence of underground services

Regulatory/legislative requirements pertaining to establishing the presence of underground services

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel (e.g. Dial Before You Dig)

Relevant Australian Standards

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Determination of services on at least two projects each covering a minimum of three different underground services (must include water, communication lines and one other from the Unit Scope). Safe location of all services and utilities without damage and following prescribed procedures

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"><li>- Site and equipment safety requirements</li><li>- Service and utility providers</li><li>- Types of services and utilities</li><li>- Processes and techniques for locating services and utilities</li><li>- Construction principles</li><li>- Processes for interpreting engineering drawings</li><li>- Equipment types, characteristics, technical capabilities and limitations</li><li>- Operational, maintenance and basic diagnostic procedures</li><li>- Site isolation and traffic control responsibilities and authorities</li><li>- Materials Safety Data Sheets and materials handling methods</li><li>- Project quality requirements</li><li>- Civil construction terminology</li><li>- JSA's/Safe work method statement</li></ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>
<b>Methods of assessment</b>	<p>Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p> <p>Assessment must be by direct observation of tasks, with</p>

questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource  
requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to the location of underground services
- hand and power tools, plant and equipment appropriate to the location of underground services
- specifications and work instructions

**... End ...**





**BCCCM3001B****Unit Descriptor****Construct and dismantle fences and gates**

This unit specifies the competency required to construct, maintain and dismantle fences and gates to isolate work sites or re-fence existing land owners property. It includes the minimum criteria for competency assessment.

This unit includes isolation fences and gates for equipment and materials preventing accidents due to unauthorised access on civil construction sites.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

**1 Plan and prepare**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allocated task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

**2 Erect fences**

- 2.1 Fence line and post positions are set out to requirements of plans and specifications
- 2.2 Fence posts are erected in place and plumbed to alignment in accordance with specifications
- 2.3 Fence rails and/or wire, cladding or mesh are fixed to posts in accordance with specifications
- 2.4 Fencing and gates are maintained to completed construction condition

- |   |                         |   |
|---|-------------------------|---|
| 3 | Erect gates and signage | 3.1 Gates are fitted and secured to requirements of site drawings, specifications and/or landowner requirements                                   |
|   |                         | 3.2 Signage is installed at entry gates in accordance with site safety plan and security requirements where specified                             |
| 4 | Remove and make good    | 4.1 Gates and fences are dismantled and removed from land or site where specified   |
|   |                         | 4.2 Area is made good to work specification   |
| 5 | Clean up                | 5.1 Work area is cleared and materials disposed of or recycled in accordance with the project environmental management plan                       |
|   |                         | 5.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Fences and gates are to include but not be limited to post, wire and droppers or metal mesh fences and gates and may include timber cladding fences and gates

Securing of posts is to include but not be limited to cement footings, rammed and may include earth packed

Fence and gate signage is to include but not be limited to site safety information and security access information

Fences are erected to re-fence existing land owner properties where new civil works may have claimed land, to prevent potential accidents which may occur by unauthorised access on work sites, to protect valuable machinery and prevent materials from being contaminated

Traffic control signage may include but not limited to on unit signage, escort vehicle, highway traffic signs, site safety signage, temporary signage for the benefit of motorists and pedestrians, and traffic conditions signage

<b>Unit scope (continued)</b>	<p>Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements</p> <p>Traffic conditions may include but not be limited to congested urban environments, low traffic rural areas, off-road un-trafficked areas, buildings, parking sites and pedestrian areas</p> <p>Site locations may include but not be limited to new construction sites, on site locations, off site in an external paddock environment and existing fencing situations</p>
<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures and project plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p> <p>Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with traffic, high voltage power lines, uneven/unstable terrain, trees, pits, poles, trip hazards, dirt mounds, overhead service lines, surrounding buildings, obstructions, structures, facilities, dangerous materials, recently filled trenches, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public</p>
<b>Environmental Requirements</b>	<p>Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management</p>
<b>Quality Requirements</b>	<p>Quality requirements may include but not be limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</p>
<b>Statutory/Regulatory Authorities</b>	<p>Statutory/regulatory authorities may include Federal, State and Local Authorities</p>

<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to measuring tapes, rulers, hammers, rammers, socket wrenches, fencing strainers, pliers and wire cutters, pop riveters, levelling equipment and may include docking saws, drop saws, jigs, stops, power drills, screwdrivers, bits and drills, clamps, squares, and nail guns
<b>Materials</b>	Materials are to include but not be limited to fencing mesh, fencing wire, droppers, metal posts, metal rails, concrete fencing materials, anchor bolts and may include timber posts, rails, pickets, palings and cladding
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to the erecting and dismantling of fences and gates</p> <p>Regulatory/legislative requirements pertaining to the erecting and dismantling of fences and gates</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### Critical aspects of evidence required to demonstrate competency in this unit

Location, interpretation and application of relevant information, standards and specifications

Compliance with the site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Completion of the construction of fences for a boundary fence of at least 50m including at least one gate to specifications

Completion of the dismantling of an existing fence of at least 50m including at least one gate to specifications

Safe and effective operational use of tools, plant and equipment

Communication and working effectively and safely with others

### Relationship to other units

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- Fencing systems
- Fence construction techniques
- Site safety and security isolation
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Processes for the calculation of material requirements
- Materials Safety Data Sheets and materials handling methods
- Quality requirements
- Civil Construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to the construction of fences and gates
- hand and power tools, plant and equipment appropriate to the construction of fences and gates
- specifications and work instructions

**... End ...**





**BCCCM3002B****Unit Descriptor****Control construction site water table**

This unit specifies the competency required to control construction site water table and minimise disruption to construction operations. It includes the minimum criteria for competency assessment.

The unit covers planning and preparation for work, the installation of drainage and dewatering systems, the establishment of water treatment system, the maintenance of operations and the ultimate removal of the systems.

**Employability Skills**

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Element**

Elements define the essential outcomes of a unit of competency.

**2 Plan and prepare****Performance Criteria**

Performance criteria specify the level of performance required to demonstrate achievement of the element.

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan, confirmed and applied to the allotted task

- |   |   |     |  |
|---|---|-----|--|
| 3 | Install site drainage/<br>dewatering system | 2.1 | Proposed permanent stormwater outlets are identified from site plans and drawings                  |
|   |   | 2.2 | Barricades are erected around the excavation/<br>installation area                                 |
|   |   | 2.3 | Sumps and wells are constructed to specified levels<br>and locations                               |
|   |   | 2.4 | Well points, spears or wick drains are installed to<br>specified configuration and required depths |

2	Install site drainage/ dewatering system (continued)	2.5	Gravel and filter material are placed in spears, sumps and wells to level above that of existing water table
		2.6	Surface or submersible pumps are installed in designed locations to spears, sumps and wells
		2.7	Suction hoses are connected to sumps, wells, spears and pumps in accordance with manufacturers' specifications and site designed drainage
		2.8	Pipes and hoses are fitted to well points, spears and pumps in accordance with manufacturers' specifications and site designed drainage
3	Establish stormwater treatment system	3.1	Holding pond is set out and construction operations supported
		3.2	Water quality and treatment standards are monitored and responded to
		3.3	Water which meets the approved quality criteria is released into the main system
4	Operate and maintain drainage and dewatering system	4.1	Pumps are activated to lower water table level to designed requirement
		4.2	Pumps are maintained in accordance with manufacturers' specifications and recommendations
		4.3	Site drainage and dewatering system is maintained to maximise water flow to project requirements
5	Remove and make good	5.1	Pumping system is disconnected and removed
		5.2	Well points and spears are withdrawn and removed
		5.3	Area is restored to environmental management plan
6	Clean up	6.1	Work area is cleared and materials disposed of or recycled in accordance with project environmental management plan
		6.2	Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Drainage and dewatering systems are to include spears and may include wick drains, well points, sumps and holding ponds

Temporary drainage systems may include slopes on ground surface, formed spoon drains, laid drains and sumps

Site conditions may include wet, mud, dust and varying day/night visibility

Operator maintenance is to include cleaning, authorised servicing and the monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements

### Safety (OH&S)

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation

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<b>Environmental Requirements</b>	Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management
<b>Quality Requirements</b>	Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction
<b>Statutory/Regulatory Authorities</b>	Statutory/Regulatory Authorities may include Federal, State and Local Authorities
<b>Materials</b>	<p>Natural materials may include but are not limited to clays, silts, stone, gravel, mud, rock, sand, topsoil and bituminous mixes</p> <p>Materials may include piping, conduit and consumables associated with dewatering systems</p>
<b>Tools and equipment</b>	Tools and equipment are to include hand tools, pumps and hand operated excavation equipment and may include lighting systems, generators, boats, pipe reels and mechanical excavation plant
<b>Communications</b>	<p>Communications are to include but not be limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task</p> <p>On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues</p>

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures related to the construction site water table

Regulatory/legislative requirements pertaining to the construction site water table

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

**Evidence Guide**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Successful establishment, operation and removal of two different systems to control construction site water tables, with

- one involving spearing, and
- at least one requiring the establishment and operation of a treatment system

The conduct of authorised operator maintenance on system components

Communication and working effectively and safely with others

<b>Relationship to other units</b>	<p>Pre-requisite units are:</p> <p>BCCCM1001C Follow OH&amp;S policies and procedures</p> <p>Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
<b>Specific knowledge required to achieve the performance criteria</b>	<p>A knowledge of</p> <ul style="list-style-type: none"> <li>- Application of principles relating to site dewatering</li> <li>- Terminology, definitions and installation methods</li> <li>- Hazardous materials and hazardous situations</li> <li>- Environmental statements, erosion, sedimentation and waste disposal</li> <li>- Site and equipment safety requirements including appropriate state or territory legislation regulations and codes</li> <li>- Dewatering system equipment characteristics, technical capabilities and limitations</li> <li>- Procedures for dewatering process</li> <li>- Processes for interpreting engineering drawings and sketches</li> <li>- Dewatering system operational, maintenance and basic diagnostic procedures</li> <li>- Site isolation and traffic control responsibilities and authorities</li> <li>- Materials Safety Data Sheets and materials handling methods</li> <li>- Project quality requirements</li> <li>- Civil construction terminology</li> <li>- JSA's/Safe work method statement</li> </ul>
<b>The context of assessment</b>	<p>The application of competency is to be assessed in the workplace or realistically simulated construction site</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context</p> <p>Assessment is to comply with relevant regulatory or Australian Standards requirements</p>
<b>Methods of assessment</b>	<p>Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil</p>

### Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

#### **Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- realistic tasks covering the mandatory task requirements
- access to dewatering system, materials and supporting plant
- access to appropriate testing kits and systems
- maintenance materials appropriate to the system
- specifications and work instructions

**... End ...**



## BCCCM3003C

### Unit Descriptor

## Implement traffic management plan

This unit specifies the competency required to implement a traffic management plan for works on roads ensuring traffic flow is maintained and risk to the safety of the public and workers is minimised. It includes the minimum criteria for competency assessment.

The unit includes traffic management plans for public and private roads, parking areas and restricted access construction sites.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Plan and prepare

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details relevant to the tasks are obtained, confirmed and applied to the allotted task
- 1.2 Safety requirements are obtained from the site safety plan and organisational policies and procedures, confirmed and applied to the allotted task
- 1.3 Signage requirements are identified and obtained from the project traffic management plan and implemented
- 1.4 Tools and equipment selected to carry out tasks that are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported
- 1.5 Environmental protection requirements are identified from the project environmental management plan confirmed and applied to the allotted task
- 1.6 The designated traffic controllers' training/ qualifications are checked for currency as per State or Territory legislation
- 1.7 Process for dealing with traffic controllers when they fail to adhere to the approved procedures is followed
- 1.8 Procedures to deal with offending motorists is followed
- 1.9 Traffic controllers are advised of the traffic flow

		requirements for the site
2	Set out the traffic guidance scheme	<ul style="list-style-type: none"><li>2.1 Traffic guidance scheme is selected to suit site conditions, traffic volumes and work activities</li><li>2.2 Work schedule, maximum traffic delays, signals and site communications are determined and adhered to</li><li>2.3 Signs and devices are correctly positioned on the approaches to the work area in accordance with the traffic management plan</li><li>2.4 Signs and devices are positioned and displayed on each approach according to State or Territory Road Authority requirements and the traffic management plan</li><li>2.5 Signs and devices are positioned laterally and displayed in accordance with State or Territory Road Authority requirements</li><li>2.6 Traffic is controlled effectively to protect the work crew placing traffic control devices around the work area</li></ul>
3	Monitor traffic guidance scheme	<ul style="list-style-type: none"><li>3.1 Traffic flow is monitored and effectiveness of guidance scheme determined</li><li>3.2 Work activities are monitored and guidance scheme adjusted</li></ul>
4	Close down traffic guidance scheme	<ul style="list-style-type: none"><li>4.1 Traffic is controlled to protect work crew removing traffic control devices from the work area</li><li>4.2 Signs are removed in sequence to provide maximum warning during removal of traffic control devices</li><li>4.3 Guidance scheme details are recorded to organisational and or State or Territory Road Authority requirements</li><li>4.4 Incidents are reported as required by the organisation and/or State or Territory Road Authority</li></ul>
5	Clean up	<ul style="list-style-type: none"><li>5.1 Work area is cleared in accordance with the project environmental management plan</li><li>5.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices</li></ul>

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Traffic management plans are to include but not be limited to public roads and construction sites

Conditions which impact on the traffic management plan may include but not be limited to varying terrain, all weather conditions, varying road surfaces, all vehicle types, rural, urban or residential localities, all times of day, varying traffic volumes and on varying road types

Traffic control applies to and includes but is not limited to worksite preparation activities, worksite traffic, through traffic, machine operator support, services protection and identification, worksite traffic co-ordination

Radio transmissions are to include but not be limited to VHF and UHF

Traffic signs and devices are to include but not limited to temporary warning signs, regulatory and traffic cones and may include vehicle mounted signs and flashing lights, guide signs, warning signs, barriers, hazard markers, portable traffic signals, bollards and arrow boards

Planning and preparation is to include but not be limited to worksite inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements

Traffic conditions may include but not be limited to congested urban environments, low traffic rural areas, off-road un-trafficked areas, buildings, parking sites and pedestrian areas

Site locations may include but not be limited to any civil construction site and road where civil construction work is conducted

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations (including general safety/industry induction requirements), organisational safety policies and procedures, and project safety plan.

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with uneven/unstable terrain, trees, pits, poles, dirt mounds, overhead service lines, bridges, surrounding buildings, obstructions, structures, facilities, dangerous materials, recently filled trenches, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, worksite visitors and the public

Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Emergency procedures are to include but not be limited to organisational first aid requirements and evacuation

**Environmental Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection noise vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not be limited to dimensions, tolerances, standards of work and materials standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

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<b>Statutory/Regulatory Authorities</b>	Statutory/regulatory authorities may include Federal, State and Local Authorities
<b>Tools and equipment</b>	Tools and equipment are to include but not be limited to high visibility vests, cones, signage, notebooks, pens and may include radios, stop-slow bats, delineators, barricades, barriers, bollards, warning lights and beacons, arrow boards and signalling devices
<b>Communications</b>	Communications are to include but not limited to verbal instructions and fault reporting and may include two way radio, hand signals, mobile phone, site specific instructions, written instructions or instructions related to job/task
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to implementing a traffic management plan</p> <p>Regulatory/legislative requirements pertaining to implementing a traffic management plan</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Implementation of a minimum of three traffic management plans (on three separate jobs), these must include at least one intersection and at least one main road

Safe and effective operational use of tools and equipment

Communication and working effectively and safely with others

### **Relationship to other units**

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Site and equipment safety requirements
- State and Territory traffic management legislation
- Requirements set down by the Manual for Uniform Traffic Control Devices
- Potential hazards
- Traffic controlling
- Traffic management plans
- Basic signalling
- Signs and devices
- Radio operations
- Equipment types, characteristics, technical capabilities and limitations
- Operational, maintenance and basic diagnostic procedures
- Site isolation and traffic control responsibilities and authorities
- Processes for the calculation of travel speed
- Quality requirements
- Civil Construction terminology
- JSAs/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated workplace

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- traffic management plan or part 3 of the Manual for Uniform Traffic Control Devices
- workplace location or simulated workplace
- signs and devices appropriate to implementing a traffic management plan
- specifications and work instructions

**... End ...**



## BCCCM3004B

### Unit Descriptor

## Maintain site records

This unit specifies the competency required to maintain site records for accounting, inventory, quality control, regulatory and legal requirements. It includes the minimum criteria for competency assessment.

This unit covers the handling, processing, completion, filing and storage of site records

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Identify records

- 1.1 Multiple copies of records to match job requirements are obtained
- 1.2 Document storage, filing and handling requirements are identified and complied with
- 1.3 Registered documents are checked against register
- 1.4 Missing registered documents are reported or replaced according to organisation policy
- 1.5 Quality assurance requirements of company operations are recognised and adhered to
- 1.6 Equipment selected is consistent with the task of maintaining site records, checked for serviceability and any faults are rectified or reported

#### 2 Process details

- 2.1 Details are recorded accurately and legibly in accordance with organisation instructions
- 2.2 Details are recorded to specified quality control procedures
- 2.3 Alterations to records are initialled by the responsible person
- 2.4 Signatures, dates and times are recorded as per organisation procedures
- 2.5 Records/entries are counter signed as per organisation procedures checked to ensure currency of information

- |   |                         |     |   |
|---|-------------------------|-----|---|
| 3 | Review and file records | 3.1 | Records are referred to for historical data   |
|   |                         | 3.2 | Records are made available to authorised personnel for checking purposes  |
|   |                         | 3.3 | Trends indicated by records as affecting work in progress are brought to the attention of appropriate personnel |
|   |                         | 3.4 | Records are processed and filed in accordance with company procedures   |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Records may include but are not limited to site diaries, materials received or dispatched, incidents on site which may be subject to investigation or query at a later date, quality management records, OH&S records, environmental records, inventory control records, records required by regulation or legislation

Document handling and filing systems may include paper based systems and electronic systems

Registered documents are to include but not be limited to permits and other regulatory requirements

Historical data may be referred to for comparing quantities, costs, equipment usage, timeframes and material types

Trends indicated by records may include but not be limited to time spent in activities, equipment requirements and material usage

Drawings may include site plans, locality plans, cross sectional plans, longitudinal plans, structural detail and specification providing illustrations and dimensions and project plans, drawings and specifications

Plans and specifications may include detail relating to materials and quality of work, quality assurance, nominated sub-contractors, provision of site access/facilities, cost, details relating to performance including:

- Standards of work
- Work schedules
- Standard procedures and practices

<b>Safety (OH&amp;S)</b>	<p>OH&amp;S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances</p> <p>Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices</p>
<b>Equipment</b>	<p>Equipment is to include but not be limited to record filing and retrieval systems (manual and computer aided) and stationery</p>
<b>Quality Requirements</b>	<p>Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction</p>
<b>Statutory/Regulatory Authorities</b>	<p>Statutory/Regulatory Authorities may include Federal, State and Local Authorities</p>
<b>Communications</b>	<p>Communications are to include but not be limited to written and verbal instructions and may include two way radio, hand signals, mobile phone, site specific instructions, or instructions related to job/task</p>
<b>Information</b>	<p>Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, material safety data sheets (MSDS) and diagrams or sketches</p> <p>Safe work procedures or equivalent related to maintaining site records</p> <p>Regulatory/legislative requirements pertaining to maintaining site records</p> <p>Manufacturers' specifications and instructions</p> <p>Organisation work specifications and requirements</p> <p>Instructions issued by authorised organisational or external personnel</p> <p>Relevant Australian Standards</p>

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Maintenance of site records for a minimum of one significant civil construction project including:

- Site diary
- Materials received and despatched
- Quality records
- OH & S records
- Environmental records
- Inventory control records

Communication and working effectively and safely with others

### **Relationship to other units?**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Basic records management systems and processes (both manual and computer aided)
- Records filing and retrieval systems and processes
- Registered document control systems
- Site diary systems
- Quality control administration
- Environmental record requirements
- Inventory control record systems
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- site records and formal job specification
- realistic tasks covering the mandatory requirements
- specifications and work instructions

**... End ...**

## BCCCM3005B

### Unit Descriptor

## Carry out site based risk control processes

This unit covers the competency to carry out site based risk control processes. It includes the minimum criteria for competency assessment.

The unit covers the three preliminary steps of identifying site based hazards, assessing the risk and identification of unacceptable risk situations. It requires the referral of critical unacceptable risk situations to others. For other circumstances it requires the identification of courses of action, the initiation of action and the completion of site records and reports.

### Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### Element

Elements define the essential outcomes of a unit of competency.

### Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element.

#### 1 Identify hazards

1.1 Site conditions and functions are analysed to identify/recognise potential hazards

1.2 Relevant safety systems information is accessed and analysed to eliminate situations covered by existing and adequate procedures

1.3 The type and scope of unresolved hazards and their likely impact are recognised

#### 2 Assess risk

2.1 Likelihood of the event happening is considered and determined

2.2 Consequence if the event should occur is evaluated and determined

2.3 Risk level (likelihood and consequence combined) is considered and determined

#### 3 Identify unacceptable risk

3.1 Criteria for determining the acceptability/unacceptability of the risk is identified or sought from the appropriate authority

3.2 Risk is evaluated against criteria to identify if it warrants 'unacceptable risk' status and is either actioned or referred to the appropriate person

- |   |   |  |
|---|---|--|
| 4 | Identify and decide on course of action | 4.1 Range of actions/controls which may eliminate or minimise the risk are identified                                    |
|   |   | 4.2 Options for resolution of the problem/ dealing with the risk are identified and considered                           |
|   |   | 4.3 Feasible options are subject to detailed analysis including the identification of resource requirements              |
|   |   | 4.4 Most appropriate action for dealing with the situation is selected   |
| 5 | Take action                             | 5.1 The course of action is planned and prepared in detail   |
|   |   | 5.2 Resources required for the course of action are acquired or obtained   |
|   |   | 5.3 Safety information and procedures are accessed and applied throughout the operation                                  |
|   |   | 5.4 The course of action is implemented  |
| 6 | Complete records and reports            | 6.1 Information on the course of action and implementation is communicated to the relevant people                        |
|   |   | 6.2 All hazards and actions from personal risk assessment are recorded as specified by legislative and site requirements |

## Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables relate to this particular unit:

### Unit scope

Safety information and procedures may be contained in legislation and regulations, relevant Australian standards, safety management plans, OH&S policy, codes of practice, manufacturers' instructions, safe working or job procedures (or equivalent)

This competency is to be applied by employees who have responsibility for the safety of others including site activity co-ordinators, plant operators or equivalent who co-ordinate site activities, team leaders, supervisors and managers

In the absence of other authorities, risk management processes must conform with the relevant and current Australian Standard

Criteria for acceptable risk must be determined by the organisation's internal policy, goals and/or objectives



**Unit scope (continued)**

Controls for hazards should be considered using option types in sequence from eliminating the hazard, substitution, engineering controls, administrative controls (procedures, etc.) and, finally personal protective equipment

Records and reports for risk assessment may include hazard reporting forms, supervisors' reports, incident/ accident reports and near miss reports

Site policy, objectives, rules, procedures and assessment techniques will vary between sites

Risk assessment terminology:

- Consequence is the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain
- Frequency is a measure of likelihood expressed as the number of occurrences of an event in a given time
- Hazard is a source of potential harm or a situation with a potential to cause loss
- Likelihood is used as a qualitative description of probability and frequency
- Probability is the likelihood of a specific outcome, measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible outcome and 1 indicating an outcome is certain
- Risk is the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood
- Risk assessment is the process used to determine risk management priorities by evaluating and comparing the level of risk against predetermined standards, target risk levels or other criteria
- Risk identification is the process of determining what can happen, why and how

**Safety (OH&S)**

OH&S requirements are to be in accordance with State or Territory legislation and regulations, organisational safety policies and procedures, and project safety plan. This may include protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of first aid equipment, hazard control and hazardous materials and substances

Personal protective equipment is to include that prescribed under legislation, regulation and workplace policies and practices

Safe operating procedures are to include but not be limited to recognising and preventing hazards associated with overhead services, other machines, personnel, and restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public

Hazards and risks may include but not be limited to uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

Safe parking practices are to include but not be limited to ensuring access ways are clear, equipment/ machinery is away from overhangs and refuelling sites, safe distance from excavations, and secured from unauthorised access or movement

Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping, organisational first aid requirements and evacuation

**Environmental Requirements**

Environmental requirements are to include but are not limited to organisational/project environmental management plan, waste management, water quality protection noise vibration, dust and clean-up management

**Quality Requirements**

Quality requirements may include but not limited to dimensions, tolerances, standards of work and material standards as detailed in the project drawings, specifications and project documentation to meet client satisfaction

**Statutory/Regulatory Authorities**

Statutory/Regulatory Authorities may include Federal, State and Local Authorities

**Communications**

Communications are to include but not be limited to verbal and written instructions and reporting and may include site specific instructions or instructions related to job/task

On site meeting processes may include notification/scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues

**Information**

Information sources may include but not be limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, maps, material safety data sheets (MSDS) and diagrams or sketches

Safe work procedures related to operations on construction sites

Regulatory/legislative requirements pertaining to construction operations and the environment

Manufacturers' specifications and instructions

Organisation work specifications and requirements.

Instructions issued by authorised organisational or external personnel

Relevant Australian Standards

## Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Performance Criteria, the Range Statement, and the Assessment Guidelines of the Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit**

Location, interpretation and application of relevant information, standards and specifications

Compliance with site safety plan, OH&S regulations and State/Territory legislation applicable to workplace operations

Compliance with organisational policies and procedures including quality requirements

Individually or as a member of a team, participate in two different circumstances requiring:

- The conduct of a worksite risk assessment to identify the acceptability/unacceptability of risk
- The development and implementation of a site based risk control activity and action
- The recording and reporting of the risk control process and outcomes

Communication and working effectively and safely with others

### **Relationship to other units**

Pre-requisite units are:

BCCCM1001C Follow OH&S policies and procedures

Competency in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**Specific knowledge required to achieve the performance criteria**

A knowledge of

- Regulatory requirements related to obligations and risk management
- Operational safety requirements
- Site and equipment safety requirements
- Site rules, policies and procedures
- Personal safety measures
- Personal risk assessment and control processes (hazard identification through to action)
- Site communication methods, written and oral
- Reporting and recording procedures
- Processes for interpreting engineering drawings and sketches
- Site isolation and traffic control responsibilities and authorities
- Materials Safety Data Sheets and materials handling methods
- Project quality requirements
- Civil construction terminology
- JSA's/Safe work method statement

**The context of assessment**

The application of competency is to be assessed in the workplace or realistically simulated construction site

Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

Assessment is to comply with relevant regulatory or Australian Standards requirements

**Methods of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's Civil Construction Training Package

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

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Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency, including those listed above

**Specific resource  
requirements for this unit**

The following resources should be made available:

- workplace location or simulated workplace
- situations requiring the application of risk control processes
- realistic tasks covering the mandatory task requirements
- specifications and work instructions

**... End ...**