

## Competency Standards for Caribbean Vocational Qualifications (CVQ)

### CCBCG10306 Level 1 in Masonry

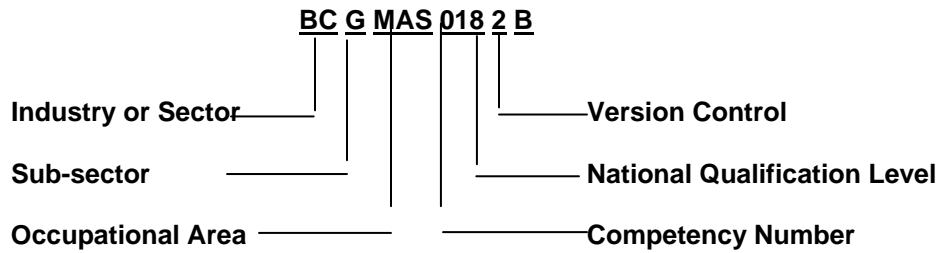
Unit Number	Unit Title	Mandatory /Elective	Hours
BCGCOR0011A	Carry out OH&S requirements	Mandatory	40
BCGCOR0101A	Work effectively in general construction industry	Mandatory	20
BCGCOR0001A	Carry out interactive workplace communication	Mandatory	20
BCGCOR0041B	Carry out measurements and calculations	Mandatory	20
BCGCOR1583A	Read and interpret plans	Mandatory	20
BCGCOR0111A	Handle construction materials and safely dispose of waste	Mandatory	10
BCGCOR0201A	Use construction plants and equipment	Mandatory	40
BCGCOR0081A	Use simple levelling devices	Mandatory	10
BCGCOR0181A	Work safely around power sources, services and assets	Mandatory	40
BCGCOR0051A	Use hand and power tools	Mandatory	10
BCGCOR0141A	Carry out excavation	Mandatory	20
BCGMAS0151A	Prepare for construction process (brick/block laying)	Mandatory	30
BCGMAS0181A	Mix cementitious materials (mortar and concrete)	Mandatory	10
BCGMAS0101A	Carry out concreting to simple forms	Mandatory	20
BCGMAS0171A	Prepare for construction process (solid plastering).	Mandatory	40
BCGMAS1422A	Lay bricks/blocks (wall and corner)	Mandatory	40
BCGMAS1242A	Apply solid render	Mandatory	40
BCGMAS1252A	Restore and renovate solid plasterwork	Mandatory	60
BCGCOR0071A	Erect and dismantle restricted height scaffolding	Elective	20
BCGSTW0011A	Handle steel fixing materials	Elective	20
BSBSBM0012A	Craft personal entrepreneurial strategy	Elective	50
BCGMAS0912A	Place concrete	Elective	20

To be awarded this Caribbean Vocational Qualification (CVQ) all Mandatory competency standards must be achieved. Electives achieved with the qualification will be awarded unit statement of competency.

The nominal training hours are a guide for planning the delivery of Training Programmes.

**Legend to Unit Code**

Example: BCGMAS0182B



**KEY:** Man – Mandatory; MAS – Masonry; BCG – Building Construction (General);  
BSB – Business Services (Business); SBM – Small Business Management

**BCGCOR0011A: Carry out OH&S requirements**

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively perform work activities to conform to Occupational Health and Safety requirements, and applies to all individuals working in the construction industry.

Competency Field:

General and Civil Construction

**ELEMENT OF COMPETENCY PERFORMANCE CRITERIA**

1	Plan and prepare for safe work practices	1.1	Quality assurance requirements associated with company's safety operations recognised and adhered to.
		1.2	Appropriate personal protective equipment selected, correctly fitted and/or made ready for use.
		1.3	Tools and equipment selected consistent with safe work practice requirements of job, checked for serviceability and any faults reported to supervisor.
		1.4	Appropriate barricades, hoardings and signage erected, where applicable, at required job location.
2	Use safe work practices to carry out work	2.1	Work carried out safely and in accordance with Statutory regulations for OH&S requirements and company policy.
		2.2	Safety hazards and workplace accidents/incidents identified in course of work and reported in accordance with company policy.
		2.3	Industry/site safety responsibilities known and applied.
		2.4	Fire fighting equipment selected and operated correctly according to type of fire.
		2.5	Current site emergency and first aid procedures known and followed.
		2.6	Signals/sirens for blasting operations recognised and adhered to.

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|---|---|-----|---|
| 3 | Assume responsibility for safety of self and others | 3.1 | Appropriate protective equipment correctly selected fitted and used.  |
|   |   | 3.2 | Safe manual handling techniques used and guidelines for lifting and placing followed.                                     |
|   |   | 3.3 | All safety signs, symbols and alarms adhered to.  |
|   |   | 3.4 | Safety procedures for pre-use check and operation of specified power tools/plant, machinery and equipment followed.       |
|   |   | 3.5 | Recommended safe practices in handling chemical and potentially hazardous materials followed.                             |
| 4 | Work from ladder and work platforms                 | 4.1 | Ladder and work platforms safely erected in planned location.   |
|   |   | 4.2 | Care taken to avoid overhead power lines and other obstructions.  |
|   |   | 4.3 | Head and base of ladder or work platform support secured against accidental movement.                                     |
|   |   | 4.4 | Work safely performed from ladder and work platform.  |
|   |   | 4.5 | Appropriate fall arrest equipment utilised in accordance with current OH&S guidelines.                                    |
| 5 | Use electrical power supply safely                  | 5.1 | Position of power pole/box identified for safe placement of leads.  |
|   |   | 5.2 | Framework support positioned to keep leads at correct height and prevent hazards.   |
|   |   | 5.3 | Power board visually checked for damage, water entry and stability. Area surrounding board checked for potential hazards. |
|   |   | 5.4 | Leads checked for tags and visual damage. Earth leakage protection checked for serviceability.                            |
|   |   | 5.5 | Work safely performed using electrical power supply.  |

6	Adhere to emergency procedures	6.1	Emergency equipment able to be located and used as required.
		6.2	Current work site emergency/evacuation procedures adhered to.
7	Carry out general housekeeping	7.1	Waste material disposed of safely in accordance with requirements of site and regulatory legislation.
		7.2	Unused equipment and materials safely and correctly cleaned, maintained and stored.
		7.3	Requirements of site, regulatory bodies and Occupational Health and Safety requirements observed.

## RANGE STATEMENT

Quality Assurance requirements may include:

- working environment
- adverse weather conditions
- protection of work personnel
- protection of public

Personal protective equipment may include but is not limited to:

- overalls, safety glasses/goggles, hard hat cap
- dust masks/respirator, safety boots
- ear plugs/muffs
- gloves

Regulatory legislation may include:

- OH&S, Dangerous goods

Manual handling techniques used in accordance with current Occupational Health and Safety.

Emergency equipment and procedures include:

- fire fighting
- medical and first aid
- evacuation

Ladders and work platforms include:

- extension ladders
- step ladders
- trestle ladders
- simple work platforms

Power connections include:

- isolation transformer
- power pole
- switch board area

Safety responsibilities apply to:

- personal protection
- safe interactive work practices (duty of care)
- protection of public and environment

Reporting of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by safely and effectively carrying out safe work practices within the range of variables statement relevant to the work orientation.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- demonstrate application of organisational policies and procedures including Quality Assurance requirements where applicable
- carry out correct procedures prior to and during construction process
- safe and effective operational use of tools, plant and equipment
- carry out appropriate applications in accordance with regulatory and legislative requirements

### (2) Pre-requisite Relationship of Units

- Nil

### (3) Underpinning Knowledge and Skills

#### Knowledge

Knowledge of:

- workplace and equipment safety requirements
- materials
- Factory's Act
- other relevant acts, regulations and codes of practice
- company policy

#### Skills

The ability to:

- work safely to instructions
- use power and hand tools
- select material to requirements
- communicate effectively
- handle material

### (4) Resource Implications

The following resources should be made available:

- Suitable work area appropriate to the construction process
- Appropriate equipment, materials and documentation to comply with OH&S legislation and/or company policies
- Hand and power tools, plant and equipment appropriate to the construction process

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based upon integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0101A****Work effectively in general construction industry**

## Competency Descriptor:

This unit covers the competency, background and underpinning knowledge required to prepare for and sustain effective work within the General Construction Industry.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Identify the industry work context and setting	1.1 The scope and nature of the General Construction industry functions and activities are identified. 1.2 The profile of the General Construction industry in terms of direct and indirect employment and national economic importance is identified. 1.3 Trends in technology and processes, which are likely to impact on the General Construction industry are identified and comprehended. 1.4 General Construction employment conditions, responsibilities and obligations are identified and clarified.
2. Organise and accept responsibility for own workload	2.1 Priorities and deadlines are established in consultation with others and recorded. 2.2 Work activities are planned and progress of work is communicated to others whose personal work plans and timelines may be affected. 2.3 Work is completed to the standard expected in the workplace and in accordance with any guidelines, directions and specifications. 2.4 Variations and difficulties affecting work requirement are identified through regular reviews and action is taken to report these issues to appropriate personnel. 2.5 Additional support to improve work outcomes is communicated clearly to the appropriate personnel.
3. Work in a team	3.1 Site goals and the contributions to be made by teams are identified and understood. 3.2 Individual contributions to team activities are identified, agreed and reviewed periodically with the team.



- 3.3 Defined roles and strengths of other team members are identified and acknowledged.
  - 3.4 Assistance and encouragement are provided to other team members wishing to enhance their role and the role of the team.
  - 3.5 Ground rules for team operations are reviewed and changes are made through team consultative processes.
  - 3.6 Team improvements are initiated and/or encouraged from team members.
  - 3.7 Causes of disharmony and other barriers to achievement are promptly resolved or referred to the appropriate party for resolution.
- 4, Participate in identifying and pursuing own development needs
- 4.1 The competencies for the workplace are identified.
  - 4.2 Steps are taken, in consultation with appropriate personnel, to identify own learning needs for future work requirements.
  - 4.3 Appropriate opportunities to learn and develop required competencies are identified and pursued with the appropriate people.
- 5, Participate in site meetings
- 5.1 Meeting procedures and objectives are identified, understood and observed.
  - 5.2 Points of view and comments, including agreement and dissent are presented in a logical, persuasive and orderly manner.
  - 5.3 Points of view of other members are given a fair hearing.

## RANGE STATEMENTS

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:

General Construction activities include:

- bricklaying/block laying
- carpentry
- formwork /false work
- concreting
- demolition
- dogging
- painting and decorating
- rigging
- roof tiling
- scaffolding
- steel fixing
- solid plastering
- wall and ceiling lining
- wall and floor tiling
- waterproofing

General Construction industry employment conditions are to include coverage of:

- enterprise agreement(s)
- workplace agreement(s)
- industrial award(s)
- bulletins and newsletters
- industry/workplace codes of practice
- enterprise procedures for handling industrial disputes
- enterprise procedures for handling grievance

Workgroup members may include but are not limited to:

- coach/mentor
- supervisor or manager
- employee representative
- peers/work colleagues/team/enterprise and other members of the organisation

Organisational requirements may be included in:

- goals
- objectives
- plans
- systems and processes
- legal and organisation policy/guidelines and requirements
- business and performance plans
- anti-discrimination and related policy
- access and equity principles and practice
- ethical standards
- quality and continuous improvement processes
- standards and defined resource parameters

Responsibilities and duties may include:

- job description and employment arrangements organisation's policy relevant to work role
- team structures

Team is a generic term, which refers to the site work organisation. Teams may be:

- known/titled locally as crews
- gangs
- shifts
- other industrially and historically acceptable terms

Safe operating procedures are to include but not be limited to:

- the conduct of operational risk assessment and treatments associated with power cables (including overhead service trays, cables and conduits) lighting
- earth leakage boxes
- trip hazards
- working with dangerous materials
- working in confined spaces
- surrounding structures
- restricted access barriers
- traffic control
- working at heights
- working in proximity to others
- worksite visitors
- the public

Emergency procedures are to include but may not be limited to:

- fire fighting
- medical and first aid
- evacuation

Development processes include competency achievement/maintenance processes which may include:

- recognition of prior learning
- assessment processes
- on-the-job training and job rotation
- formal vocational education and training
- refresher training

Environmental requirements are to include but are not limited to:

- waste management
- noise
- dust
- vibration
- clean-up management

Safety (OH&S)

OH&S requirements are to be in accordance with 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
- organisational first aid
- hazard control and hazardous materials and substances

Personal protective equipment is to include:

- that prescribed under legislation
- regulation
- workplace policies and practices

Supervision and accountability requirements including:

- occupational health and safety
- skills
- training and competencies
- codes of conduct

Quality requirements are to include but not be limited to:

- Relevant regulations including, internal company quality policy and standards, workplace operations and procedures and manufacturers specifications where specified.

Regulatory authorities may include:

- Local Authorities administering the applicable acts, regulations and codes of practice.

On site meeting processes may include:

- notification/ scheduling (time, place, purpose)
- task discussions
- local coordination of procedural and operational issues

Information sources may include but not be limited to:

- verbal or written and graphical instructions
- signage
- work schedules/plans/specifications
- work bulletins
- memos
- material safety data sheets (MSDS)
- diagrams or sketches
- Safe work procedures related to the operations on construction sites

Communications are to include but not limited to verbal and visual instructions and fault reporting and may include:

- mobile phone
- site specific instructions
- written instructions
- plans or instructions related to job/task
- two way radio
- hand signals
- work orders

- regulatory/legislative requirements pertaining to general construction operations and the environment
- manufacturers' specifications and instructions
- organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel

## 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.

### (1) Critical Aspects and Evidence

- location, interpretation and application of relevant information, standards and specifications
- compliance with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations
- compliance with organisational policies and procedures including quality requirements
- communication and working effectively and safely with others
- an explanation to others of the scope, employment and economic importance of the general construction industry
- the location and identification of site employment conditions and the source of these conditions
- setting personal and team work goals
- responding to personal conflict situations
- identifying personal development needs
- participating in site meetings

**(2) Pre-requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

The general construction industry size, scope of work and national economic importance:

- relevant industrial awards and enterprise agreements
- relevant legislative provisions covering discrimination and equal employment opportunity
- typical site/team work structure and methods
- typical site communication procedures
- Interpersonal communication skills
- typical site training/development systems
- basic job/skill analysis techniques
- basic conflict management
- site meeting procedures
- quality requirements
- general construction terminology
- safe work method statements

Skill

The ability to:

- locate, interpret and apply relevant information, standards and specification
- comply with site safety plans and OH&S regulations/legislation/ codes of practice relevant to workplace practice
- communicate and work effectively and safely with others and self
- set personal and team work goals
- identify personal development goals
- comply with organisational goals

**(4) Resource Implications**

- The following resources should be made available:
- workplace location or simulated workplace
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions

**(5) Method of Assessment**

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

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

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

Due to the nature of the mandatory requirements, assessment may require stage management and role-playing.

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.

**(6) 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 requirements

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
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Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0001A: Carry out interactive workplace communication**

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively perform interactive communication at the workplace, and applies to all individuals working in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Receive and convey information	1.1 Verbal/written instructions received and responded to with correct actions. 1.2 Instructions conveyed and work signage responded to, with correct action. 1.3 Information conveyed in basic English so that messages are understood.
2. Carry out face-to-face routine communication	2.1 Routine instructions, messages and schedules are given or followed. 2.2 Workplace procedures are carried out according to procedures laid down by the company or supervisor. 2.3 Relevant information is assessed and analysed from a range of sources. 2.4 Information is selected and sequenced correctly.
3. Work with others	3.1 Suggestions and information are provided relevant to the planning/conduct of the activities. 3.2 Communication carried out clearly, concisely and effectively so those messages are understood.
4. Participation in simple on-site meeting processes	4.1 Participation in on-site meetings is in accordance to predetermined procedures. 4.2 Interaction carried out to achieve constructive outcome.



## RANGE STATEMENT

This unit applies to all communication requirements, associated with working with other persons at a site location and carrying out tasks under supervision.

Verbal/written instructions include directions or instructions related to a simple job/task.

Signage may include but are not limited to:

- on-site direction signs
- common site warning signs
- facility or location signs
- traffic signs

Range of information sources may include:

- instructions: oral/memos
- signage
- work schedules/work bulletins
- charts and maps

On-site meeting process may take the form of formal or informal meetings and may include:

- notification (time, place, purpose)
- item discussion
- negotiation outcome

## EVIDENCE GUIDE

Competency is to be demonstrated by the effective use of methods of communication relating to instructions, information sources and meeting procedures listed within the range statement relative to the work orientation.

### (1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- communications to include Occupational Health and Safety regulations applicable to work place operations, and organisational policies and procedures
- demonstrate appropriate communications processes prior to and during construction activities

### (2) Pre-requisite Relationship of Units

- Nil

### (3) Underpinning Knowledge and Skills

#### Knowledge

knowledge of:

- workplace safety requirements
- types of onsite meetings and their procedures
- how work schedules, charts, work bulletins and memos are used
- how instructions are conveyed in the workplace

#### Skills

The ability to:

- follow instructions for working safely
- convey information in basic English to invoke correct actions

**(4) Resource Implications**

The following resources should be made available:

- Suitable work area appropriate to the construction process
- Appropriate communication documentation relative to the task

**(5) Method of Assessment**

Competence should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is being done under general guidance, checking at various stages of the process and at the completion of the activity, against the performance criteria and specifications.

**(6) Context of Assessment**

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, the specific policies, procedures and codes of practice of the enterprise.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills

**BCGCOR0041B: Carry out measurements and calculations**

## Competency Descriptor:

This unit deals with the skills and knowledge required to effectively carry out measurements and calculation of work to required tolerance, and applies to all individuals working in the construction industry.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
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.
2. Obtain measurements	2.1 Method of obtaining the measurement is selected and applied. 2.2 Accurate measurements obtained to job instruction using rule, tape and other measuring devices. 2.3 Measurements are confirmed and recorded.
3. Perform simple calculations	3.1 Simple calculations involving length, perimeter, mass and volume using four basic operations (+,-,x,÷), carried out. 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 Measurements or quantities estimated (approximately) on site or from job instruction. 4.2 Information obtained correctly from job instruction. 4.3 Measurements correctly identified/recorded without error. 4.4 Quantities of materials suitable for work undertaken are calculated and recorded to job instructions. 4.5 Costs for a simple project estimated to within + or – 10%.



## RANGE STATEMENT

This unit applies to simple projects applicable to:

- timber frames
- structural steelwork
- concrete
- brick/block work
- joinery
- tiling
- sheeting/panelling
- plastering
- final finishes
- fences
- formwork
- excavation work

Materials include all materials utilised in construction of commercial, industrial/domestic and civil construction projects, including hardware items.

Calculations to include:

- area
- perimeter
- volume
- mass
- scales
- ratios (ingredients/elements and triangulation)

Job instruction may involve:

- verbal direction/instruction
- written instruction
- provision of job drawing and details

## EVIDENCE GUIDE

Competency is to be demonstrated by the effective calculation of measurements and calculations of materials in accordance with the range listed in the range of variables statement, relevant to the work orientation.

### (1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

- communicate effectively to enable accurate calculations and measurements
- demonstrate effective use of measuring devices
- accurate measurements taken and recorded
- perform simple calculations to specifications
- estimate quantities and costs to requirements

**(2) Pre-requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

knowledge of:

- drawings and specifications
- materials relevant to the construction process
- basic operations in simple geometry, measurement and calculations
- costing relative to the construction process
- units of measurement and conversion factors

Skills

The ability to:

- read and interpret drawings
- measure and calculate manually
- record measurements correctly
- measure accurately
- operate electronic calculating devices
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- information on construction materials appropriate to the relevant construction process
- suitable work area appropriate to the activity
- suitable site plans/drawings and/or specifications
- measuring and calculating devices

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based upon integrated project work.

Assessment may be intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

## BCGCOR1583A: Read and interpret plans

### Competency Descriptor:

This unit deals with the skills and knowledge required to effectively read and interpret building plans and drawings, and applies to individuals working in the general & civil construction industry.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Identify types of drawings and their functions	1.1 Main types of plans and drawings used in the construction industry identified.
	1.2 Key functions of each type of drawing identified.
	1.3 Key users of these drawings identified.
2. Recognise commonly used symbols and abbreviations	2.1 Commonly used terms, symbols, scales and abbreviations recognised.
	2.2 Function of legend understood and explained.
3. Locate and identify key features on a site plan	3.1 Key features and dimensions of site identified and located.
	3.2 Orientation of site identified.
	3.3 Access from roadways to worksite located and identified.
	3.4 Services identified.
	3.5 Knowledge of construction details and conformity to building regulations demonstrated.
4. Identify and locate key features from sectional details and elevations	4.1 Specific key features identified correctly from sectional details and elevations.
	4.2 Structural features and horizontal/vertical measurements located.
	4.3 The ability to identify and relate to site survey of conditions of soil, natural damage, existing pits, foundations, drains, trees, etc. demonstrated.



5.	Recognise amendments	5.1	Title panel checked. Verification that drawing used is latest amendment.
6.	Read and interpret specifications	6.1	Purpose of specifications identified.
		6.2	Types of details identified from specifications.
7.	Read and interpret other drawings and plans	7.1	Drainage requirements determined.
		7.2	Existing surface level and finished surface level identified.
		7.3	Evidence of ability to read and interpret basic plans of other occupational areas demonstrated.

## 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:

Types of drawings include:

- site plans
- elevations
- floor plans
- foundation
- roof plan
- sectional plans/elevations
- structural details and specification providing illustrations and dimensions
- sectional plans/elevations
- details and specification providing illustrations and dimensions

Other drawings and plans:

- electrical
- plumbing
- drainage
- roads
- landscape

Key features of site plans may involve:

- shape of site
- proposed building/s
- roads
- easements
- existing buildings/structures
- services
- dimensions

Key features of plans and elevations may involve:

- type of structure – structural members
- shape of building/structure
- type of construction
- layout of rooms
- service requirements
- location of plant or machinery
- vertical and horizontal measurements

Types of construction include but are not limited to:

- structural steel framed
- light steel framed
- timber framed
- reinforced concrete
- pre-cast concrete
- solid brick
- brick veneer

Services may include:

- drainage
- sewerage
- gas
- water
- electricity

Civil construction includes:

- tunnels
- bridges
- culverts
- earthworks and other types of construction

Types of structures include:

- single storey buildings
- double storey buildings
- multi storey buildings
- bridges
- fabricated towers
- 

Types of details include but are not limited to:

- structural steelwork
- timber framework
- brickwork
- concrete work
- plastering

Orientation of site includes:

- relationship to 'north'
- location of roads
- relationship to roads and neighbouring sites

## EVIDENCE GUIDE

Competency is to be demonstrated by effectively reading and interpreting drawings to locate or identify nominated features or functions in accordance with the performance criteria and the range listed within the range of variables statement.

### (1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- identify and understand various types of drawings
- identify dimensions, symbols, abbreviations and key features
- identify title panel and reference date as to up-to-date copy of drawings
- indicate sound understanding of purpose of specifications in accordance with the work orientation

### (2) Pre-requisite Relationship of Units

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- a range of drawings
- materials relative to drawings/specifications
- measurements and calculations
- symbols, dimensions and terminology

Skills

The ability to:

- read and interpret drawings
- measure accurately
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- Suitable range of drawings and specifications

**(5) Method of Assessment**

Competency should be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based upon integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

## **BCGCOR0111A: Handle construction materials and safely dispose of waste**

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively and safely handle construction materials, and to dispose of waste in a safe and environment friendly manner. It applies to individuals working in the construction industry.

Competency Field:

General Construction

<b>ELEMENT OF COMPETENCY</b>		<b>PERFORMANCE CRITERIA</b>	
1	Plan and prepare work	1.1	Occupational Health and Safety (OH&S) requirements associated with application tasks and workplace environment recognised and adhered to.
		1.2	Appropriate personal protective equipment selected, correctly fitted and used.
		1.3	Quality Assurance requirements associated with company's construction operations recognised and adhered to.
		1.4	Tools and equipment for handling materials/goods, non -toxic waste, selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
2	Correctly manual handle, sort and stack construction material	2.1	Common construction materials recognised and selected for sorting and stacking/stockpiling to supervisor's instructions and/or specifications.
		2.2	Handling characteristics of materials identified and appropriate handling techniques applied.
		2.3	Specific handling requirements for hazardous materials applied.
		2.4	Materials stored, stacked/stockpiled and protected, clear of traffic ways, so they are easily identified, retrieved and not damaged.
		2.5	Appropriate signage and barricades erected where applicable to isolate stored materials from workplace traffic or access.
		2.6	Correct manual handling techniques used.

3	Prepare for mechanical handling of materials	3.1	Materials stacked/banded for mechanical handling in accordance with type of material and plant/equipment to be used.
		3.2	Dogman/rigger assisted with loading, unloading, moving, locating and/or installing materials.
		3.3	Materials safely handled with assistance of pallet trolley, forklift or hoist.
4	Handle and remove waste safely	4.1	Waste materials handled correctly and safely according to MSDS and requirements of regulatory authorities.
		4.2	Hazardous material identified for separate handling.
		4.3	Non-toxic materials removed using correct procedures.
		4.4	Dust suppression procedures used to minimise health risk to work personnel and others.
5	Clean up	5.1	Tools and equipment cleaned, maintained, and stored.
		5.2	Unused materials safely stacked/stockpiled stored.
		5.3	Waste materials disposed of safely.
		5.4	Site cleaned and cleared of debris and unwanted material.

## RANGE STATEMENT

Tools and equipment includes but is not limited to:

- brooms
- hoses
- shovels
- rakes
- wet and dry industrial vacuum cleaners
- wheelbarrows
- pallet trolley
- materials hoists
- forklifts

Construction materials include but are not limited to:

- bricks and concrete masonry
- mortar components – cement, coarse aggregate, 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

Protection of stacked/stored materials may include:

- covering
- tying or banding
- barricades
- signs
- locked away (hazardous materials)

Dust suppression procedures may include:

- spraying with water
- covering
- use of vacuum cleaner

Waste material and debris include but are not limited to:

- banding straps
- packing pieces
- broken or damaged goods
- cardboard
- plastic
- paper
- loose material

Removal of materials to include processes of recycling and salvage where applicable.

OH&S requirements to be in accordance with (Statutory/Territory) legislation and regulations.

Work to be undertaken as part of a team or individually under supervision of appropriately certificated persons where applicable.

Reporting of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by the effective handling and storing/stacking of appropriate construction materials listed within the range of variables statement, relevant to the work orientation.

### (1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of materials handling processes
- demonstrate safe and effective operational use of tools and equipment
- demonstrate safe application in the process of cleaning up
- interactively communicate with others to ensure safe and effective operations

**(2) Pre-requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements including relevant codes and regulation
- hand tools and equipment
- materials
- materials handling
- Quality Assurance
- range of communication mediums (verbal and non-verbal)

Skills

The ability to:

- work safely to instructions
- use hand tools
- handle materials
- select material
- measure
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- general construction materials relative to construction processes
- plant and equipment appropriate to handling processes
- hand tools appropriate to handling processes
- suitable work area appropriate to construction process
- MSDS information

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.



## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0201A: Use construction plants and equipment**

## Competency Descriptor:

This unit deals with the knowledge, skills and attitudes required to safely and efficiently operate small construction plant and equipment, and applies to individuals working in ancillary equipment operation/masonry in the construction industry.

Competency Field: General and Civil Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare for work	1.1	Work instructions and operational details are obtained, confirmed and applied.
		1.2	OH&S requirements for guarding and cut off switches identified.
		1.3	OH&S requirements for personal protective equipment associated with using machines identified.
		1.4	Material quantity requirements are calculated in accordance with plans and/or specifications.
		1.5	Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.
2.	Select plant and equipment	2.1	OH&S requirements for operating and using plant and equipment recognised and adhered to.
		2.2	Appropriate personal protective equipment selected, correctly fitted and used.
		2.3	Plant and equipment selected consistent with needs of job.
		2.4	Plant and equipment checked for serviceability/safety and faults reported to supervisor.
3.	Identify, select and use plant and equipment	3.1	Plant and equipment are selected and used consistent with OH&S requirements and the needs of the job.
		3.2	Site hazards identified in use of plant and equipment and correct procedures used to eliminate or minimise risk.
		3.3	Plant and equipment safely located when not in immediate use.
4.	Clean up	4.1	Plant and equipment cleaned, maintained and stored.



## RANGE STATEMENT

This unit applies to all small plant and equipment used in construction work

Plant and equipment includes but is not limited to:

- air compressor and hoses
- concrete mixer
- industrial wet and dry vacuum cleaner
- pallet trolley
- rollers
- compactors
- pumps and hoses
- brick/masonry saw
- terrazzo grinders
- ladders
- trestles and planks
- wheelbarrows
- augers/drills
- jack hammers

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses/goggles
- gloves
- ear plugs/muffs
- face masks/respirators

OH&S requirements are to be in accordance with relevant National regulations, which may include:

- workshop/worksite safety practices
- control of noise and dust
- use of ladders and working platforms
- control of exhaust emission
- isolation of work areas

Reporting of faults may be written or verbal.

## EVIDENCE GUIDE

Competency is to be demonstrated by the safe and effective operation of particular plant and equipment listed within the range of variables statement relevant to the work orientation.

### (1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of processes
- demonstrate safe and effective operational use of tools, plant and equipment
- demonstrate and show understanding of manufacturer's specifications and recommendations
- interactively communicate with others to ensure safe and effective workplace operations

**(2) Pre-Requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

knowledge of:

- workplace and equipment safety requirements
- portable power tools applicable to the construction process
- hand tools and a range of plant and equipment
- materials handling relevant to plant and equipment use
- workplace communication processes

Skills

The ability to:

- work safely to instructions
- use power tools, hand tools, plant and equipment applicable to the construction process
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- hand and power tools appropriate to the construction process
- plant and equipment appropriate to the construction process
- suitable work area appropriate to the construction process
- appropriate OH&S safety resources

**(5) Method of Assessment**

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

**(6) Context of Assessment**

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0081A: Use simple levelling devices**

Competency Descriptor:

This unit deals with the skills and knowledge required to competently select and use levelling devices, and applies to individuals working in the building and Construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1	Plan and prepare work	1.1	Occupational Health and Safety (OH&S) requirements recognised and adhered to in accordance with application tasks and workplace environment.
		1.2	Requirements of job identified from drawings or instructions.
		1.3	Appropriate personal protective equipment selected, correctly fitted and used.
		1.4	Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		1.5	Quality Assurance requirements recognised and adhered to in accordance with company's construction operations.
2	Set up and use levelling device	2.1	Heights to be transferred identified from given instructions or drawings.
		2.2	Device assembled and filled with water to required level with air bubbles removed.
		2.3	Height transferred to required locations to a tolerance of + or - 5mm over 3 metres.
3	Transfer heights with straight edge and spirit level	3.1	Heights to be transferred identified from given instructions/drawings or given marked level.
		3.2	Height transferred to required location to + or - 5mm over 3 metres.
4	Maintain given level or specified slope with boning rods	4.1	Heights of each end of line to be boned established to given levels.

	4.2	End of boning rods securely fixed to required heights.
	4.3	Heights of intermediate points sighted and marked with boning rods to a tolerance of + 10mm.
5	Clean-up	5.1 Tools and equipment cleaned, maintained and stored.

## RANGE STATEMENT

This unit applies to using simple levelling devices to carry out basic exercises in transferring levels and/or maintaining a line of a slope.

Levelling and lining devices include:

- water level
- spirit level
- boning rods
- line level

Heights or levels may be given by:

- drawing/sketch indicating mark
- verbal or written instruction indicating level or mark
- datum/survey peg fixed into ground
- chalk or nail mark on paved/concrete surface
- mark on vertical surface

Associated tools and equipment include:

- string line
- wooden/steel pegs
- straight edge
- hammer
- chalk line

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses
- dust jacket
- masks/respirators

Work may be carried out under supervision and in a team situation or individually.

Reporting of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the effective application of the different types of levelling devices listed within the range statement relative to the work orientation.

**(1) Critical Aspects of Evidence**

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of levelling and boning processes
- demonstrate safe and effective handling and operational use of levelling device
- indicate care in accurately transferring levels to other locations
- interactive communication with others to ensure safe and effective levelling operations.

**(2) Pre-requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements
- hand tools
- measurement and calculation
- Quality Assurance
- range of levelling devices
- horizontal/vertical concepts

Skills

The ability to:

- work safely to instructions
- measure accurately
- use hand tools
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- general construction materials appropriate to levelling
- hand tools appropriate to levelling and lining
- equipment appropriate to the activity processes
- suitable work area appropriate to the activities
- suitable plans/drawings and specification



**(5) Method of Assessment**

Competency should be assessed while work is being done, under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit should be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

## **BCGCOR0181A: Work safely around power sources, services and assets**

### Competency Descriptor:

This unit specifies the competency required to work with or operate plant in or around close proximity of power sources, services and assets for the general safety of personnel and equipment.

Competency Field: General Construction

<b>ELEMENT OF COMPETENCY</b>	<b>PERFORMANCE CRITERIA</b>
1. Plan and prepare	<p>1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied.</p> <p>1.2 Safety requirements are followed in accordance with safety plans and policies.</p> <p>1.3 Signage/barricade requirements are identified and implemented.</p> <p>1.4 Plant, tools and equipment are selected to carry out tasks that are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.5 Material quantity requirements are calculated in accordance with plans and/or specifications.</p> <p>1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.7 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.</p>
2. Apply safe working practices	<p>2.1 JPS contacted to identify electrical source and type.</p> <p>2.2 Plant is positioned according to work method statement.</p> <p>2.3 Plant procedures are followed to comply with work method statement.</p> <p>2.4 Work is conducted in or around the power source/service/asset.</p>

- 2.5 Personnel, plant and equipment are retracted from powered area following safe work method statement.
3. Clean up
- 3.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification.
- 3.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.
- 3.3 Work completion procedures are applied and relevant personnel notified that work is finished.

## RANGE STATEMENTS

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:

Planning and preparation is to include but not be limited to:

- worksite inspection
- equipment defect identification
- assessment of conditions and hazards
- determination of work requirements

Relevant authorities are to include but not be limited to:

- Jamaica Public Service

Electrical sources may include but not be limited to:

- distribution towers
- poles
- underground conductors
- underground and overhead wires
- temporary services
- train and tram assets
- transmission towers
- substations
- generators
- all other services, sources and assets

Communications are to include but not limited to:

- verbal and visual instructions
- fault reporting
- mobile phone
- site specific instructions
- written instructions
- plans or instructions related to job/task
- two way radio
- hand signals

Safe operating procedures are to include but not be limited to:

- the conduct of operational risk assessment and treatments associated with power cables (including overhead service trays, cables and conduits)
- lighting
- earth leakage boxes
- trip hazards
- working with dangerous materials
- working in confined spaces
- surrounding structures
- restricted access barriers
- traffic control
- working at heights
- working in proximity to others
- worksite visitors
- the public

Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices

Regulatory authorities may include:

- Authorities administering the applicable acts
- regulations
- codes of practice

Quality requirements are to include but not be limited to relevant regulations including:

- Standards
- internal company quality policy and standards
- workplace operations and procedures
- manufacturers specifications where specified

Plant may include but not be limited to:

- scaffolds
- backhoes
- excavators
- booms
- cranes

Occupational Health and Safety (OH&S) requirements are to be in accordance with legislation/regulations/codes of practice, 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
- organisational first aid
- hazard control
- hazardous materials and substances

Emergency procedures related to this unit are to include but may not be limited to:

- extinguishing fires
- organisational first aid requirements
- evacuation

Tools and equipment are to include but not be limited to:

- those associated with the task at hand

Barriers are to include but not be limited to:

- isolation
- barricades
- other physical barriers
- site safety signage

Information sources may include but not be limited to:

- verbal or written and graphical instructions
- signage
- work schedules/plans/specifications
- work bulletins
- memos
- material safety data sheets (MSDS)
- diagrams or sketches
- Safe work procedures related to working safely around power
- regulatory/legislative requirements pertaining to working safely around power
- manufacturers' specifications and instructions where specified
- organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel

On site meeting processes may include:

- notification/ scheduling (time, place, purpose)
- task discussions
- local coordination of procedural and operational issues

## 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.

### (1) Critical Aspects and Evidence

- Location, interpretation and application of relevant information, standards and specifications
- Compliance with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations
- Compliance with organisational policies and procedures including quality requirements
- Communication and working effectively and safely with others
- Contact with relevant authorities, application of work method statement to oversee plant positioning and operation for one project including erection and/or placement of barriers and safeguards.

### (2) Pre-requisite Relationship of Units

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- Workplace and equipment safety requirements
- Quality requirements
- General Construction terminology
- Plant, tools and equipment types, characteristics, uses and limitations
- Working with power techniques
- Material Safety Data Sheets
- Plans, drawings and specifications
- Materials handling, storage and environmentally friendly waste management
- Relevant acts, regulations and codes of practice
- Safe work method statements
- First aid including CPR
- Electrical safety and legislation
- Emergency procedures (site specific)
- Working at heights

Skill

The ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OH&S legislation/ regulations/codes of practice
- apply cable to workplace operations
- communicate and work effectively and safely with others

**(4) Resource Implications**

The following resources should be made available:

- workplace location or simulated workplace
- hand and power tools, plant and equipment appropriate to working around power
- realistic activities covering the mandatory task requirements
- specifications and work instructions

**(5) Method of Assessment**

Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's General Construction Training Package and relevant standards where they apply.

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) 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 key competencies.

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.

**(6) Context of Assessment**

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

Assessment is to occur using 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 requirements including specified Standards.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.



**BCGCOR0051A: Use hand and power tools**

Competency Descriptor:

This unit deals with skills and knowledge required to competently select and use appropriate hand and power tools of construction trades, and applies to individuals in the construction industry.

Competency Field:

General Construction

<b>ELEMENT OF COMPETENCY</b>		<b>PERFORMANCE CRITERIA</b>	
1	Identify hand and power tools	1.1	Regular power tool applications in workshop operations recognised.
		1.2	Types of hand and power tools and their functions identified.
		1.3	Sources of power supply recognised.
2	Select hand tools	2.1	OH&S requirements for using hand tools recognised and adhered to.
		2.2	Appropriate personal protective equipment selected, correctly fitted and used.
		2.3	Hand tools selected consistent with needs of job.
		2.4	Tools checked for serviceability and safety and any faults reported to supervisor.
		2.5	Equipment selected to hold or support material for power tools application where applicable.
3	Use hand tools	3.1	Material located and held in position for hand tool application.
		3.2	Hand tools safely and effectively used according to their intended use.
		3.3	Hand tools safely located when not in immediate use.
4	Select power tools	4.1	Occupational Health and Safety (OH&S) requirements for using power tools recognised and adhered to.
		4.2	Appropriate personal protective equipment selected, correctly fitted and used.

- 4.3 Power tools and leads/hoses selected consistent with needs of job in accordance with conventional work practice.
  - 4.4 Power tools and leads/hoses visually checked for serviceability/safety in accordance with OH&S requirements and any faults reported to supervisor.
  - 4.5 Equipment selected to hold or support materials for power tool application where applicable.
- 5 Establish power supply to work location
  - 5.1 Route identified for safe placement of leads/hoses clear of hazards.
  - 5.2 Electric power leads run out to power supply and supported overhead clear of traffic or covered if presenting possible trip hazard.
  - 5.3 Electric power leads connected to supply and power board or direct to power tool.
  - 5.4 Air hoses run out to compressed air supply and covered if presenting possible trip hazard.
  - 5.5 Hose connected to power tool and air supply.
- 6 Use power tools
  - 6.1 Material located and held in position for power tool application where applicable.
  - 6.2 Power tools safely and effectively used in application processes.
  - 6.3 Power tools safely located when not in use.
- 7 Clean up
  - 7.1 Power tools cleaned, maintained and stored.
  - 7.2 Power leads/hoses cleaned, visually checked and stored.
  - 7.3 Equipment cleaned, maintained and stored.
  - 7.4 Work area cleared and waste removed.

## RANGE STATEMENT

Hand tools include, but are not limited to:

- adjustable spanners
- bars (crow and pinch)
- bolt cutters
- brooms
- chisels
- hacksaws
- handsaws
- hammers
- measuring tapes
- nips
- picks/mattocks
- pliers
- sealant gun
- shovel/spades
- sledge hammers
- spanners and wrenches
- spirit level, straight edge
- string lines
- trowels and floats
- wire cutters
- paint brushes/rollers
- spatula/putty knives

Power supply to include but not limited to:

- electricity
- compressed air

Power tools include:

- drills
- nail guns
- staplers
- screwdrivers
- sanders
- angle grinders
- pneumatic wrenches
- circular saw
- jig saws
- planers
- routers

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses/goggles
- gloves
- ear plugs/muffs
- face masks/respirators

OH&S requirements may include:

- workshop/worksite safe working practices
- use of tools and equipment
- use of power tools
- safe handling and storage of materials

Reporting of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by the safe and effective operation of particular power and hand tools listed within the range of variables statement relevant to the work orientation.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- adopt and carry out correct procedures prior to and during use of hand tools and power tools
- demonstrate safe and effective operational use of tools and equipment
- interactively communicate with others to ensure safe and effective operations

### (2) Pre-requisite Relationship of Units

Competency in this unit may be determined concurrently based upon integrated project work using the following units:

- |                           |   |
|---------------------------|---|
| • BCGCOR0011A             | Carry out OH&S requirements   |
| • BCGCOR0061A             | Use plant and equipment   |
| • BCGCOR0041A             | Carry out measurements and calculations                             |
| • BCGCOR0111A             | Handle construction materials and safe disposal of waste            |
| • BCGMAS0121A-BCGPAD0191A | Prepare for the construction process (relative to work orientation) |

### (3) Underpinning Knowledge and Skills

#### Knowledge

Knowledge of:

- workplace and equipment safety requirements and OH&S legislation
- portable power tools
- hand tools and equipment
- materials
- materials handling whilst operating tools

#### Skills

The ability to:

- work safely to instructions
- apply appropriate hand-eye co-ordination in the use of tools
- handle/hold materials during operation of tools
- select appropriate tools for material usage
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- general construction materials
- hand and power tools appropriate to the construction process
- plant and equipment appropriate to the construction process
- suitable work area appropriate to the construction process
- appropriate OH&S safety resources

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures .

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0141A: Carry out excavation**

## Competency Descriptor:

This unit deals with the skills and knowledge required to effectively carry out excavation work and to install support for excavation, and applies to all individuals working in trenching and foundation work of the construction industry.

Competency Field: General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare work	1.1	Quality Assurance requirements of company's construction operations recognised and adhered to.
		1.2	OH&S requirements recognised and adhered to in accordance with application tasks and workplace environment.
		1.3	Appropriate personal protective equipment selected, correctly fitted and used.
		1.4	Tools and equipment requirements identified to supervisor's instructions, consistent with needs of job.
2.	Locate excavation and erect safety equipment	2.1	Excavation located from instruction.
		2.2	Site pegs installed, service markers identified and excavation limits marked.
		2.3	Safety barricades, signs and lights erected in positions as required by OH&S requirements.
3.	Select tools and equipment	3.1	OH&S requirements associated with use of tools and equipment recognised and adhered to.
		3.2	Personal protective equipment items selected in accordance with excavation method and conditions and correctly fitted and used.
		3.3	Hand tools and equipment selected consistent with the needs of the job, checked for serviceability and any faults reported to supervisor.
4.	Dig excavations by hand	4.1	Temporary drainage system established to divert surface and subsurface water to storm water drainage system. Surface holes and depressions filled.
		4.2	Excavations safely dug with hand tools under direction.
		4.3	Service markers or taped areas identified.



	4.4	Damage or interference with underground services (power, water, gas, and telephone) avoided during excavation process.
	4.5	Excavations cleaned out with hand tools, free from loose material.
5. A	5.1	Machine operator assisted with excavation by verbal and trimming support, ensuring it is to line and depth.
assist machine excavation operations	5.2	Excavation cleaned out by hand to job requirements and instructions.
6.	6.1	Excavation works carried out in accordance with regulatory authority's requirements.
Install excavation support	6.2	Trench/excavation support installed to instruction and to OH&S regulations.
7.	7.1	Site cleaned and cleared of unwanted excavated material.
Clean up	7.2	Tools cleaned, maintained and stored.

## RANGE STATEMENT

This unit applies to excavations carried out by hand and assisting excavator operators with their operation.

This unit applies to trench/excavation depth not exceeding 1.5m excavation and includes but is not limited to:

- post holes
- pits
- panned excavations
- trenches
- levelling of work area

Regulatory authorities are those under legislation governing:

- water
- sewerage
- gas
- electricity
- telephone

OH&S requirements are to be in accordance with legislation and regulations.

Work is to be undertaken in a team situation or individually under supervision.

Reporting of faults may be written or verbal.



## EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective excavation and/or support of at least two different types of excavations from those listed within the range of variables statement, relevant to the work orientation.

### (1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

- demonstration of compliance with Occupational Health and Safety regulations applicable to workplace operations
- indication of compliance with organisational policies and procedures including Quality Assurance requirements
- carrying out correct procedures prior to and during excavation processes
- identify and understand instruction relevant to the location of excavation
- demonstration of safe and effective operational use of tools and equipment
- interactive communication with others to ensure safe and effective operations

### (2) Pre-requisite Relationship of Units

- Nil

### (3) Underpinning Knowledge and Skills

#### Knowledge

knowledge of:

- workplace and equipment safety requirements
- hand tools and equipment
- materials handling
- measurement and calculations
- workplace communications
- regulatory authority's requirement for excavation/support
- range of in ground services and relevant markers/identifiers

#### Skills

The ability to:

- work safely to instructions
- use hand tools and equipment
- handle material
- measure relevant to excavation process
- communicate effectively

### (4) Resource Implications

The following resources should be made available:

- general construction materials for excavation support
- hand tools appropriate to excavation processes
- plant and equipment appropriate to the excavation process
- work area appropriate for the excavation activities
- appropriate OH&S safety resources to suit excavation location

**(5) Method of Assessment**

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work. Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

**(6) Context of Assessment**

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

## **BCGMAS0151A: Prepare for construction process (Brick/Block laying)**

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively prepare the construction process for laying concrete blocks/bricks, and applies to individuals working in masonry/concrete trades in the construction industry.

Competency Field:

General Construction

<b>ELEMENT OF COMPETENCY</b>		<b>PERFORMANCE CRITERIA</b>	
1.	Plan for construction process	1.1	Quality Assurance requirements of company's construction operations recognised and adhered to.
		1.2	Job requirements identified from drawings and supervisor's instructions.
		1.3	Occupational Health and Safety (OH&S) requirements identified and adhered to according to application tasks and workplace environment.
		1.4	Safety hazards identified and correct procedures adopted to minimise risk to self and others.
		1.5	Materials selected to supervisor's instructions, safely handled and stored/located and ready for application.
		1.6	Appropriate personal protective equipment selected, correctly fitted and used.
		1.7	Tools and equipment selected are consistent with job requirements, checked for serviceability and any faults reported to supervisor.
2.	Prepare materials selected for construction process	2.1	Activities for material preparation identified from specifications or supervisor's instructions.
		2.2	Material preparation carried out to satisfy requirements of construction process.
		2.3	Correct manual handling techniques used to remove materials to location of placement.
		2.4	Components distributed and stacked to suit job location and construction sequence.

3.	Prepare work area suitable for construction process	3.1	Activities to be carried out in work area identified from type of brick/block, planned layout of construction and access location.
		3.2	Work area prepared for construction process according to supervisor's instructions.
4.	Use tools, plant and equipment appropriate for construction process	4.1	Regular hand and power tools suitable for application process identified to job requirements.
		4.2	Hand and power tools used safely and effectively to carry out processes.
5.	Mix mortar/concrete by hand	5.1	Materials for mortar/concrete selected to instruction.
		5.2	Additives for mortar/concrete selected to mix requirements.
		5.3	Specified proportions of materials for mortar/concrete mixture prepared accurately in accordance with instruction.
		5.4	Mortar/concrete materials mixed to a workable consistency.
6.	Assist with brick/block works	6.1	Bricks/blocks selected, visually checked to ensure that specifications are met including colour matching surrounding area and distributed to location.
		6.2	Surface brushed/scraped/washed and clean.
7.	Clean-up	7.1	Materials stacked/stored for re-use or removal.
		7.2	Work area cleared.
		7.3	Tools and equipment cleaned, maintained and stored.
		7.4	Waste disposed of using appropriate method according to EPA requirements.

## RANGE STATEMENT

This unit applies to the preparation processes carried out to support the laying of brickwork or block work.

Construction processes includes:

- worksite preparation
- preparation for brick/block laying
- finish brickwork/block work face

Tools and equipment include but are not limited to:

- hammer
- bolster
- shovel
- measuring tape/rule
- concrete mixer
- angle grinder
- masonry saw
- power leads
- hoses
- brushes and brooms
- wheelbarrows
- mortar boards
- bucket

Specifications for bricks/blocks should be part of Quality Assurance requirements and include:

- size
- shape
- sharp arises (where applicable)
- colour
- strength

Materials preparation may include:

- cutting concrete blocks
- locating lintels ready for placement
- distributing vents
- cutting and distributing reinforcement
- preparing materials for batching for mortar and concrete

Work is to be undertaken as part of a team under supervision with instructions being part of supervisor's directions, either verbal or written.

OH&S requirements to be in accordance with Statutory Legislation and regulations.

Reporting of faults may be verbal or writ ten.

Materials in addition to bricks/blocks include:

- cement and sand
- gravel
- adhesive
- brick/block reinforcement
- steel lintels
- mortar additives (workability and damp proofing)

Masonry units may include:

- wire cut bricks
- pressed bricks
- solid concrete blocks
- hollow concrete blocks

Work area preparation may include:

- cleaning strip footings or slab
- setting up concrete mixer
- locating mortar boards
- establishing temporary water and power supply
- preparing access for supply of mortar/concrete

## EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective preparation for the laying of bricks/blocks in accordance with the performance criteria using any of the listed range of variables with either brickwork or block work.

### (1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of construction processes
- demonstrate safe and effective operational use of tools, plant and equipment
- adopt and use correct procedures to handle and place materials
- interactively communicate with others to ensure safe and effective worksite operations

### (2) Pre-requisite Relationship of Units

- BCGCOR0011A Carry out OH&S requirements
- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use small plant and equipment
- BCGCOR0111A Handle construction material

### (3) Underpinning Knowledge and Skills

#### Knowledge

Knowledge of:

- workplace and equipment safety requirements
- drawings and specifications
- portable power tools
- hand tools and equipment
- materials handling
- mortar and concrete constituents and ratio of mix
- measurement relative to brick/block work
- accessories associated with brickwork/block work construction
- workplace communications

#### Skills

The ability to:

- work safely to instructions
- read drawings
- use power tools and hand tools
- handle material
- select material
- measure relative to the construction process
- mix mortar and concrete manually and with mixer
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- construction materials relevant to brick/block work
- hand and power tools appropriate to brick/block work processes
- plant and equipment appropriate to brick/block work processes
- suitable work area appropriate to construction process

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2	Level 3.
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGMAS0181A: Mix cementitious materials (mortar and concrete)**

## Competency Descriptor:

This unit deals with the skills and knowledge required to quantify and mix cementitious materials, and applies to individuals working in masonry trades.

## Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1 Quality Assurance requirements of company's construction operations recognised and adhered to. 1.2 Occupational Health and Safety (OH&S) requirements for workplace environment and for mixing concrete/mortar identified and adhered to. 1.3 Appropriate personal protective equipment selected, correctly fitted and used. 1.4 Tools and equipment selected are consistent with requirements for batching and mixing concrete or mortar, are checked for serviceability and any faults identified reported to supervisor. 1.5 Where required, surface for hand mixing concrete or mortar is prepared according to work instruction
2. Select and batch materials for mixing	2.1 The correct type and quality materials are identified and selected as instructed. 2.2 Materials transported and handled in a manner to prevent wastage/cause health and safety hazards 2.3 Materials are batched for mixing according to instruction given for quantity and ratio of mix. 2.4 Materials for manual mixing are spread out on mixing bed according to type of mix required (concrete or mortar). 2.5 Materials for machine mixing are placed in machine in accordance with recommended procedure –water in first. 2.6 Sand for mortar mix is sifted with specified grade sieve wire



- |    |              |  |
|----|--------------|--|
|    | 2.7          | Where required, additives are selected according to mix requirements or as instructed.     |
| 3. | Mix concrete | 3.1 The cement is uniformly mixed with aggregates and evenly distributed.                  |
|    | 3.2          | The concrete meets specified slump test and workability.                                   |
|    | 3.3          | Wastage of materials is prevented or minimised during hand mixing process.                 |
| 4. | Mix mortar   | 4.1 The mortar is uniformly mixed, has appropriate consistency, plasticity and is workable |
|    | 4.2          | Mixing techniques applied prevented or minimised wastage of materials.                     |
| 5. | Clean up     | 5.1 Area cleared and waste material disposed of safely.                                    |
|    | 5.2          | Tools and equipment cleaned, maintained and stored.  |

## RANGE STATEMENT

This unit covers the mixing of both concrete and mortar for application to form masonry structures using both cement mixers and manual operations.

Quality Assurance requirements may include:

- workplace operations and procedures
- quality of materials
- control of handling procedures
- use and maintenance of equipment
- attention to work specifications
- specification of concrete mix
- specification of mortar mix

Materials:

- sand
- coarse aggregate
- Portland cement
- Additives
- Colouring (where appropriate)

OH&S requirements to be in accordance with Statutory Legislation and regulations and may include:

- workplace environment and safety
- protective clothing and equipment
- use of tools and equipment
- handling of materials
- working platforms and scaffolding
- safety hazards

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- dust masks/respirators
- hard hat
- overalls

Tools and equipment may include but are not limited to:

- wheel barrow
- shovel
- measuring box
- water hose
- motorised transporting machine

Types of mix:

- concrete
- mortar for block laying
- rough cast mortar
- rendering mortar
- pebble-dash mortar

## EVIDENCE GUIDE

Competency is to be demonstrated by the batching and mixing of concrete and mortar by hand and machine.

### (1) Critical Aspects of Evidence

Competence is to be observed in the following critical aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to worksite operations
- select and use appropriate tools and equipment for mixing cementitious materials
- apply organisational quality procedures and process within context of preparing concrete and mortar.
- Interpret work instructions with respect to proportion and ratio of mix
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work procedures
- complete the mixing of concrete and mortar to work specifications

### (2) Pre-requisite Relationship of Units

- BGCOR0001A Carry out interactive communication
- BGCOR0041A Carry out measurements and calculations
- BGCOR0051A Use hand and power tools
- BGMAS0061A Use small plant and equipment

This unit may concurrently be assessed with:

- BGCOR0051A Use hand and power tools
- BGMAS0061A Use small plant and equipment

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements including regulations, codes and standards
- hand tools and equipment for preparing concrete and mortar
- materials handling
- measurement and calculation relative to batching of materials
- mortar mix composition
- concrete constituents and ratio of mix
- range of mortar additives including plasticisers and their application
- workplace communications

Skills

The ability to:

- work safely
- read and interpret work instructions
- use tools and equipment
- select materials
- measure and calculate ratio and proportion
- communicate effectively
- organise work
- batch concrete and mortar
- mix concrete and mortar by hand
- mix concrete and mortar using machine

**(4) Resource Implications**

The following resources should be provided:

- workplace location
- tools, plant and equipment appropriate for mixing concrete and mortar
- materials for mixing concrete and mortar

**(5) Method of Assessment**

Competency should be assessed through direct observation of practical application and questions related to underpinning knowledge.

Competency should be assessed under general guidance checking at various stages of the process and at completion of the activity against performance criteria and specifications.

**(6) Context of Assessment**

Competency may be assessed in the workplace or simulated workplace setting.

Assessment should be conducted while tasks are undertaken either individually or as part of a team under limited supervision.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level -	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills

**BCGMAS0101A: Carry out concreting to simple forms**

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively and safely carry out concreting to simple formwork, and applies to all individuals working in the preparation and placing of formwork and

Competency Field:

General Construction

**ELEMENT OF COMPETENCY****PERFORMANCE CRITERIA**

- |    |                                 |     |   |
|----|---------------------------------|-----|---|
| 1. | Select tools and equipment      | 1.1 | Quality Assurance requirements recognised and adhered to in accordance with company's construction operations.                                  |
|    |                                 | 1.2 | Occupational Health and Safety (OH&S) requirements recognised and adhered to in accordance with application tasks and workplace environment.    |
|    |                                 | 1.3 | Appropriate personal protective equipment selected, correctly fitted and used.  |
|    |                                 | 1.4 | Tools and equipment selected to instructions consistent with job requirements checked for serviceability and any faults reported to supervisor. |
| 2. | Erect and strip simple formwork | 2.1 | Design of formwork identified from drawings/supervisors instructions.   |
|    |                                 | 2.2 | Formwork safely erected on commencement and stripped on completion under direction of supervisor.   |
|    |                                 | 2.3 | Stripping agent applied to erected formwork, where appropriate.   |
|    |                                 | 2.4 | Timber components dewatered following stripping of formwork.  |
|    |                                 | 2.5 | All components cleaned, stacked and stored for re-use or bundled for removal.   |
| 3. | Place and tie reinforcement     | 3.1 | Reinforcing components safely handled and carried to required position.   |
|    |                                 | 3.2 | Reinforcing bars, rods, stirrups and mesh positioned under supervisor's directions.   |
|    |                                 | 3.3 | Bar chairs and spacers located in place, checking minimum edge cover under the direction of supervisor.   |



4. Place concrete
- 4.1 Formwork/excavation cleaned of excess material and debris prior to concrete placement.
  - 4.2 Concrete correctly proportioned and mixed and/or safely transported by wheelbarrow and placed under direction.
  - 4.3 Pump line/chute controlled and concrete placed as directed.
  - 4.4 Concrete spread as directed to specified levels.
  - 4.5 Concrete consolidated under direction and screeded to finished levels as directed.
  - 4.6 Surface of concrete finished as directed to specified finish.
5. Clean up
- 5.1 Formwork components removed from site.
  - 5.2 Pour site and surrounds cleared of concrete spills and other debris and surface left in safe condition.
  - 5.3 Worksite cleared of debris and unused materials.
  - 5.4 Tools and equipment cleaned, maintained and stored.

## RANGE OF STATEMENT

This unit applies to placing concrete to simple forms and excavations which includes:

- post holes
- trench foundations
- pad foundations
- slabs
- pathways
- simple concrete aprons
- channels
- garden edges

Formwork in this unit applies to edging forms where structural components would include:

- edge boards
- pegs
- struts
- bracing

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses/goggles
- gum boots
- face masks
- waterproof pants and jacket

Concrete finishes include:

- wood floated
- steel floated
- broom brushed



Excess material and debris includes:

- excavated loose soil
- off cut timber
- paper
- rags
- sticks
- nails

Concrete placement methods include:

- shovel
- wheelbarrow
- chute
- pump line

Work is to be undertaken in a team situation or individually under supervision.

Reporting of faults may be verbal or written.

OH&S requirements are in accordance with Statutory requirements.

## EVIDENCE GUIDE

Competency is to be demonstrated by the safe installation of formwork, reinforcement and concrete using any two of the simple forms listed within the range statement relevant to the work orientation.

### (1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during construction processes
- demonstrate safe and effective operational use of tools, plant and equipment
- interactively communicate with others to ensure safe and effective operations

### (2) Pre-requisite Relationship of Units

- BCGCOR0011A Carry out OH&S requirements
- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use small plant and equipment

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements
- hand tools and equipment
- concrete and formwork materials
- materials handling
- measurement and proportion
- transporting and placing concrete
- levelling equipment
- simple formwork and reinforcement components
- select and handle materials appropriate to concreting processes

Skills

The ability to:

- work safely to instructions
- measure relative to the concreting process
- use power tools and hand tools
- mix concrete by hand
- use simple levelling equipment
- communicate effectively
- select and handle materials appropriate to concreting processes

**(4) Resource Implications**

The following resources should be made available:

- general construction materials relevant to forming, reinforcing and placement of concrete
- hand tools and power tools appropriate to construction process
- tools and equipment appropriate to construction process
- suitable work area appropriate to concreting process
- information relevant to OH&S requirements

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.



**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGMAS0171A: Prepare for construction process (solid plastering)**

## Competency Descriptor:

This unit deals with the skills and knowledge required to effectively prepare the process for carrying out solid plastering work, and applies to individuals working in masonry in the construction industry.

Competency Field: General Construction

**ELEMENT OF COMPETENCY PERFORMANCE CRITERIA**

1. Plan for construction process	1.1	Quality Assurance requirements of company's construction operations recognised and adhered to.
	1.2	Preparation and planning requirements identified from drawings/work location and/or supervisor's instructions.
	1.3	Occupational Health & Safety requirements identified and adhered to in accordance with application tasks and workplace environment.
	1.4	Safety hazards identified and correct procedures adopted to minimise risk to self and others.
	1.5	Materials selected according to supervisor's instructions safely handled and stored/located ready for application.
	1.6	Appropriate personal protective equipment selected, correctly fitted and used.
	1.7	Tools and equipment selected consistent with the job requirements, checked for serviceability and any faults reported to supervisor.
	1.8	Fixing/fasteners selected consistent with the job requirements where applicable and checked for serviceability.
2. Prepare materials selected for construction process	2.1	Activities for material preparation identified from specifications or supervisor's instructions.
	2.2	Material preparation carried out to satisfy requirements of application process.

3.	Prepare work area suitable for construction process	3.1	Activities to be carried out in work area identified from surface to be covered, method of application and access to surface.
		3.2	Work area prepared for construction process according to supervisor's instructions.
4.	Use tools, plant and equipment appropriate for construction process	4.1	Regular hand and power tools suitable for application process identified to job requirements.
		4.2	Hand and power tools used safely and effectively to carry out processes where applicable.
5.	Prepare background of brick, concrete or blockwork for solid plastering	5.1	Structure identified and surface prepared. Depressions patched with suitable material to supervisor's instructions.
		5.2	Concrete surface where appropriate is roughened or adhesive applied.
		5.3	Materials for scratch coat proportioned and mixed to instructions ready for application to wet surface.
6.	Clean up	6.1	Materials stacked/stored for re-use or disposed of.
		6.2	Work area cleared.
		6.3	Tools and equipment cleaned, maintained and stored.

## RANGE STATEMENT

This unit applies to the preparation and construction processes carried out in preparing for the application of solid plastering to surfaces.

Background surfaces for application of solid plastering include but not limited to:

- concrete
- concrete block work
- brickwork
- stonework
- polystyrene
- expanded metal or bird wire

Construction process includes:

- application of solid plaster
- preparation of surfaces
- finish of surfaces
- workplace preparation

Tools and equipment may include but are not limited to:

- measuring tape/rule
- brushes
- broom
- screed boards
- scaffolding
- spirit level
- straight edges
- concrete mixer
- shovels
- wheelbarrows
- power leads
- hoses
- masonry hammer

Work area preparation may include:

- cleaning of area
- erecting restricted height scaffolding
- setting up concrete mixer
- establishing temporary water and power supply

Patching materials include but are not limited to:

- sand and cement
- plaster
- cornice adhesive
- caulking compounds

Work is to be undertaken either as part of a team or individually, under supervision with instruction being as part of the supervisor's directions either verbal or written.

Reporting of faults may be verbal or written.

OH&S requirements to be in accordance with regulations.

Personal protective equipment may include:

- overalls
- waterproof pants and jacket
- boots
- water (rubber) boots
- gloves
- dust masks/respirators
- hard hat/cap
- safety goggles

Material preparation may include:

- locating loose materials for mixing
- preparing brackets for fixing to steelwork
- cutting expanded metal or bird-wire for placement

## EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective preparation for solid plastering applications in accordance with performance criteria using any of the range of materials and processes listed within the range of variables statement.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstration of compliance with Occupational Health and Safety regulations applicable to workplace operations
- indication of compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of construction processes
- demonstration safe and effective operational use of tools, plant and equipment
- interactive communicate with others to ensure safe and effective workplace operations

### (2) Pre-requisite Relationship of Units

- Nil

### (3) Underpinning Knowledge and Skills

#### Knowledge

Knowledge of:

- workplace and equipment safety requirements
- drawings and specifications
- portable power tools
- hand tools and equipment
- materials relative to solid plastering
- materials handling
- measurement relative to solid plastering
- fixing and fasteners consistent with solid plastering requirements
- workplace communications

#### Skills

The ability to:

- work safely to instructions
- use power and hand tools
- handle material
- select material
- communicate effectively
- measure relative to process

**(4) Resource Implications**

The following resources should be made available:

- general construction materials relevant to solid plastering
- hand and power tools appropriate to solid plastering process
- plant and equipment appropriate to solid plastering process
- suitable work area appropriate to solid plastering activities

**(5) Method of Assessment**

Competency should be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2	Level 3
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGMAS1422A: Lay bricks/blocks (wall and corner)**

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and lay bricks and blocks to form walls and corners, and applies to individual working in masonry in the construction industry.

Competency Field:

General Construction

<b>ELEMENT OF COMPETENCY</b>		<b>PERFORMANCE CRITERIA</b>	
1.	Plan and prepare work	1.1	Quality Assurance requirements of company's construction operations recognised and adhered to.
		1.2	OH&S requirements for workplace environment and laying bricks and blocks identified and adhered to.
		1.3	Job materials and equipment requirements determined from drawings, site location and specifications.
		1.4	All work to comply with Standards for Building Bricks/blocks, Damp Proof Courses and Flashings, Wall Ties on Masonry Construction and Concrete Masonry.
		1.5	Appropriate personal protective equipment selected correctly fitted and used.
		1.6	Safety hazards identified and correct procedures used to minimise risk to self and others.
		1.7	Tools and equipment selected to carry out processes consistent with any job requirements, checked for serviceability and faults reported to supervisor.
2.	Select bricks/blocks and mortar materials	2.1	Bricks/blocks selected according to quality requirements and specifications.
		2.2	Materials for mortar selected to requirements of specification.
3.	Prepare location and materials	3.1	Location of block-work/brickwork set out on reinforced concrete footing slab in accordance with dimensions and details from job drawings.
		3.2	Mortar mixed in accordance with the job specifications and relevant Building Standard Code.
		3.3	Brickwork/block-work gauge determined and set out rod prepared to gauge dimensions.
4.	Lay bricks/blocks	4.1	Mortar applied evenly to job and set out location.
		4.2	Bricks/blocks laid to line, level and plumb with perpendicular joints consistent in size to specifications.

- |      |  |
|------|--|
| 4.3  | Bricks/blocks laid maintaining stretcher bond throughout construction, according to specifications.    |
| 4.4  | Bricks/blocks cut neatly and accurately to work bond.  |
| 4.5  | Corners formed maintaining bond and perpendicular intersection of both surfaces.                       |
| 4.6  | Reinforcement placed and laid to bed joints to specifications, where applicable.                       |
| 4.7  | Block-work/brickwork laid and completed to job drawings and specifications.                            |
| 4.8  | Scaffolding erected as required in accordance with job requirements and OH&S regulations.              |
| 4.9  | Joints of laid brickwork/block-work raked or ruled to correct profile and depth to job specifications. |
| 4.10 | Brickwork/block-work brushed down prior to drying to remove unwanted mortar.                           |
| 5.   | Clean-up   |
| 5.1  | Area cleared to specification.   |
| 5.2  | Waste and unwanted materials removed and placed into job waste bins or rubbish stockpile.              |
| 5.3  | Tools and equipment cleaned, maintained and stored.  |

## RANGE STATEMENT

This unit covers all concrete block and brick masonry units.

Quality Assurance requirements may include:

- workplace operations and procedures
- colour and quality of bricks or blocks
- control of handling procedures
- specification of mix
- attention to work specifications
- specified finish

OH&S requirements to be in accordance with Statutory Legislation and Regulations and may include:

- workplace environment and safety
- protective clothing and equipment
- working platforms and scaffolding
- safety hazards
- use of tools and equipment

Masonry units may include:

- wire cut bricks
- pressed bricks
- concrete blocks
- hollow concrete blocks

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- respirators



Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- bolster
- shovels
- wheelbarrows
- spirit level
- trowels
- jointing tools
- mortar boards
- scaffolding
- straight edges
- profiles
- line blocks
- builders line
- masonry saw

Construction may include reinforcement which may involve:

- wire strands
- welded wire fabric

Reporting of faults to be in accordance with organisation's workplace procedures and may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by constructing a masonry wall and corners in two separate projects, one with bricks and the other using blocks.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to worksite operations
- select and use appropriate processes, tools and equipment to carry out tasks
- apply organisational quality procedures and processes within context of laying brickwork or blockwork
- select masonry units and mortar materials in accordance with specifications and job requirements
- accurately set out dimensions and alignment of work
- proportion and mix mortar materials to specification
- identify, minimise and eliminate safety hazards
- erect scaffold in accordance with OH&S regulations
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others, where applicable, to ensure safe and effective work operations
- complete wall construction to specifications

**(2) Pre-requisite Relationship of Units**

- BGCOR0031A Draw and interpret simple drawings
- BGCOR0071A Erect and dismantle restricted height scaffolding
- BCG COR0081A Use simple levelling devices
- BCGMAS0151A Prepare for construction process (brick/block-work)
- BCG COR0242A Carry out levelling

Part of this competency may be assessed concurrently with:

- BCGMAS1393A Carry out brick veneer construction

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements including regulations, codes and standards
- working drawings and specifications
- bricks and blocks and material characteristics
- laying of bricks or blocks
- mortar mix composition
- range of mortar additives including plasticisers and their application
- Relevant Building Code and Standards
- materials
- tools and equipment
- measuring and levelling
- quantities
- scaffolding

Skills

The ability to:

- work safely
- read and interpret drawings
- interpret documentation from a wide range of sources
- organise work
- use tools and equipment
- set out work
- lay bricks or blocks
- communicate effectively

**(4) Resource Implications**

The following resources should be provided:

- workplace location
- tools, plant and equipment appropriate to construction processes
- scaffolding required for activity
- material relevant to the proposed activity
- drawings and specifications relevant to the tasks

**(5) Method of Assessment**

Competency should be assessed through direct observation of application to tasks and questions related to underpinning knowledge.

Competency should be assessed under general guidance, checking at various stages of the process and at completion of the activity against performance criteria and specifications.

Competency should be assessed while tasks are undertaken.

**(6) Context of Assessment**

Competency may be assessed in the workplace or simulated workplace setting.

Assessment should be while tasks are undertaken either individually or as part of a team under limited supervision.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 3	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 3	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

## BCGMAS1242A: Apply solid render

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and apply cement mortar to render masonry structures, and applies to individuals working in masonry in the building construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1 Plan and prepare work	1.1 Quality Assurance requirements of company's construction operations recognised and adhered to. 1.2 OH&S requirements for the workplace environment and preparing for and applying solid render recognised and adhered to. 1.3 Area to receive solid render determined from job drawings. 1.4 Correct mix for solid render determined from job specifications. 1.5 Materials and required quantities calculated from job drawings and specifications. 1.6 Appropriate personal protective equipment selected, correctly fitted and used. 1.7 Tools and equipment selected consistent with requirements for applying solid render to flat surfaces, checked for serviceability and any faults reported to supervisor.
2 Prepare surface area	2.1 Scaffolding erected in accordance with job requirements and OH&S regulations. 2.2 Surface area to be rendered prepared in accordance with job specifications. 2.3 Dash coat mixed and applied liberally to wetted surface.
3 Mix materials for solid/render	3.1 Mortar for render mixed to designed proportion and consistency in accordance with the job specifications.

- |   |                      |  |
|---|----------------------|--|
|   | 3.2                  | Render coat dotted and lined (screeded) to plumb or level tolerance of +/- 2mm over 2.4 metres.  |
| 4 | Apply render         | <p>4.1 Render applied to dried splash, dotted and lined surface and screeded to correct thickness in accordance with job drawings and specifications.</p> <p>4.2 Screeded solid render trowelled to specify surface according to job finishes schedule.</p> <p>4.3 Surface finished plumb/level and to an alignment tolerance of +/-2mm over 3 metres.</p> |
| 5 | Cure applied surface | 5.1 Finished surface cured using curing method in accordance with the job requirements and architect's specifications.   |
| 6 | Clean up             | <p>6.1 Work area cleared.</p> <p>6.2 Waste materials removed from job area and placed into job waste bins or rubbish stockpile.</p> <p>6.3 Unused materials stored.</p> <p>6.4 Tools and equipment cleaned, maintained and stored.</p>   |

## RANGE STATEMENT

This unit applies to the application of one or two -coat cement mortar render to masonry or concrete surfaces.

Render mix to be in accordance with specification.

Quality Assurance requirements may include:

- workplace operations and procedures
- quality of materials
- control of handling procedures
- use and maintenance of equipment
- attention to specifications of work

OH&S requirements to be in accordance with Statutory Legislation and Regulations and may include:

- workplace environment and safety
- fall safe protection
- protective clothing and equipment
- use of tools and equipment
- handling of materials
- working platforms and scaffolding

Application may be to horizontal or vertical surfaces.

Background surfaces for application include:

- concrete
- concrete block-work
- brickwork
- stonework
- timber or metal lathing

Cleaning of surfaces may involve:

- wire brushing
- grinding
- chipping
- washing down

Dash coat may be applied using:

- trowel
- brush
- nozzle spray

Personal protective equipment may include:

- boots
- safety glasses/goggles
- ear plugs/muffs
- dust masks/respirators
- gloves
- cap

Tools and equipment may include but are not limited to:

- measuring tape/rule
- trowels
- brushes
- screed boards
- scaffolding
- straight edges
- grinder
- concrete mixer
- mortar boards and stands
- shovel
- wheelbarrows
- hawks
- joint rules
- small tools
- plumb bob
- masons square
- buckets
- sieve
- power leads

Reporting of faults should be in accordance with company's workplace procedures and may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by applying solid render to either brick, block or concrete background surfaces.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspect s:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace and solid plastering operations
- display compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment
- apply organisational quality procedures and processes within context of applying solid plastering
- locate surfaces and inspect for bonding requirements prior to application of splash coat or render or set coat
- prepare render mix to architect's specification and
- finish reveals and returns square to surface
- employ safe and efficient techniques in the use of tools and equipment
- identify faults and problems that occur and necessary action taken to rectify
- finish surface plumb/level to tolerance of +/-2mm over 2.4 metres
- interactively communicate with others to ensure safe and effective work procedures

### (2) Pre-requisite Relationship of Units

- BCGCOR0051A Use hand and power tools
- BCGCOR0081A Use simple levelling devices
- BCGCOR0212A Prepare surfaces
- BCGCOR0242A Carry out levelling

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements
- drawings and specifications
- mix composition
- render and rough cast
- additives including plasticisers, colour and waterproofing agents
- Building Code of Jamaica and relevant Standard
- materials
- tools and equipment
- calculation of material quantities

Skills

The ability to:

- work safely
- select and handle material safely
- organise work
- interpret drawings and specifications
- interpret documentation from a wide range of sources
- set out work
- use tools and equipment
- communicate effectively

**(4) Resource Implications**

The following resources should be provided:

- workplace location
- tools, plant and equipment suitable for applying cement rendering coats to flat surface
- scaffolding
- appropriate materials

**(5) Method of Assessment**

Competency should be assessed through direct observation of the application process and questions related to underpinning knowledge.

Assessment should be conducted while tasks are undertaken either individually or as part of a team under limited supervision.

**(6) Context of Assessment**

Competency may be assessed in the workplace or simulated workplace setting.

Assessment should be while tasks are undertaken either individually or as part of a team under limited supervision.



## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGMAS1252A: Restore and renovate solid plasterwork**

## Competency Descriptor:

This unit deals with the skills and knowledge required to prepare, restore and renovate damaged cement surfaces, and applies to individuals working in masonry work in the construction industry.

## Competency Field:

General Construction and Building Restoration

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1 Quality Assurance requirements of company's construction operations recognised and adhered to. 1.2 OH&S requirements for workplace environment and in restoring and renovating solid plasterwork recognised and adhered to. 1.3 Appropriate personal protective equipment selected, correctly fitted and used. 1.4 Tools and equipment selected consistent with requirements of restoring and renovating solid plasterwork, checked for serviceability and any faults reported to supervisor. 1.5 Safety hazards identified and correct procedures used to eliminate hazards and minimise risks to self and others according to OH&S legislation and company policy.
2. Identify damaged plasterwork	2.1 Scaffolding erected, where required, to OH&S regulations. 2.2 Extent and type of restoration required identified by examination and from location indicated in job drawings and specifications. 2.3 Drawing and/or template of damaged area prepared accurately to profile/moulding shape.
3. Restore plastered surfaces	3.1 Damaged plasterwork restored to original conditions or specifications. 3.2 Sand/cement mortar and gypsum plaster setting applied as required. 3.3 Materials applied and finished to match original surfaces, details and alignment.
4. Renovate lettering where applicable	4.1 Surface prepared for renovation to architect's specifications. 4.2 Monograms and lettering panels constructed in sand and cement mortar to match detail for restorations.

- 4.3 Materials applied to fine finish, with sharp arises, square returns and plumb/level to the requirements of job drawings.
5. Clean up
- 5.1 Area cleaned to specification.
- 5.2 Waste and unwanted material disposed of safely.
- 5.3 Unused materials stored/stacked.
- 5.4 Tools and equipment cleaned, maintained and stored.

## RANGE STATEMENTS

This unit covers all restoration and renovation to damaged surface with cement render, hard plaster and concrete.

OH&S requirements to be in accordance with Statutory Legislation and Regulations and may include:

- workplace environment and safety
- fall safe protection
- protective clothing and equipment
- use of tools and equipment
- handling of materials
- working platforms and scaffolding

Application may be to solid plaster or cement render surface and may include but is not limited to:

- walls – straight, curved
- ceilings
- chimneys
- archways
- columns - fluted
- centre panels
- cornices
- other decorative features

Quality Assurance requirements may include:

- workplace operations and procedures
- quality of materials
- control of handling procedures
- use and maintenance of equipment
- attention to specifications of work

Personal protective equipment may include:

- boots
- safety glasses/goggles
- dust masks/respirators
- gloves
- cap
- hard hat
-

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit level
- squares
- trowels
- floats
- brushes
- screed boards
- scaffolding
- concrete mixer
- mortar boards and stands
- shovel
- wheelbarrows
- hawks
- joint rules
- small tools
- plumb bob
- masons square
- buckets
- sieve
- power leads

Reporting of faults should be in accordance with company's workplace procedures and may be verbal or written.

## EVIDENCE GUIDE

Competence is to be demonstrated by restoring damage to all types of cement rendered, hard plastered and concrete surfaces.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- display compliance with organisational policies and quality procedures and processes within context of restoring and renovating solid plasterwork
- identify location and details of proposed solid plaster work restorations/renovations
- select and use appropriate processes, tools and equipment
- use safe and efficient procedures to apply and finish plaster to designed specification
- identify typical faults and problems that occur and necessary action taken to rectify
- ensure restoration materials conform to National Building Standard – Internal Plastering on Solid Backgrounds
- complete restoration/renovation of damaged walls and decorative components to specification
- demonstrate interactive communication with others to ensure safe and effective work procedures

### (2) Pre-requisite Relationship of Units

- BCGCOR0061A Use small plant and equipment
- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGMAS0131A Prepare for construction process (solid plastering)
- BCGMAS1232A Apply float and set coats for hard plaster – flat surfaces
- BCGMAS1242A Apply solid render
- BCGMAS1263A Construct plaster mouldings

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements
- working drawings and specifications
- solid plaster techniques
- material selection and identification
- tools and equipment
- scaffolding
- substrate preparation

Skills

The ability to:

- work safely
- read and interpret drawings
- organise work
- use tools and equipment
- erect restricted height scaffolding
- communicate effectively

**(4) Resource Implications**

The following resources should be provided:

- work area suitable for solid plastering
- tools, plant and equipment suitable for application of solid plaster
- materials suitable to the process of solid plastering
- scaffolding
- drawings and/or specifications relevant to tasks

**(5) Method of Assessment**

Competency should be assessed through direct observation of application to tasks and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon integrated project work.

Assessment may be by intermittent checking at various stages of each tasks application or at the completion of each task in accordance with the performance criteria.

**(6) Context of Assessment**

Competency may be assessed in the workplace or simulated workplace setting.

Assessment should be conducted while tasks are undertaken either individually or as part of a team under limited supervision.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>• Carries out established processes</li> <li>• Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Manages process</li> <li>• Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes principles and procedures</li> <li>• Evaluates and reshapes process</li> <li>• Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 3	
Communicate ideas and information	Level 3	
Plan and organise activities	Level 2	
Work with others and in team	Level 3	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGCOR0071A: Erect and dismantle restricted height scaffolding**

## Competency Descriptor:

This unit deals with the skills and knowledge required to effectively and safely erect and dismantle scaffolding at specified height (not exceeding 4 meters), and applies to individuals working at elevated positions in the building and construction industry.

## Competency Field:

General construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare work	1.1	Occupational Health and Safety (OH&S) requirements for tasks and workplace environment recognised and adhered to.
		1.2	Location and scope of scaffolding/equipment determined from job drawings or supervisor's instructions.
		1.3	Appropriate personal protective equipment selected, correctly fitted and used.
		1.4	Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		1.5	Scaffolding/equipment components selected consistent with requirements of job.
2.	Erect safety barriers	2.1	Safety barriers erected, where applicable, to isolate site work area.
		2.2	Relevant signage installed where required to OH&S requirements.
3.	Erect scaffolding	3.1	All work undertaken safely and to supervisor's prescribed procedures.
		3.2	Erection site prepared to meet job requirements.
		3.3	Necessary signage prepared to meet job requirements.
		3.4	Scaffolding/equipment erected to plan in accordance with safe work practices, OH&S and manufacturers requirements.

4.	Dismantle scaffolding	4.1	Work undertaken safely and according to reverse procedures for erecting.
		4.2	Scaffolding/equipment dismantled in accordance with site procedures and critical structural safety requirements.
5.	Clean up	5.1	Site cleaned and cleared of all tools, excess material and waste and left in safe condition.
		5.2	Tools and equipment cleaned, maintained and stored.

## RANGE STATEMENT

This unit applies to the erection of scaffolding up to 4m in height, which must be constructed in accordance with:

- Guidelines for Scaffolding, and
- General requirements for erecting scaffolding

Personal protective equipment may include:

- overalls
- jacket
- boots
- hard hat
- safety glasses
- gloves
- ear plugs/muffs
- dust masks

The range of scaffolding equipment associated with this unit includes:

- standing prefabricated tower scaffolds
- tube and fitting scaffolds to 4 metres height
- fall protection devices
- catch platforms
- bracket scaffolds

Tools and equipment may include:

- spanners
- shovels
- hammers
- picks
- crow bars
- ladders



Work is to be undertaken in accordance with statutory regulatory and legislative requirements for Occupational Health and Safety. Work must be supervised and undertaken in a team situation.

Supervision instruction may involve:

- verbal direction/instruction
- written instruction
- provision of sketch/drawing and details

Reports of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by the safe and effective erection and dismantling of different types of restricted height scaffolding listed within the range of variables statement relevant to the work orientation.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of construction process
- demonstrate safe and effective operational use of scaffolding tools and equipment
- erect scaffolding plumb and brace for stability
- interactively communicate with others to ensure safe and effective erection and dismantling operations

### (2) Pre-requisite Relationship of Units

- BCGCOR0011A      Carry out OH&S requirements
- BCGCOR0051A      Use hand and power tools

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements
- scaffolding and basic working platforms
- hand tools
- materials
- materials handling
- vertical and horizontal triangular concepts

Skills

The ability to:

- work safely to instructions
- use hand tools
- handle material
- select material
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- construction materials appropriate for scaffolding
- hand tools and equipment appropriate to the construction process
- suitable work area appropriate to the construction process
- information on OH&S requirements

**(5) Method of Assessment**

Competency shall be assessed while work is being done under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

**(6) Context of Assessment**

Competency should be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpins effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills .

**BCGSTW0011A: Handle steel fixing materials**

## Competency Descriptor:

This unit deals with the skills and knowledge required to effectively handle steel fixing materials in the construction process and applies to all individuals carrying out basic activities in steel-fixing work.

Competency Field: General Construction

**ELEMENT OF COMPETENCY PERFORMANCE CRITERIA**

1	Plan for construction process	1.1	Quality Assurance requirements for company's construction operations recognised and adhered to.
		1.2	Job requirements identified from drawings/work location and/or supervisor's instructions.
		1.3	OH&S requirements identified and adhered to in accordance with application tasks and workplace environment.
		1.4	Safety hazards identified and correct procedures adopted to minimise risk to self and others and environment.
		1.5	Materials selected to supervisor's instructions, safely handled and stored/located ready for application.
2	Prepare materials selected for construction process	2.1	Activities for material preparation identified from specifications and/or supervisor's instructions.
		2.2	Material preparation carried out to satisfy requirements of construction process.
3	Prepare work area suitable for construction process	3.1	Activities to be carried out in work area identified from drawing details of proposed construction and supervisor's instructions.
		3.2	Work area prepared for construction process to supervisor's instruction.
4	Select materials and cut components	4.1	Materials obtained from stack/store to instruction.
		4.2	Correct manual handling techniques used to move and place material.
		4.3	Materials safely moved to work area.



	4.4	Abrasive 'cut off/bolt cutter saw used to accurately cut off one or multiple components to the same length to instruction.
5. Distribute components	5.1	Cut components distributed and stacked to suit job location and sequence of work application.
6. Clean up	6.1	Unused and off-cut materials stacked/stored for re-use or disposal.
	6.2	Work area cleared.
	6.3	Waste disposed of using appropriate method to EPA and OH&S requirements.

### RANGE STATEMENT

This unit applies to the handling of steel fixing materials associated with steel fixing work.

Construction processes includes:

- worksite preparation
- materials preparation
- constructing fabricated components
- assembling of fabricated components

Fabricated units incorporating the assembly of components include but are not limited to:

- reinforced footing and foundation
- reinforcing columns and beams
- reinforced concrete slab
- reinforced concrete wall

Quality Assurance requirements may include:

- workplace procedures
- safety requirements
- control of handling
- quality of materials
- specifications of work

OH&S requirements are to be in accordance with National legislation and regulations and may include:

- worksite environment and safety
- protective clothing and equipment
- handling of materials
- emergency procedures

Hazards may include but are not limited to:

- pathway obstacles
- off-cut material
- movement of other work personnel

Personal protective equipment may include:

- coveralls
- safety boots
- gloves
- hard hat/cap
- safety glasses/goggles
- ear plugs/muffs

Materials would involve rolled steel sections.



Tools and equipment may include but are not limited to:

- measuring tape/rule
- squares
- abrasive cut off saw
- hammers
- clamps
- support stands
- bolt cutters
- axe saw
- work bench

Work area preparation may include:

- clearing area
- setting up equipment
- material storage

Material preparation may include:

- selecting and straightening of material
- measuring and marking
- cutting to lengths
- grinding of edges
- stacking of material tag

Work is to be undertaken as part of a team under supervision with instructions being part of a supervisor's directions, either verbal or written.

Reporting of faults may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective handling of steel fixing materials to construct a nominated fabricated structural steel unit in accordance with the listed range of variables.

### (1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of construction preparation processes
- demonstrate safe and effective operational use of steel fixing materials
- interactively communicate with others to ensure safe and effective workplace operations

**(2) Pre-requisite Relationship of Units**

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

A knowledge of:

- workplace and equipment safety requirements
- portable power tools
- hand tools and equipment
- materials relevant to steelwork
- materials handling
- measurement relevant to steelwork construction
- drawings and specifications
- fixing and fasteners consistent with steelwork requirements
- workplace communication

Skills

The ability to:

- work safely to instructions
- interpret drawings
- use power tools and hand tools
- handle material
- select material
- measure relative to the processes
- prepare materials for steelwork
- communicate effectively

**(4) Resource Implications**

The following resources should be made available:

- construction materials relevant to steelwork
- hand tools and power tools appropriate to steelwork processes
- plant and equipment appropriate to steelwork processes
- suitable work area appropriate to steelwork activity

**(5) Method of Assessment**

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

**(6) Context of Assessment**

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

**CRITICAL EMPLOYABILITY SKILLS**

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"><li>Carries out established processes</li><li>Makes judgement of quality using given criteria</li></ul>	<ul style="list-style-type: none"><li>Manages process</li><li>Selects the criteria for the evaluation process</li></ul>	<ul style="list-style-type: none"><li>Establishes principles and procedures</li><li>Evaluates and reshapes process</li><li>Establishes criteria for evaluation</li></ul>
Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.



**BSBSBM0012A: Craft personal entrepreneurial strategy**

## Competency Descriptor:

This unit deals with the skills and knowledge required to craft an entrepreneurial strategy that fits with the attitudes, behaviours, management competencies and experience necessary for entrepreneurs to meet the requirements and demands of a specific opportunity.

Competency Field: Small Business Operations

**ELEMENT OF COMPETENCY PERFORMANCE CRITERIA**

1. Demonstrate knowledge of the nature of entrepreneurship	1.1	Concepts associated with entrepreneurship are clearly defined.
	1.2	Factors which influence entrepreneurship in and outside of Jamaica are correctly identified and explained.
	1.3	The importance of entrepreneurship to economic development and employment is explained clearly.
	1.4	The findings of research conducted on entrepreneurial ventures and successes in the Caribbean region are clearly presented in an appropriate format.
	1.5	Differences between wage employment and entrepreneurial ventures are correctly stated.
2. Identify and assess entrepreneurial characteristics	2.1	Relevant research is carried out and required entrepreneurial characteristics identified.
	2.2	Entrepreneurial characteristics identified are assessed and ranked.
	2.3	An understanding of the process and discipline that enable an individual to evaluate and shape choices and to initiate effective action is correctly demonstrated.
	2.4	Factors that will help an entrepreneur to manage the risk and uncertainties of the future, while maintaining a future orientated frame of mind, are identified.

- |    |                                   |     |   |
|----|-----------------------------------|-----|---|
| 3. | Develop self-assessment profile   | 3.1 | Self-assessment tools/methods to identify personal entrepreneurial potential are identified and properly used.  |
|    |                                   | 3.2 | The ability to apply creativity, problem-solving techniques and principles to solve business related problems are demonstrated.   |
|    |                                   | 3.3 | Feedback from others for the purpose of becoming aware of blind spots and for reinforcing or changing existing perceptions of strengths/ weaknesses is appropriately obtained.  |
| 4. | Craft an entrepreneurial strategy | 4.1 | A profile of the past that includes accomplishments and preferences in terms of life and work styles, coupled with a look into the future and an identification of what one would like to do is developed.                |
|    |                                   | 4.2 | Commitment, determination and perseverance; orientation towards goals; taking initiative and accepting personal responsibility; recognizing management competencies and identifying areas for development are determined. |
|    |                                   | 4.3 | Written guidelines to obtain feedback that is solicited, honest, straightforward, and helpful but not all positive or negative are developed to facilitate reviews.   |
|    |                                   | 4.4 | Framework and process for setting goals which demand time, self-discipline, commitment, dedication and practice are developed.  |
|    |                                   | 4.5 | Goals established are specific and concrete, measurable, relate to time, realistic and attainable.  |
|    |                                   | 4.6 | Priorities, including identifying conflicts and trade-offs and how these may be resolved are established.   |
|    |                                   | 4.7 | Potential problems, obstacles and risks in meeting goals are identified.  |
|    |                                   | 4.8 | Specified action steps that are to be performed in order to accomplish goals are identified.  |
|    |                                   | 4.9 | The method by which results will be measured is indicated.  |

- 4.10 Milestones for reviewing progress and tying these to specific dates on a calendar are established.
- 4.11 Sources of help to obtain resources are identified.
- 4.12 Evidence of the ability to review process and periodically revise goals is demonstrated.

## RANGE STATEMENT

At this stage of the entrepreneurial process the entrepreneur must be able to conduct a self-assessment profile, examine the frame work for self assessment, develop a personal entrepreneurial strategy, identify data to be collected in the self-assessment process and learn about receiving feedback and setting goals.

Concepts associated to include:

- risk
- entrepreneurship
- macro-screening
- micro-screening
- competition
- wage employment

Influencing factors to include:

- market conditions
- markets – demand/supply
- global trends
- level of economic activities
- funding
- economic stability
- social stability
- resources availability

The entrepreneur must be able to:

- understand the extreme complexity in predicting or aligning him/herself to specific careers in an environment of constant change
- determine the kind of entrepreneur he or she wants to become based on attitudes, behaviours, competencies, experience and how these fit with the requirements and demands for a specific opportunity
- evaluate thoroughly his or her attraction to entrepreneurship
- effectively develop personal plan
- utilize available information that will enhance his or her ability to achieve success

The entrepreneur may encounter setbacks if the planning process is not effectively pursued.

Pitfalls may include:

- proceeding without effective planning which may result in commitment to uncertainty
- commitment to a premature path with the desirability of flexibility can lead to disaster
- personal plans fail for the same reasons as business plans including frustration if the plan appears not to be working immediately and the challenges of changing behaviour from an activity-oriented routine to one that is goal oriented
- developing plans that fail to anticipate obstacles, and those that lack progress milestones and reviews

## EVIDENCE GUIDE

Competency is to be demonstrated when the entrepreneur is able to undertake a personal entrepreneurial assessment exercise to determine if he or she possesses the necessary credentials to be a successful entrepreneur. This stage of the entrepreneurial process is critical since experience has shown that the founder is one of the deciding forces if the venture is to succeed and prosper.

### (1) Critical Aspects of Evidence

The entrepreneur will be assessed by his/her action in developing an orchestrated plan in order to effectively pursue the business concept.

### (2) Pre-requisite Relationship of Units

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- personal entrepreneurial profile systems
- effective management systems: marketing, operations/productions, finance, administration, law
- how to measure feedback
- the method of developing a personal plan and a business plan
- understanding the difference between entrepreneurial culture and management culture

Skills

The ability to:

- determine barriers to entrepreneurship
- minimize exposure to risk
- exploit any available resource pool
- tailor reward systems to meet a particular situation
- effectively plan and execute activities
- use computer technology to undertake assessments

**(4) Resource Implications**

The following resources should be made available:

Personal computer with access to the internet and appropriate software that will enable one to conduct the necessary analysis using the internet

**(5) Method of Assessment**

A useful method of assessment is to determine if the venture can stand up to the test of critical evaluation.

**(6) Context of Assessment**

This stage of the entrepreneurial process is assessed when comparisons are made between actual outcomes and plans/projections.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**BCGMAS0912A: Place concrete**

Competency Descriptor:

This unit deals with the skills and knowledge required to place and consolidate concrete, and applies to individuals working in concrete work in the construction industry.

Competency Field:

General Construction

<b>ELEMENT OF COMPETENCY</b>		<b>PERFORMANCE CRITERIA</b>	
1	Plan and prepare work	1.1	Quality Assurance requirements of company's concreting operations recognised and adhered to.
		1.2	OH&S requirements for workplace environment and preparing for and placing of concrete recognised and adhered to.
		1.3	Method of placement and consolidation identified in accordance with job requirements and engineer's specifications.
		1.4	Appropriate personal protective equipment selected, correctly fitted and used.
		1.5	Plant, tools and equipment selected to carry out processes consistent with job requirements, checked for serviceability and any faults reported to supervisor.
2	Define and prepare work area	2.1	Location of concrete placement defined from drawings and specifications and checked to be free of debris and waste.
		2.2	Safe working area maintained around pour location using barriers and signage consistent with OH&S regulations.
		2.3	Plants, tools and equipment located to designed requirement for planned placement.
3	Place concrete	3.1	Concrete poured in horizontal layers into location to levels as indicated by markers, level pegs or lines.
		3.2	Height of vertical drop minimised to avoid segregation.
		3.3	Poured concrete consolidated during process using approved compaction or vibration method to specifications
		3.4	Finished levels checked against designed levels using appropriate levelling device.

4	Screed/level concrete	4.1	Concrete screeded to correct levels and/or grades using appropriate straight edged tool/formwork mounted screed.
5	Clean up	5.1	Area cleared of waste and equipment.
		5.2	Waste and unwanted material removed and placed into job waste bins or rubbish stockpiles.
		5.3	Tools and equipment cleaned, maintained and stored.

## RANGE STATEMENT

This unit applies to the placing of concrete into forms or foundations

Forms and foundations to include:

- slab on ground
- suspended slab
- columns
- beams
- piers
- strip footings
- pads

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- respirators/masks

Tools and equipment may include but are not limited to:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• shovels</li> <li>• rakes</li> <li>• screed boards</li> <li>• levels</li> <li>• measuring tape/rule</li> <li>• compressor</li> </ul> | <ul style="list-style-type: none"> <li>• vibrator</li> <li>• wheelbarrows</li> <li>• kibble</li> <li>• dumper</li> <li>• chute</li> <li>• concrete placing boom</li> </ul> |
|--|--|

Quality Assurance requirements may include:

- method of transporting
- control of handling and spillage
- placement control
- cleaning of equipment

OH&S requirements to be in accordance with Statutory Legislation and Regulations and may include:

- protective clothing and equipment
- working platforms
- working from scaffolding
- safety hazards
- use of plant and equipment



Debris and waste may include:

- off-cut material
- loose soil
- empty containers
- paper and cardboard

Reporting of faults should be in accordance with organisations workplace procedures and may be verbal or written.

## EVIDENCE GUIDE

Competency is to be demonstrated by placing concrete into prepared formwork or foundation.

### (1) Critical Aspects of Evidence

It is essential that competence is demonstrated in the critical aspects of:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace and concrete placing operations
- indicate compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment
- apply organisational quality procedures and processes within the context of concrete placement
- select and use appropriate concrete handling/transportation method
- place concrete ensuring no segregation and adequate compaction
- check formwork and support system periodically during the pour
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective placement of concrete

### (2) Pre-requisite Relationship of Units

- BCGCOR0061A Use plant and equipment
- BCGMAS0101A Carry out concrete work to simple forms
- BCGMAS0292A Carry out concrete work

This competency may be assessed concurrently with:

- BCGMAS0903A Transport concrete

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- concrete mix specifications
- cause and effect of segregation
- effect of over or under compaction of concrete
- plant and equipment
- reinforcement of concrete

Skills

The ability to:

- work safely
- organise work
- use tools and equipment
- communicate effectively

**(4) Resource Implications**

The following resources should be provided:

- pour location for concrete placement
- tools, plant and equipment appropriate to placement processes
- concrete relevant to proposed pour

**(5) Method of Assessment**

Competency should be assessed through direct observation of application to tasks and questions related to underpinning knowledge.

Competency should be assessed under general guidance checking at various stages of the process and at completion of the activity against performance criteria and specifications.

**(6) Context of Assessment**

Competency may be assessed in the workplace or simulated workplace setting.

Assessment shall be while tasks are undertaken either individually or as part of a team under limited supervision.

## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Level 1.	Levels of Competency	
	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 2	To measure self-performance
Communicate ideas and information	Level 1	With members of the work team
Plan and organise activities	Level 3	For self
Work with others and in team	Level 2	In completing scheduled tasks
Use mathematical ideas and techniques	Level 1	As an aid to measure and schedule tasks
Solve problems	Level -	As an aid to self-development
Use technology	Level 2	To manage scheduling and completion of tasks

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.