

Competency Standards for Caribbean Vocational Qualifications (CVQ)

CCBCG20406

Level II 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
BCGCOR0141A	Carry out excavation	Mandatory	20
BCGCOR0151A	Install trench support	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
BCGMAS0151A	Prepare for construction process (brick/block laying)	Mandatory	30
BCGMAS0171A	Prepare for construction process (solid plastering)	Mandatory	40
BCGMAS0011A	Handle concreting materials	Mandatory	10
BCGMAS0101A	Carry out concreting to simple forms	Mandatory	20
BCGCOR0212A	Prepare surfaces	Mandatory	40
BCGMAS1422A	Lay bricks/blocks (wall and corner)	Mandatory	40
BCGMAS1432A	Lay multi-thickness walls and piers	Mandatory	40
BCGMAS0182A	Apply float and render to straight and curved surfaces	Mandatory	40
BCGMAS1242A	Apply solid render	Mandatory	40
BCGMAS1252A	Restore and renovate solid plasterwork	Mandatory	60
BCGMAS0892A	Finish concrete	Mandatory	20
BCGMAS0922A	Cure concrete	Mandatory	20
BCGMAS0033A	Carry out cavity brick/block construction	Mandatory	40
BCGMAS1413A	Construct masonry steps and stairs	Mandatory	40
BCGMAS1443A	Construct masonry arch-semi-circular and segmental	Mandatory	60
BCGMAS1453A	Construct curved wall	Mandatory	40
BCGMAS0123A	Construct masonry structural systems (load bearing walls)	Mandatory	20
BCGCOR0433A	Carry out basic setting out	Mandatory	20
BCGCMH0743A	Undertake rigging	Elective	80
BCGCOR0071A	Erect and dismantle restricted height scaffolding	Elective	20
BCGSTW0011A	Handle steel fixing materials	Elective	20
BCGSTW0021A	Use steel fixing tools and equipment	Elective	20
ITICOR0011A	Carry out data entry and retrieval procedures	Elective	40
BCGMAS0192A	Apply plaster by projection machine	Elective	40
BCGMAS0912A	Place concrete	Elective	20
BCGCMH0752A	Operate hoist	Elective	40
BCGMAS0052A	Resurface concrete	Elective	40
BCGMAS0082A	Carry out repair and rectification of concrete	Elective	40
BCGMAS0092A	Cut and core concrete	Elective	10
BSBSBM0012A	Craft personal entrepreneurial strategy	Elective	50
BCGSTW0222A	Oxy – acetylene cutting	Elective	20

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.

-
- | | | | |
|---|---|-----|---|
| 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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 SkillsKnowledge

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

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

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 SkillsKnowledge

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

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 SkillsKnowledge

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

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.

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. Assist machine excavation operations	5.1	Machine operator assisted with excavation by verbal and trimming support, ensuring it is to line and depth.
	5.2	Excavation cleaned out by hand to job requirements and instructions.
6. Install excavation support	6.1	Excavation works carried out in accordance with regulatory authority's requirements.
	6.2	Trench/excavation support installed to instruction and to OH&S regulations.
7. Clean up	7.1	Site cleaned and cleared of unwanted excavated material.
	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
- pad 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

BCGCOR0151A: Install trench support

Competency Descriptor:

This unit specifies the competency required to shore a trench to prevent the collapse of trench walls and provide safety to personnel working in the trench.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare for work	<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 selected to carry out tasks 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. Install trench shoring	<p>2.1 Plant operator is communicated with to ensure excavation of trenches comply with site plan, line and depth.</p> <p>2.2 Shoring method is determined and prepared.</p> <p>2.3 Positioning of shoring is set out to specifications.</p> <p>2.4 Shoring is positioned or erected within the trench.</p> <p>2.5 Shoring is secured in position and checked to ensure structural conformity with regulations.</p>

- | | | |
|----|-----------------------|--|
| | 2.6 | Excavation is cleaned out by hand to job requirements. |
| | 2.7 | Ladders provided for access and egress to site safety plan requirements. |
| 3. | Remove trench shoring | |
| | 3.1 | Jacking mechanisms are released and ladders removed. |
| | 3.2 | Shoring is checked and prepared for lifting from the trench. |
| | 3.3 | Shoring is removed from trench and stored on site in accordance with organisational requirements. |
| 4. | Clean up | |
| | 4.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification. |
| | 4.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices. |

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:

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

Trench shoring is to include one of the following:

- fixed and/or adjustable trench boxes
- drag boxes
- hydraulic vertical shoring
- closed timber shoring
- aluminium shoring shields
- powerbrace
- lite box aluminium panels
- slide rails

Shoring securing mechanisms may include but not be limited to:

- footings
- needles
- anchors
- sole plates
- struts
- brackets

Trench shoring mechanisms may include but not be limited to:

- closed timber sheeting
- soldier sets
- segmental sections
- trench shields

OH&S requirements are to be in accordance with The Building Operations Works of Engineering Construction Safety, Health and Welfare regulations, organisational safety policies and procedures, and project safety plan. This may include:

- protective clothing and equipment
- use of tools and equipment
- workplace environment and safety
- handling of materials
- use of fire fighting equipment
- organisational first aid
- hazard control and hazardous materials
- substances

On site meeting processes may include:

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

Traffic control signage may include but not be limited to:

- site safety signage
- temporary signage for the benefit of motorists and pedestrians
- barricades
- traffic conditions signage

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

- wells
- pits

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

Personal protective equipment is to include:

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

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

Information sources may include but not be limited to:

- verbal or written and graphical instructions signage
- work schedules/plans/specifications
- work bulletins
- memos
- maps
- material safety data sheets (MSDS)
- diagrams or sketches
- safe work procedures or equivalent related to the installation of trench support
- regulatory/legislative requirements pertaining to the installation of trench support
- manufacturers' specifications and instructions
- Organisation work specifications and requirements.
- Instructions issued by authorised organisational or external personnel
- Relevant Jamaican Standards

Statutory/regulatory authorities may include:

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

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

- shoring systems
- levelling equipment
- hand and power tools
- measuring equipment
- shovels
- picks
- scaffolding
- elevated work platforms
- slings
- chains

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

- extinguishing fires
- organisational first aid requirements
- evacuation

Quality requirements are to include but not be limited to:

- relevant regulations including Jamaican Standards
- internal company quality policy and standards
- workplace operations and procedures
- manufacturers specifications where specified

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

Environmental requirements are to include but are not limited to:

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

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, OH&S regulations and legislation applicable to workplace operations
- compliance with organisational policies and procedures including quality requirements
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- installation of trench support on two projects in trenches deeper than 1.5 metres requiring the trench support to be installed, moved along or within the trench and removed from the trench

(2) Pre-requisite Relationship of Units

- Nil

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

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- site and equipment safety requirements
- excavation techniques
- shoring methods and systems
- working in confined spaces
- construction techniques
- processes for interpreting engineering drawings
- equipment types, characteristics, technical capabilities and limitations
- operational, maintenance and basic diagnostic procedures
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- general construction terminology
- safe work method statements

Skill

The ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OH&S regulations and legislation applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively operationally use tools, plant and equipment
- communicate and work effectively and safely with others
- Install trench support on two projects in trenches deeper than 1.5 metres requiring the trench support to be installed, moved along or within the trench and removed from the trench

(4) Resource Implications

The following resources should be made available:

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

(5) Method of Assessment

- assessment must satisfy the endorsed assessment guidelines of the building and construction industry's general construction training package
- assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge
- assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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 workplace.

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

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

Assessment is to comply with relevant regulatory or Jamaican Standards 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.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
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 SkillsKnowledge

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

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
- augurs/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 SkillsKnowledge

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

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 SkillsKnowledge

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

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

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
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
- sub stations
- 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:

- scaffold
- back hoes
- 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 SkillsKnowledge

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
- applicable 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
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"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

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.

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

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

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

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.

BCGMAS0011A: Handle concreting materials

Competency Descriptor:

This unit specifies the competency required to safely manually handle, store and apply environmental management principles associated with concreting materials and components in preparation for concreting work to commence. The unit includes the identification and safe handling of hazardous materials and waste in accordance with Material Safety Data Sheets (MSDS).

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1 Work instructions 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 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported 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. Handle and sort concrete materials and components	<p>2.1 Concrete materials and components, on delivery to site, are identified and checked for conformity to material schedule, plans/specifications.</p> <p>2.2 Concrete materials are moved to specified location applying safe manual handling techniques.</p> <p>2.3 Concrete materials and components are stacked or stockpiled for ease of identification and retrieval for task sequence and job location in accordance with job specifications.</p>

- 2.4 Concrete materials and components are protected against physical and water damage and stored clear of access ways, for ease of identification, retrieval and distribution.
 - 2.5 Components are handled and positioned ready for installation in accordance with manufacturers' recommendations and plans/specifications.
- 3. Handle and remove concrete materials and components on completion
 - 3.1 Materials are handled safely according to material safety data sheets and requirements of regulatory authorities.
 - 3.2 Hazardous material is identified for separate handling.
 - 3.3 Dust suppression procedures are used to minimise health risk to work personnel and others.
 - 3.4 Protection of materials is provided in accordance with specific material needs.
 - 3.5 Materials stored safely and effectively according to MSDS and requirements of regulatory authorities.
- 4. Clean up
 - 4.1 Work area is cleared and materials disposed of, reused or recycled in accordance with The Building Operations Works of Engineering Construction Safety and Health welfare legislations (1968) and job specification.
 - 4.2 Hazardous material is identified for separate handling.
 - 4.3 Non-toxic materials are removed using correct procedures.
 - 4.4 Dust suppression procedures are used to minimise health risk to work personnel and others.
 - 4.5 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

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

Concreting components are to include but not be limited to:

- steel and timber formwork
- bracing
- reinforcement mesh
- plastic membrane
- bar chairs
- spacers
- scaffolding
- push-pull props
- tilt panels
- decking
- support props
- reinforcement bars
- bar steel
- key joints

Handling procedures are to include but not be limited to:

- MSDS
- calculation of quantities
- stacking
- storing of materials

Dust suppression includes keeping dust in the air to a minimum and may include:

- spraying with water
- covering or use of a vacuum cleaner

Material protection is to include correct handling and stacking techniques without damaging the material and may include:

- protecting with covers

Materials are to include but not be limited to:

- cement form release agents
- sand/fine aggregate
- coarse aggregates
- water and may include:
 - oxides
 - curing compound
 - additives

Manual handling is to include but not be limited to:

- using pallets
- carrying materials using correct lifting techniques control of waste

Non toxic materials include:

- general concreting materials

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

Quality requirements are to include but not be limited to:

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

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

- shovels
- rakes
- tarpaulins/covers
- wheel barrows
- brooms

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

OH&S requirements are to be in accordance with The Building Operations Works of Engineering Construction Safety and Health welfare legislations, 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

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

Regulatory authorities may include:

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

Environmental requirements are to include but are not limited to:

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

On site meeting processes may include:

- notification/ scheduling (time, place, purpose)
- task discussions
- local co-ordination 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

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

- extinguishing equipment fires
- organisational first aid requirements
- evacuation
- Safe work procedures related to handling concreting materials
- Manufacturers' specifications and instructions where specified
- 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

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

- 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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- safely handle the materials and components listed in the Unit Scope including the mandatory tasks

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – carry out OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- quality requirements
- General Construction terminology
- tools and equipment types, characteristics, uses and limitations
- concrete materials handling techniques
- concreting materials
- processes for the calculation of material requirements
- Material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- hazardous materials
- Safe work method statements

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 applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively use of tools, plant and equipment
- communicate and work effectively and safely with others
- safely handle the materials and components listed in the Unit Scope including the mandatory tasks

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to concrete handling activities
- equipment, hand and power tools appropriate to handling concreting materials
- 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.

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

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

Method of Assessment (Cont'd)

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.

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

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.

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 concrete.

Competency Field:

General Construction

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

- | | | | |
|----|----------------|-----|--|
| 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 SkillsKnowledge

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, re inforcing 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 inte grated 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

BCGCOR0212A: Prepare surfaces

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively prepare the range of surfaces for various finishing applications, and applies to individuals working in the preparatory phase of surface finishing in the construction industry

Competency Field:

General Construction

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

- | | |
|--|---|
| 1. Plan and prepare work | <ul style="list-style-type: none"> 1.1 Quality Assurance requirements of company's construction operations recognised and adhered to. 1.2 Preparation requirements identified from drawings, work area and instructions/specifications extract. 1.3 OH&S requirements recognised and adhered to in accordance with the application tasks and workplace environment. 1.4 Appropriate personal protective equipment selected, correctly fitted and used. 1.5 Tools and equipment selected to carry out processes consistent with requirements of job are checked for serviceability and any faults reported to supervisor. 1.6 Safety hazards identified and correct procedures used to minimise risk to self and others in accordance with OH&S workplace operations. 1.7 Materials appropriate to job application selected, safely handled and stored/located ready for application. |
| 2. Prepare work area for application processes | <ul style="list-style-type: none"> 2.1 Hazards and attachments safely removed where applicable or arranged for removal from area. 2.2 Work area prepared for application processes in accordance with finishing material and manufacturer's specifications. |
| 3. Prepare surface by sanding/grinding | <ul style="list-style-type: none"> 3.1 Correct abrasive disc/sheet or wheel selected in accordance with surface condition and work to be undertaken and fitted to sander/grinder. |

- 3.2 Sander/grinder used and applied safely to surface in accordance with manufacturer's specifications and relevant OH&S requirements.
- 3.3 All loose or protruding material removed by sander /grinder and brushing so that surface is prepared to specification.
- 4. Patch holes
 - 4.1 Method of patching hole determined from type of material surface, size of hole, compatibility of materials and planned specified finish.
 - 4.2 Patching materials selected to suit material surface and, where applicable, mixed to requirements of manufacturer's specifications.
 - 4.3 Colour patching materials checked to ensure that colour matches surrounding area, where applicable.
 - 4.4 Material applied to job and material according manufacturer's specifications using appropriate application method.
 - 4.5 Where applicable to type of patching material, patched areas must be sanded to provide flush and flat finish to surface.
 - 4.6 Surface brushed/scraped/washed clean of surplus material in accordance with type of patching material and material surface
 - 4.7 Patched areas sealed by application of prime or sealing coat, where applicable, to suit requirements of specified finishes.
- 5. Stop and fill surface
 - 5.1 Correct stopping material selected for specified surface, where applicable.
 - 5.2 Imperfections prepared and material applied to a flush and even finish, where applicable, to proposed additional surface application processes.
 - 5.3 Excess filler removed without damaging or marking surface.
 - 5.4 Surface fine-sanded and cleaned free of dust, where applicable for proposed applied finishes.

- | | |
|-------------|---|
| 6. Clean-up | 6.1 Area cleaned free of debris. |
| | 6.2 Waste and unwanted material disposed of safely using appropriate method according to National Environment Protection Act (NEPA) requirements. |
| | 6.3 Unused materials stored. |
| | 6.4 Tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to the preparation of different material surfaces for the application of applied surface finishes or the abutting or attaching of a construction to that surface.

Surface preparation will vary in accordance with the types of materials to be applied to finish or seal surface and the type of construction, which is to abut or be attached to the surface.

Material surfaces include:

- | | |
|--|---|
| <ul style="list-style-type: none"> • timber • plasterboard/plaster-glass • masonry • brick | <ul style="list-style-type: none"> • metal (ferrous and non-ferrous) • concrete • solid plaster • plastic |
|--|---|

Surface preparation for application finishes includes the preparation for:

- wall and floor tiling
- terrazzo
- segmental paving
- pre-cast cladding
- waterproofing/damp-roofing
- painting
- solid plastering
- wall papering
- clear timber finishes
- stone veneer
- sheet plastering or lining material

Surface preparation for construction applications of abutting or attaching to surfaces includes the preparation for:

- curtain walling fixing
- brick or block laying
- timber partition walls
- light steel partition walls
- formwork construction
- stair installation
- attachment of steel brackets or fabricated units
- aluminium framework fixing
- roof tiling and slating

Surfaces may be new or established material surfaces including both painted and unpainted surfaces.

Personal protective equipment may include:

- overalls
- waterproof pants and jacket
- boots
- gumboots
- gloves
- hard hat/cap
- safety goggles
- ear plugs/muffs
- dust masks/respirators

Equipment includes but is not limited to:

- electrical leads
- elevated work platforms
- trestles
- planks
- ladders
- buckets
- sanders
- hose and water spray

Work area preparation may include:

- clearing area
- setting up equipment for operation
- erecting scaffolding
- disconnecting and removing attachments from or against walls

Waste and debris may include:

- spilt patching material
- cleared or scraped old paint
- discarded abrasive discs/sheets
- cardboard

Tools include but are not limited to:

- scrapers
- paint brushes
- wire brushes
- brooms
- sponges
- sanding blocks
- shovels
- power sanders
- power grinders
- filling blades
- chisels
- hammers

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

- workplace environment
- protective clothing and equipment
- working platforms
- use of tools and equipment
- control of hazardous substances
- hazard control

Patching materials include but are not limited to:

- cellulose/plaster proprietary fillers
- plaster
- sand and cement
- cornice adhesive
- putty
- plastic wood
- fibreglass
- caulking compounds
- sheet material

- paper
- dirt and dust
- disused containers

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

Instructions and reporting of faults may be verbal or written.

EVIDENCE GUIDE

Competency is to be demonstrated by the safe and effective preparation of at least three separate types of material surfaces from those 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
- show compliance with organisational policies and procedures including Quality Assurance requirements
- adopt and carry out correct procedures prior to and during application of preparation processes
- demonstrate that finished patching of holes is flush and straight with surface within tolerances applicable to work orientation
- demonstrate safe and effective operational use of tools, plant and equipment
- interactively communicate with others to ensure safe and effective workplace operations
- prepare surface to specification or instruction requirements

(2) Pre-requisite Relationship of Units

Prerequisites for this unit are:

- BCGCOR0011A Carry out OH&S requirements
- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use small plant and equipment
- BCGCOR0071A Erect and dismantle restricted height scaffolding

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- portable power tools
- hand tools and equipment
- materials relevant to patching and preparation of surfaces
- materials handling
- measurement and calculation
- drawings and written instructions
- workplace communication

Skills

The ability to:

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

(4) Resource Implications

The following resources should be made available:

- general construction and patching materials relevant to surface preparation
- hand tools and power tools appropriate to application processes
- plant and equipment appropriate to application processes
- suitable work area appropriate to surface preparation process

(5) Method of Assessment

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

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

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

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

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 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

- BCGCOR0031A Draw and interpret simple drawings
- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGCOR0081A Use simple levelling devices
- BCGMAS0151A Prepare for construction process (brick/block-work)
- BCGCOR0242A Carry out levelling

Part of this competency may be assessed concurrently with:

- BCGMAS1393A Carry out brick veneer construction

(3) Underpinning Knowledge and SkillsKnowledge

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

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.

BCGMAS1432A: Lay multi-thickness walls and piers

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare multi-thickness brick-work/block-work walls and piers, and applies to individuals working in masonry in the construction industry.

Competency Field:

General Construction, 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 constructing brick walls and piers recognised and adhered to.
		1.3	Material and quantity requirements identified from job drawings 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	Tools and equipment selected consistent with requirements of multi-thickness wall and pier construction, checked for serviceability and any faults reported to supervisor.
2.	Set out brick/block work	2.1	Location and structural details of brick/block work determined from drawings and specifications.
		2.2	Location and relative level of prepared footing checked from job drawings and specifications.
		2.3	Brick/block work set out to location to dimensions from drawings and specifications.
3.	Construct walls and attached piers	3.1	Mortar mixed to requirements and bricks/blocks laid to set out for specified bond.
		3.2	Multi-thickness wall constructed maintaining bond and completed to job specifications.
		3.3	Attached piers, where required, bonded to wall according to job specifications.
		3.4	Walls to be straight and true in plumb line and level within tolerance set out.
		3.5	Where required, damp proof courses built to specifications and Standard requirements.

		3.6	Scaffolding erected as required in accordance with job requirements and OH&S regulations.
		3.7	Openings constructed and lintels installed to job specifications and Standard requirements.
		3.8	Tie downs for ceiling/roof structure built into walls in accordance with Standard requirements.
4.	Construct isolated piers	4.1	Bricks/block laid to set out and specified bond, or blocks to required specifications.
		4.2	Piers constructed to line, level and plumb according to job specifications.
5.	Rake/rule brickwork joints	5.1	Joints to laid face brickwork raked or ruled to correct profile and depth in accordance with job specifications.
		5.2	Brick/block work brushed down prior to drying to remove unwanted mortar.
6.	Clean up	6.1	Area cleared to specification.
		6.2	Waste and unwanted materials removed and placed in job waste bins or rubbish stockpile.
		6.3	Tools and equipment cleaned, maintained and stored.
		6.4	Unused materials stored/stacked.

RANGE STATEMENT

This unit applies to multi-thickness brick or block work construction incorporating laying of bricks or blocks to specified specifications to provide a designed structural stability and/or designed brick/block featured face.

This unit covers all straight, square and plumb multi-thickness block-work/brickwork constructions including walls, columns, attached piers and incorporating wall ties and reinforcement.

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
- colour and shape of bricks/blocks
- specification of mix
- specified finish

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

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

Personal protective equipment may include:

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

Bond types for brickwork may include:

- English
- Flemish
- stretcher

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit levels
- dumpy level
- concrete mixer
- bolsters
- wheelbarrows
- shovels
- masonry saw
- trowels
- straight edges
- jointing tools
- string line
- line pins
- line blocks
- profiles
- scaffolding
- mortar boards
- buckets
- mason's square
- angle grinder
- plumb rule

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 the performance of laying bricks or blocks to construct a triple thickness wall with a corner and a multi-thickness isolated pier. The nominated projects are to be constructed maintaining given specification.

(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 and bricklaying operations
- display compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment for laying multi-thickness walls and piers
- apply organisational quality procedures and processes within context of constructing multi-thickness brick or block walls and piers
- select bricks or blocks and mortar consistent with specification of laying multi-thickness walls and piers
- correctly locate and set out walls and piers
- lay bricks or blocks to line and gauge with bond maintained
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work procedures
- complete construction of multi-thickness wall and isolated pier to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGMAS0151A Prepare for construction process (brick/block-work)
- BCGCOR0242A Carry out levelling
- BCGMAS1422A Lay bricks and/or blocks (wall and corner)
- BCGMAS1403A Carry out solid brickwork construction

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including regulations, codes and standards
- working drawings and specifications
- mortar mix composition
- range of mortar additives including plasticisers and their application
- relevant Building Code and Standards
- multi-thickness wall construction
- brick bond patterns
- materials
- tools and equipment
- quantities
- scaffolding

Skills

The ability to:

- work safely
- read and interpret drawings
- interpret documentation from a wide range of sources
- organise work
- set out work
- erect restricted height scaffolding
- use tools and equipment
- lay bricks
- communicate effectively
- calculate quantities

(4) Resource Implications

The following resources should be provided:

- workplace location
- tools, plant and equipment appropriate for construction processes
- scaffolding
- appropriate materials for construction activity
- drawings and specifications relative to tasks

(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"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

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 3	
Use technology	Level 2	

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

BCGMAS0182A: Apply float and render to straight and curved surfaces

Competency Descriptor:

This unit deals with the skills and knowledge required to float and set coats to provide solid plaster finishes to flat surfaces, and applies to individuals working masonry in the construction

Competency Field: General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1. Plan and prepare for work	1.1	Quality Assurance requirements of company's construction operations recognised and adhered to.	
	1.2	OH&S requirements for workplace environment and preparing for and rendering surfaces recognised and adhered to.	
	1.3	Delivered materials selected and checked against specifications/instructions for quantity and description.	
	1.4	Appropriate personal protective equipment selected, correctly fitted and used.	
	1.5	Tools and equipment selected consistent with requirements of applying float and setting coats for hard plaster to flat surfaces, checked for serviceability and any faults reported to supervisor.	
	1.6	Safety hazards identified and correct procedures used to eliminate hazards and reduce risk to self and others according to OH&S legislation and company policy.	
2. Prepare templates for curved work or circular columns	2.1	Material is selected to manufacture templates.	
	2.2	Radius and shape are established for curves and columns to plans/specifications	
	2.3	Templates are manufactured and formed to suit job requirements	

- | | |
|---|--|
| 3. Prepare background of concrete, block or brickwork surface | 3.1 Background surface identified and wire-brushed if required. |
| | 3.2 Dash coat/Scratch coat mixed and applied liberally to wetted surface where applicable. |
| | 3.3 Bonding coats, using patent products, are applied to specifications. |
| | 3.4 Metal beads are selected for external or squint arrises, fixed to arises and checked for accuracy where applicable. |
| 4. Apply floating/rough cast (using sand and cement) to flat surfaces | 4.1 Applied coat dotted and lined (screeded) to plumb or level, with specified thickness and tolerance of +/- 2mm over 2.4 metres. |
| | 4.2 Type of render used and applied to architect's specifications and relevant Building Standard. |
| | 4.3 Floating coat/rough coat applied and ruled off to screed. |
| | 4.4 Surface finished plumb/level and/or to alignment tolerance of +/- 2mm over 3metres. |
| | 4.5 Heads reveals and sills finished square off wall face and back into opening where applicable. |
| | 4.6 All internal angles/corners, ceiling and floor lines accurately cut. |
| 5. Apply floating coat/rough cast to piers | 5.1 Floating coat/rough cast applied using floating rules/profiles; dutch pins/steel clamps so that face of pier is plumb and ruled off. |
| | 5.2 Face squared off to form returns, rules/straight edges removed and a plough form bullnose/pencil round arrises applied to external angles. |
| 6. Apply floating coat/rough cast within metal beading | 6.1 Metal beading fixed to base surface to form a panel with expansion joint so that panel is plumb and square in specified position. |
| | 6.2 Panels finished with plaster and lime to a smooth, flat, fine finish. |

7. Apply setting coat/finishing coat to flat surfaces	7.1	Background surface prepared and cleaned free of residue then wetted down thoroughly.
	7.2	Thin scratch coat/finishing coat applied, using 60% plaster and 40% lime to architect's specifications/cement and sand mixture as specified.
	7.3	Second coat applied, 2-3mm thick and worked until firm.
	7.4	Fine finish coat applied and steel trowelled/float to smooth even finish to architect's specifications.
8 Clean up	8.1	Area cleared to specification.
	8.2	Waste and unwanted material disposed of safely.
	8.3	Unused materials stored/stacked.
	8.4	Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit involves the application of floating/rough cast and set coats/finishing coat to provide solid plaster finishes to flat surfaces which include, walls, reveals, sills, piers and columns.

Render mix to be in accordance with Building Standards – Internal Plastering on Solid Background

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 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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- spirit level
- squares
- trowels
- floats
- brushes
- screed boards
- scaffolding
- straight edge
- grinder
- concrete mixer
- mortar boards and stands
- shovels
- wheelbarrows
- hawks
- joint rules
- small tools
- plumb bob
- mason's square
- buckets
- sieve
- power leads

Personal protective equipment may include:

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

Background surfaces for application include:

- concrete
- concrete blockwork
- brickwork
- stonework
- timber or metal lathing

Application may be to horizontal or vertical surfaces:

Cleaning of surfaces may involve:

- wire brushing
- grinding
- blast cleaning
- chipping
- washing down

Dash coat may be applied using:

- trowel
- brush
- nozzle spray

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 the performance of applying both floating/rough cast and setting/finishing coats to provide a finished surface to either one of the backgrounds listed in the range of variables statement.

(1) Critical Aspects of Evidence

It is essential that competence be demonstrated in the following aspects.

- Demonstration of compliance with Occupational Health and Safety regulations applicable to workplace and solid plastering operations
- display selection and safe use of appropriate processes, tools and equipment
- application of organisational quality procedures and processes within context of floating and setting solid plaster-flat surfaces
- location of surfaces and inspection for bonding requirements prior to application of splash coat
- determination of surface finish from specification or site inspection
- checked render mix conforms to specification and Jamaican Standard – Internal Plastering on Solid Backgrounds
- interactive communication with others to ensure safe and effective work procedures
- checked surface is finished plumb/level to tolerance of +2mm over 2.4metres
- finish reveals and returns square to wall surface
- application of setting coat to achieve texture or finish specified
- mix render coat and apply in accordance with Jamaican Standards and architect's specifications
- identify faults and problems that occur and necessary action taken to rectify

(2) Pre-requisite Relationship of Units

- Nil

(3) Underpinning Knowledge and SkillsKnowledge

A knowledge of:

- workplace and equipment safety requirements
- drawings and specifications
- mix composition
- render and setting coats
- additives including plasticisers, colour and waterproofing agents
- Building Code of Jamaica and Standard for materials and application
- 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 float/rough cast and set coats to flat surface
- scaffolding
- appropriate materials

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

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

(6) Context of Assessment

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

Assessment shall 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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

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 SkillsKnowledge

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

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 SkillsKnowledge

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

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.

BCGMAS0892A: Finish concrete

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and finish concrete surfaces, and applies to individuals working in masonry and other concrete related skills in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1	Define type of surface finish	1.1	Quality Assurance requirements of company's concreting operations recognised and adhered to.
		1.2	Occupational Health and Safety (OH&S) requirements for placing and finishing concrete and workplace environment recognised and adhered to.
		1.3	Quality/pattern/type of concrete surface finish defined from job plans and specifications.
2	Select tools and equipment	2.1	Concrete finishing tools and equipment selected to carry out processes consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		2.2	Appropriate personal protective equipment selected, correctly fitted and used.
3	Finish concrete	3.1	Concrete placed and compacted to required standards.
		3.2	Screeded concrete surface wood floated or given initial trowel application using mechanical trowelling machine.
		3.3	Control/structural joints defined and edges trowelled to specified location according to the appropriate drawings and specifications.
		3.4	Concrete surface given final trowel/finish to architects design engineers specifications.
4	Clean up	4.1	Area cleared and waste material removed.
		4.2	Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to the finishing of surfaces of placed concrete.

Finishes to concrete surfaces include:

- steel trowelled
- wood floated
- broomed
- brushed to expose aggregate

Finishing of concrete to be in accordance with specifications and Building Codes.

Quality Assurance requirements may include:

- workplace operations and procedures
- application procedures for finishing concrete
- protection to finished surfaces
- 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
- protective clothing and equipment
- use of tools and equipment
- handling of materials
- working platforms

Personal protective equipment may include:

- boots
- safety glasses/goggles
- ear plugs/muffs
- gloves

Tools, plant and equipment may include but are not limited to:

- power trowel
- wood float
- steel float
- brooms
- hoses
- edging tools

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

EVIDENCE GUIDE

Competency is to be demonstrated by finishing concrete in at least three of the types of finishes listed within the range statement.

(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 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 placing and finishing concrete
- finish concrete surface in accordance with specifications
- take measures to protect concrete surface from either pedestrian, vehicular traffic, and the weather
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work procedures

(2) Pre-requisite Relationship of Units

- BGCOR0001A Carry out interactive workplace communication
- BGCOR0061A Use small plant and equipment
- BCGMAS0101A Carry out concrete work to simple forms
- BCGMAS0292A Carry out concrete work

This competency may be assessed concurrently with:

- BCGMAS0912A Place concrete
- BCGMAS0923A Cure concrete

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- work organisation factors affecting concrete setting time
- concrete finishing techniques
- specifications
- tools and equipment

Skills

The ability to:

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

(4) Resource Implications

The following resources should be provided:

- freshly screeded concrete
- tools, plant and equipment appropriate to the finishing processes
- specifications for concrete finish

(5) Method of Assessment

Competency should be assessed through direct observation 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 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"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
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

BCGMAS0922A: Cure concrete

Competency Descriptor:

This unit deals with the skills and knowledge required to carry out concrete curing process, and applies to individuals working with concrete in particular the construction industry.

Competency field:

General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1	Select curing method	1.1	Quality Assurance requirements of company's concreting operations recognised and adhered to.
		1.2	OH&S requirements for workplace environment and curing concrete recognised and adhered to.
		1.3	Concrete curing method selected in accordance with engineer's specification and Concrete Structures.
2	Select curing and personal protective equipment	2.1	Curing equipment selected consistent with curing requirements and checked for sound and safe working order.
		2.2	Appropriate personal protective equipment selected, correctly fitted and used.
3	Cure concrete	3.1	Concrete cured to engineer's approval and in accordance with the National Building Codes and standard practice inc Concrete on Building.
		3.2	Curing agent/method maintained on concrete surface to specifications and, where applicable, in accordance with standards for Liquid Membrane Forming Curing Compounds for Concrete.
		3.3	Protection provided to concrete during curing process by isolating and/or barricading area.
4	Clean-up	4.1	Area of concrete cure cleared and waste material removed.
		4.2	Curing equipment cleaned, maintained to manufacturer's specifications and stored.

RANGE STATEMENT

This unit applies to the curing of concrete in an on-site environment.

Curing methods may include:

- hosing
- sprinklers
- ponding
- applied chemical curing agent
- plastic film

Quality Assurance requirements may include:

- workplace operations and procedures
- 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
- protective clothing and equipment
- use of tools and equipment
- handling of materials
- working platforms and scaffolding
- hazardous materials

Personal protective equipment may include:

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

Tools/equipment may include:

- hoses and sprinklers
- tarpaulins/covers
- rollers
- spray applicators

EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the initial curing process to a nominated poured concrete section.

(1) Critical Aspects of Evidence

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

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace and concrete pouring 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 placing and curing of concrete
- apply concrete curing method safely and effectively to designed application
- interactively communicate with others to ensure safe and effective curing operations

(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:

- BCGMAS0892A Finish concrete

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations and codes
- influence of curing process on strength of concrete
- methods of curing concrete
- safe handling of curing chemicals
- plant and equipment
- specifications

Skills

The ability to:

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

(4) Resource Implications

The following resources should be provided:

- freshly poured concrete location.
- tools, plant and equipment, appropriate to curing processes.
- specifications for curing application.

(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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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 2	For self
Work with others and in team	Level 1	In completing scheduled tasks
Use mathematical ideas and techniques	Level -	As an aid to measure and schedule tasks
Solve problems	Level-1	As an aid to self-development
Use technology	Level 1	To manage scheduling and completion of tasks

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

BCGMAS0033A: Carry out cavity brick/block construction

Competency Descriptor:

This unit specifies the competency required to construct cavity brick/block buildings and structures. It includes the planning, preparation, set out and installation of the construction.

Competency Field: General construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<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 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. Set out block/brick work	<p>2.1 Bricks and/or blocks are identified, selected and checked for conformity with specifications and comply with standards.</p> <p>2.2 Work platform is erected in accordance with regulatory and workplace requirements.</p> <p>2.3 Location and structural details of brickwork/ blockwork identified from job drawings and job specifications.</p>

- 2.4 Base brickwork below floor construction is set out to location, dimensions and specifications in compliance with standards.
 - 2.5 Load bearing brickwork, including engaged piers, dwarf walls, isolated piers and corbelling are set out to job drawings and specifications.
 - 2.6 Cavity brick wall is set out to requirements of job drawings.
- 3. Construct base brick/ block work
 - 3.1 Mortar mix is prepared and checked for conformity and bricks/blocks are laid to set out to specifications and standards.
 - 3.2 Brickwork/blockwork gauge is determined and set out rod is prepared.
 - 3.3 Base brickwork/blockwork is constructed for cavity construction to requirements of regulations and specifications.
- 4. Position door and window frames
 - 4.1 Window frames are located and built in to cavity walls to specification and protected from mortar droppings during construction.
 - 4.2 Doorjambes are located, built in and fixed to cavity walls and single leaf walls to job drawings and specifications.
- 5. Construct brick walls
 - 5.1 Brick walls are constructed to job specifications and standards.
 - 5.2 Damp proof courses and flashings are laid/built in to job specifications.
 - 5.3 Ventilation for solid brick construction built to requirements of job specification and regulations.
 - 5.4 Walls are to be straight and true in plumb, line and level within standard tolerances.
 - 5.5 Wall ties are positioned to comply with standards.
 - 5.6 Openings are constructed and flashing is installed to job specifications.
 - 5.7 Lintels are installed to job specifications.
 - 5.8 Control joints are formed in accordance with locations on job drawings and standards.

- | | | | |
|----|------------------|---|--|
| | 5.9 | Weepholes, brick reinforcing, vermin proofing and wall flashings are located and built in to job specifications. | |
| | 5.10 | Gables and parapets are constructed by plans and specifications. | |
| | 5.11 | Sill bricks are cut and laid to line in accordance with job specifications. | |
| | 5.12 | Tie down and lateral support systems for ceiling/roof structures are installed to walls in accordance with plans, specifications and standards. | |
| 6. | Rake/rule joints | 6.1 | Joints of laid brickwork/blockwork are raked or ruled to correct depth and profile in accordance with job specifications. |
| | | 6.2 | Brickwork/blockwork is brushed down prior to drying to remove unwanted mortar. |
| | | 6.3 | Excess mortar is removed from brick/block work surfaces and cavities are cleaned free of mortar and debris in accordance with manufacturers' recommendations, job specification and standards. |
| 7. | Clean up | 7.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification. |
| | | 7.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices. |

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:

The unit requires the laying of bricks to construct a cavity brick building

Brick/block cavity construction includes but is not limited to:

- straight
- square and plumb brick/block
- wall ties and lateral support systems
- damp course and flashings
- openings
- reinforcement

Bricklaying and block laying tasks may be performed on a new construction site, an existing structure being renovated or extended or an existing structure subject to service restoration or maintenance.

Brickwork may be laid on a suspended floor or a slab

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 and hazardous materials
- substances

Information sources may include but not be limited to:

- verbal or written and graphical instructions
- signage
- work schedules/plans/specifications
- work bulletins
- hand drawings
- memos
- material safety data sheets (MSDS)
- diagrams or sketches
- Safe work procedures related to cavity brick construction
- regulatory/legislative requirements pertaining to cavity brick construction
- manufacturers' specifications and instructions where specified
- organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel
- relevant Standards

Tools and equipment may include:

- scaffolds
- elevators
- materials hoists
- forklifts
- pallet trolleys
- brick buggies
- small petrol/diesel engines/compressors

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

Materials are to include but not limited to:

- clay bricks
- masonry blocks
- reinforcing materials
- steel
- aluminium and timber window frames
- timber and steel door frames
- aggregates
- cement and lime
- waterproofing materials
-

Environmental requirements are to include but are not limited to:

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

Tools and equipment are to include but not limited to:

- Wheelbarrows
- concrete mixers
- brooms
- buckets
- hoses
- shovels
- measuring tapes/rules
- plumb rules
- jointing tools
- hammers
- bolsters
- shovels
- spirit levels
- dumpy levels
- trowels
- mortar boards
- straight edges
- profiles
- string lines
- line blocks
- line pins
- builders lines
- masonry saws
- mason's squares
- jig saws
- elevators
- brick grabs
- pointing or raking tools

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

- emergency shutdown and stopping
- extinguishing fires
- organisational first aid requirements
- evacuation

Quality requirements are to include but not be limited to:

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

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) underground services (water, gas, electricity, communications)
- 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

On site meeting processes may include:

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

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

Regulatory authorities may include:

- Local Authorities administering the applicable acts
- Regulations
- codes of practice

Bricklaying and block laying tasks include:

- all clay brick (wire cut/pressed)
- concrete block (hollow and solid) masonry work

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
- Safe and effective operational use of tools, plant and equipment
- Communication and working effectively and safely with others
- correct identification of requirement and finishing of the task
- correct selection and use of appropriate processes, tools and equipment
- completing all work to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0011A Carry out OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
 - Quality requirements
 - general Construction terminology
 - plant
 - tools and equipment types
 - characteristics
 - uses
 - limitations
- The techniques of cavity brick construction including:
- gable and eaves construction
 - stepped and level flashing for parapets and gables
 - damp proofing
 - ventilation
 - vermin control
 - anti-termite measures for floor
 - wall and roof members
 - tying components
 - sub-floor construction
 - lintels and load bearing components
 - closing of cavities
 - storage and environmentally friendly waste management
 - measurement and calculation
 - brick and block expansion and growth, control and articulation joints
 - brick bond patterns
 - communication processes verbal and signalling
 - Safe work method statement
 - capping systems
 - characteristics and applications of materials for cavity brick construction
 - processes for the calculation of material requirements
 - Material Safety Data Sheets
 - plans, drawings and specifications
 - materials handling

Skill

The ability to:

- locate, interpret and apply relevant, information
- comply with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations
- communicate and work effectively and safely with others
- correctly identify requirements and finishing of the task.
- complete all work to specification

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to constructing cavity brick construction
- hand and power tools, plant and equipment appropriate to cavity brick construction
- realistic tasks 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.

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

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

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

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

Assessment is to comply with relevant regulatory or Standards 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.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
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.

**BCGMAS1413A: Construct masonry steps and stairs**

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct masonry work steps and stairs, and applies to individuals working in masonry in 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 for workplace environment and constructing masonry steps and stairs recognised and adhered to.
	1.3 Materials and quantities checked against job drawings and specifications.
	1.4 Appropriate personal protective equipment selected, correctly fitted and used.
	1.5 Tools and equipment selected consistent with requirements of constructing masonry steps and stairs, checked for serviceability and any faults reported to supervisor.
	1.6 Safety hazards identified and correct procedures used to eliminate hazards to self and others according to OH&S legislation and company policy.
2. Set out steps	2.1 Location and relative level of prepared footing checked from job drawings and specifications.
	2.2 Rise and going of flight and individual steps calculated to the requirements of the National Building Code.
	2.3 Flight and individual steps set out from calculations and job drawings.
3. Lay bricks/blocks and form steps	3.1 Mortar mixed to specifications and applied evenly to set out.
	3.2 Bricks/blocks laid to correct line and set out with gauge maintained to specifications.
	3.3 Base brickwork/block-work constructed and built up to requirements of job drawings and specifications.



- 3.4 Steps formed square, level, plumb and true and laid to specified bond.
- 3.5 Profile of steps constructed to bond and design, aligned and plumb to specifications, where applicable.
- 3.6 Jointing carried out to job specifications.
- 3.7 Brickwork/block-work laid and completed to job drawings, specification and within the National Building Code.
- 3.8 Brick/block faces cleaned free of mortar.
4. Clean up
 - 4.1 Area cleared to specification.
 - 4.2 Waste and unwanted material disposed of safely.
 - 4.3 Unused materials stored/stacked.
 - 4.4 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to both internal and external construction of steps and stairs in both brickwork and block-work.

Stairs involve straight flights only and may incorporate landings.

Brickwork or block-work to be in accordance with specified Masonry Code.

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
- colour and shape of bricks/blocks
- specification of mix
- 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
- use of tools and equipment
- handling of materials
- working platforms and scaffolding



Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit level
- dumpy level
- concrete mixer
- bolsters
- wheelbarrows
- shovels
- masonry saw
- straight edge
- plumb rule
- jointing tools
- string line
- line pins
- line blocks
- profiles
- scaffolding
- mortar boards
- buckets
- mason's square
- angle grinder

Personal protective equipment may include:

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

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 constructing a straight flight and landing of a nominated brick or block stair.

(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 and bricklaying operations
- display compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment for laying brick/block steps
- apply organisational quality procedures and processes within context of masonry step and stair construction
- select bricks and mortar consistent with specification and job required
- locate position of stairs and accurately set out
- calculate rise accurately ensure all rises between landings are of equal height
- lay bricks/blocks to line and gauge
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work operations
- complete construction of flight of masonry steps to specifications

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

- BGCOR0071A Erect and dismantle restricted height scaffolding
- BCGMAS0151A Prepare for construction process (brick/block-work)
- BGCOR0242A Carry out levelling
- BGCOR0433A Carry out basic setting out
- BCGMAS1403A Carry out solid brick construction
- BCGMAS1422A Lay bricks and blocks (wall and corner)

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including regulations, codes and standards
- working drawings and specifications
- design of masonry steps and stairs
- mortar mix composition
- range of mortar additives including plasticisers and their application
- Relevant Building Code and Standards
- materials and their characteristics
- tools and equipment
- quantities
- scaffolding

Skills

The ability to:

- work safely
- read and interpret drawings
- interpret documentation from a wide range of sources
- use tools and equipment suitable to carrying out masonry step/stair construction
- lay bricks
- set out work
- organise work
- communicate effectively
- calculate quantities
- erect restricted height scaffolding

(4) Resource Implications

The following resources should be provided:

- workplace location ready for stair or steps installation
- tools, plant and equipment appropriate for constructing masonry steps/stairs
- scaffolding
- appropriate materials to carry out proposed construction
- drawings and specifications relevant to the task

(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.

(5) 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

BCGMAS1443A: Construct masonry arch - semi-circular and segmental

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct arches, semi-circular and segmental masonry walls, and applies to individuals working in masonry in the construction industry.

Competency Field:

General Construction, 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 constructing masonry arches recognised and adhered to. 1.3 Delivered materials selected and checked against job drawings and specifications for quantity and description. 1.4 Appropriate personal protective equipment selected, correctly fitted and used. 1.5 Tools and equipment selected consistent with requirements of constructing semi circular and segmental arches, checked for serviceability and any faults reported to supervisor. 1.6 Safety hazards identified and correct procedures used to eliminate hazards and minimise risk to self and others.
2. Set out first course	2.1 Location and line of brickwork /block-work wall set out on concrete footing/slab according to job drawings. 2.2 Span of arch determined from prepared allotted arch centre plus 4mm. 2.3 Arch span set out to location on concrete footing for first course, to job drawings.
3. Construct wall to arch level	3.1 Mortar mixed and bricks/blocks laid to form wall to set out. 3.2 All work carried out to specifications and requirements of the National Building Code for Masonry. 3.3 Gauge of abutting walls maintained within specified tolerance at each course level. 3.4 Vertical wall face maintained plumb and in alignment. 3.5 Bricks cut neatly and accurately.

- 3.6 Bricks/blocks laid level and to line over length of wall.
 - 3.7 Abutment jambs/piers laid vertical up to springing line.
 - 3.8 Bricks/blocks laid in stretcher bond to springing line of arch with perpendicular joints to be maintained in vertical line.
- 4. Set up arch centre
 - 4.1 Height to springing line accurately determined and height to crown of arch to be within tolerance specified.
 - 4.2 Timber arch centre set up and supported to determined height on toms and wedges or adjustable metal props.
 - 4.3 Supports adjusted to ensure arch centre level at right angles to wall face and level across springing line.
 - 4.4 Props, toms, packers and wedges located in order to be easily removed.
 - 4.5 Position of central key brick/blocks established for gauged arch and tape used to mark gauge.
- 5. Cut and lay bricks/blocks to form arch
 - 5.1 Bricks/blocks cut and laid on centre to form arch to specification.
 - 5.2 All joints maintained to equal size on extrados.
 - 5.3 Same size wedge shape maintained on face.
 - 5.4 Centreline of key brick/block wedge maintained through vertical centre line of arch.
 - 5.5 Even joint thickness maintained around extrados for cut brickwork/block-work.
 - 5.6 All bricks cut and laid accurately to maintain even joints.
 - 5.7 All joints, struck evenly to depth and shape to architect's specifications.
- 6. Clean-up
 - 6.1 Area cleaned to specification.
 - 6.2 Waste and unwanted material disposed of safely.
 - 6.3 Unused materials stored/stacked.
 - 6.4 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to arches formed within walls and above columns/attached piers.

Construction may be of brick masonry or concrete block units and is to be in accordance with relevant Building Masonry Code.

Arch shapes are related to curves generated by a single radiating point.

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
- colour and shape of bricks/blocks
- specification of mix
- 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
- 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

Masonry units may include:

- wire cut bricks
- pressed bricks
- concrete blocks

Tools and equipment may include but are not limited to:

- | | |
|---|--|
| <ul style="list-style-type: none"> • measuring tape/rule • hammers • spirit level • dumpy level • concrete mixer • wheelbarrows • shovels • masonry saw • angle grinder • trowels • straight edges • plumb rule | <ul style="list-style-type: none"> • jointing tools • string line • line pins • line blocks • scaffolding • mortar boards • buckets • mason's square • timber and centre • timber toms, packers and wedges • adjustable metal props • sponge |
|---|--|

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 the safe and accurate construction of arches using specified masonry material of the types listed in the range of variables as the components for the installation.

(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 and bricklaying operations
- display compliance with organisational policies and procedures
- select and use appropriate tools, equipment and processes consistent with requirements of constructing masonry arches
- select bricks and mortar consistent with the specification for constructing masonry
- apply organisational quality procedures within context of constructing arches
- select bricks/blocks and mortar consistent with specification or job requirement
- correctly locate wall and arch and set out with designed bond
- correctly set up arch centre
- lay bricks to line and gauge with bond maintained
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work procedures
- complete wall and archway to specifications

(2) Pre-requisite Relationship of Units

- BGCOR0242A Carry out levelling
- BGCOR0433A Carry out basic setting out
- BCGMAS1403A Carry out solid brick construction
- BCGMAS1422A Lay bricks and blocks (wall and corner)
- BCGMAS1432A Lay multi thickness walls and piers

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- working drawings and specifications
- brick expansion and growth
- control and articulation joints
- workplace and equipment safety requirements including regulations, codes and standards
- mortar mix composition
- range of mortar additives including plasticiser/s and/or application
- relevant Building Code and Standard
- materials
- tools and equipment
- quantities
- scaffolding
- drawings and specifications relevant to task

Skills

The ability to:

- work safely
- read and interpret drawings
- use hand and power tools suitable for constructing masonry arches
- measure and calculate quantities appropriate to construction of masonry
- select materials appropriate to construction of masonry arches
- prepare work
- erect scaffolding (restricted height)
- lay bricks/concrete block work

(4) Resource Implications

The following resources should be provided:

- suitable work area appropriate to construction process
- tools, plant and equipment suitable for constructing masonry arches
- suitable materials relevant to constructing masonry arches
- scaffolding

(5) Method of Assessment

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

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

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

(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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

BCGMAS1453A: Construct curved wall

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct brick/concrete block curved wall, and applies to individuals working in masonry in 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 Occupational Health & Safety (OH&S) requirements for application tasks and workplace environment recognised and adhered to. 1.3 Delivered materials selected and checked against job drawings and specifications for quantity and description. 1.4 Appropriate personal protective equipment selected, correctly fitted and used. 1.5 Tools and equipment selected consistent with requirements of constructing curved masonry walls, checked for serviceability and any faults reported to supervisor. 1.6 Safety hazards identified and correct procedures used to minimise risk to self and others.
2. Set out	2.1 Key plan curve points plotted from job drawings and trammel centres established on footing slab. 2.2 Plan curve of wall drawn to specified location from trammel points and marked on footing slab.
3. Lay first course	3.1 Mortar mixed to specifications and spread evenly to wall location as established. 3.2 Bricks laid to plan set out for line and specified bond according to job specification. 3.3 All work carried out to job specifications and the requirements of the relevant Building Code for Masonry.

-
- | | | | |
|----|--|-----|---|
| 4. | Lay subsequent courses and complete wall | 4.1 | Gauge maintained within tolerance specified at every course level. |
| | | 4.2 | Vertical face maintained in alignment. |
| | | 4.3 | Neat and accurate cuts made to blocks/bricks. |
| | | 4.4 | Blocks/bricks laid level over the length of the wall to established plan profile. |
| | | 4.5 | Blocks/bricks laid to specified bond with perpendicular joints (perpends) maintained in vertical line. |
| | | 4.6 | Restricted height scaffolding erected as required in accordance with job requirements and OH&S regulations. |
| | | 4.7 | Construction completed to requirements of job drawings and specifications. |
| | | 4.8 | Block/Brickwork face brushed down and cleaned free of mortar. |
| 5. | Clean-up | 5.1 | Area cleared 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 STATEMENT

This unit applies to curved walls curved constructed of clay brick or concrete masonry blocks.

All work to be in accordance with the Building Code for Masonry Work

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
- colour, shape and quality of bricks/blocks
- specification of mortar mix
- specified finish

Wall may be constructed of:

- pressed clay bricks
- extruded clay bricks
- concrete masonry blocks

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:

- measuring tape/rule
- hammers
- spirit level
- dumpy level
- concrete mixer
- wheelbarrows
- shovels
- masonry saw
- angle grinder
- trowels
- straight edges
- plumb rule
- jointing tools
- string line
- line pins
- line blocks
- scaffolding
- mortar boards
- buckets
- mason's square

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 the safe and accurate construction of a specified curved wall using any of the masonry types listed in the range statements.

(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 and bricklaying operations
- display compliance with organisational policies and procedures
- demonstrate appropriate selection and use of tools and equipment consistent with the requirements of constructing a curved wall
- set out wall to requirements of job drawings
- apply organisational quality procedures and process within context of curved wall construction
- selection of bricks/blocks and mortar consistent with job specification
- lay bricks/blocks to specified curve
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work procedures
- complete construction of curved masonry wall to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0242A Carry out levelling
- BCGCOR0433A Carry out basic setting out
- BCGMAS1422A Lay bricks and blocks (wall and corner)

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- Brick/block expansion and growth
- control and articulation joints
- workplace and equipment safety requirements
- mortar mix composition
- range of mortar additives including plasticiser/s and/or application
- The Building Code and Standard for Masonry Work
- materials
- tools and equipment
- quantities
- scaffolding

Skills

The ability to:

- work safely
- use hand and power tools
- measure and calculate quantities appropriate to the task
- select materials appropriate to the task
- organise work
- set out work
- lay bricks/blocks
- erected restricted height scaffolding
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- suitable work area appropriate to construction process
- tools, plant and equipment suitable for constructing curved walls
- appropriate communication of documentation relevant to task
- appropriate construction materials relevant to brick/blockslaying process

(5) Method of Assessment

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

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

Competency will 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, in order to achieve outcomes within time constraints.

(6) Context of Assessment

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

Assessment will 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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 3	
Solve problems	Level 3	
Use technology	Level 2	

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

BCGMAS0123A: Construct masonry structural systems (Load bearing walls)

Competency Descriptor:

This unit specifies the competency required to construct masonry load bearing walls and engaged and isolated piers. It includes the planning, preparation set out and construction requirements of the work.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<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 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. Set out masonry structures	<p>2.1 Location and structural details of masonry structures are determined from plans and specifications.</p> <p>2.2 Work platform is erected in accordance with regulatory and workplace requirements.</p> <p>2.3 Set out area is correctly located and footing checked for conformity to dimensions and location as per job specifications.</p>

- 2.4 Masonry structure is set out from drawings and specifications.
 - 2.5 Mortar materials are prepared and mixed in accordance with specifications.
- 3. Construct load bearing walls
 - 3.1 Masonry walls structure is laid to set out for base and specified bond in accordance with specifications.
 - 3.2 Masonry wall is constructed maintaining bond, and completed to job specifications.
 - 3.3 Walls are to be straight, plumb and level within standard tolerances.
 - 3.4 Tie down and lateral support system structures are installed to walls in accordance with plans, specifications, codes and standards.
 - 3.5 Electrical and plumbing conduits placed in block covers during constructions to avoid cutting block wall after completion.(where applicable)
- 4. Construct load bearing walls with piers
 - 4.1 Masonry block work is laid to set out on reinforced concrete footing slab and to specified bond.
 - 4.2 Masonry block work gauge/template is determined and set out rod is prepared to gauge/template dimensions in accordance with specifications.
 - 4.3 Masonry blocks are cut to work bond and control joints.
 - 4.4 Columns are formed using walls and attached/engaged piers, incorporating and maintaining bond and perpendicular intersections with both vertical surfaces.
 - 4.5 Reinforcement material is placed and secured to form tie down, bracing and vertical supports for roof structures.
 - 4.6 Cores and blocks are cleaned out in preparation for the installation of formwork for concrete core filling in accordance with manufacturers' recommendations and specifications.
 - 4.7 Concrete grout is mixed, placed and compacted to hollow blocks in accordance with manufacturers' recommendations and specifications.

- | | | |
|---|-----|--|
| | 4.8 | Completed wall is to be straight, plumb and level within standard tolerances. |
| 5. Carry out articulated masonry construction | 5.1 | Design principles and methods of construction using articulation joints are identified. |
| | 5.2 | Locations of articulation joints are identified from work drawings specifications. |
| | 5.3 | Type of articulation method is identified and applied in accordance with work drawings, manufacturers' recommendations and specifications. |
| 6. Clean and finish mortar joints | 6.1 | Joints to laid face blockwork are raked or ruled to correct profile and depth in accordance with job specifications. |
| | 6.2 | Block work is brushed down prior to drying. |
| 7. Clean up | 7.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification. |
| | 7.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices. |

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:

The unit requires the laying of bricks or blocks to a specified bond to construct load bearing building structures of a designed structural stability

Structural masonry may include:

- specified wall ties
- lateral support systems and reinforcement

Load bearing walls may include but not limited to:

- walls directly supporting roof walls/bracing
- walls for wind loads and reinforced masonry retaining walls

Articulated construction may include but is not limited to:

- full height control joint
- combined flexible panel and control joint
- flexible panel
- compressed foam joint filler
- compressed foam joint strips
- compressed foam filler rods

Occupational Health and Safety (OH&S) requirements are to be in accordance with:

- legislation/regulations/codes of practice organisational safety policies and procedures
- project safety plan
- 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

Environmental requirements are to include but are not limited to:

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

Pier wall construction may include but not limited to:

- corner column
- straight wall column
- end of wall column
- column at a control joint

Bricklaying and block laying tasks include:

- all clay brick (wire cut/pressed)
- concrete block (hollow and solid) masonry work

Bricklaying and block laying tasks may be performed on:

- a new construction site
- an existing structure being renovated or extended
- an existing structure subject to service restoration or maintenance

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

- emergency shutdown and stopping
- extinguishing fires
- organisational first aid requirements
- evacuation

Regulatory authorities may include:

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

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) underground services (water, gas, electricity, communications)
- 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

Materials are to include but not limited to:

- clay bricks (wire cut or pressed) masonry blocks
- sealants
- steel reinforcing materials
- steel ties
- aggregates
- cement and lime

Materials may include:

- waterproofing materials
- non-shrink grout

Tools and equipment are to include but not limited to:

- wheelbarrows
- concrete mixers
- brooms
- buckets
- hoses
- shovels
- measuring tapes/rules
- hammers (brickies, club, scutch)
- pincers
- steel tying tools
- explosive power tools
- bolt cutters
- bolsters
- shovels
- spirit levels
- dumpy levels
- plumb rule
- trowels
- mortar boards
- straight edges
- profiles
- string line
- line blocks
- line pins
- builders lines
- masonry saws
- jig saws
- elevators
- brick grabs
- pointing or raking tools

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

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
- hand drawings
- memos
- material safety data sheets (MSDS)
- diagrams or sketches
- Safe work procedures related to constructing masonry structural systems
- Regulatory/legislative requirements pertaining to constructing masonry structural systems
- Manufacturers' specifications and instructions where specified
- 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
- Safe and effective operational use of tools, plant and equipment
- Communication and working effectively and safely with others
- As a minimum, given the plans and specifications, construct:
 - a block wall including confirmation that starter bars are correctly positioned, horizontal and vertical steel reinforcement, cleaning eyes and tie downs, cleaning of cores (for installation of formwork and pouring of concrete), mixing, placing and compacting of concrete grout, and finish wall to specifications;
 - a load bearing column (390mm x 390mm) of a minimum of 1m high including a control joint
 - a service opening for a door jamb with a bond beam lintel, ensuring correct identification of requirement and finishing of the tasks, correct selection and use of appropriate processes, tools and equipment, and completing all work to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – Carry out OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- quality requirements
- general Construction terminology
- plant, tools and equipment types, characteristics, uses and limitations
- the techniques of constructing masonry structural systems
- characteristics and applications of materials for constructing masonry structural systems
- processes for the calculation of material requirements
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- measurement and calculation
- bonding patterns and block bonding techniques
- articulated and pier construction
- reinforcing of structures and core filling of block work
- brick expansion and growth, control joints
- communication processes verbal and signalling
- Safe work method statement

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 applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively use tools, plant and equipment
- Communicate and work effectively and safely with others
- Construct given as a minimum plans and specifications:
 - a block wall including confirmation
 - bars are correctly positioned
 - horizontal and vertical steel reinforcement
 - cleaning eyes and tie downs
 - cleaning of cores (for installation of formwork and pouring of concrete)
 - mixing, placing and compacting of concrete grout
 - finish wall to specifications

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to constructing masonry structural systems
- hand and power tools, plant and equipment appropriate to constructing masonry structural systems
- realistic tasks 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.

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

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

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

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

Assessment is to comply with relevant regulatory or Australian Standards requirements.

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

Collect, analyse and organise information	Level 2	
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 1	

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

BCGCOR0433A: Carry out basic setting out

Competency Descriptor:

This unit deals with the skills and knowledge required to carry out basic setting out of buildings and structures, and applies to individuals working in carpentry and masonry trades in the

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1 Quality Assurance requirements for company's construction operations recognised and adhered to. 1.2 OH&S requirements for setting out processes on developed/undeveloped sites recognised and adhered to. 1.3 Building/structure to be set out identified in details from site drawings. 1.4 Appropriate personal protective equipment selected, correctly fitted and used. 1.5 Tools and equipment selected to carry out processes consistent with requirements of job and checked for serviceability. 1.6 Materials for pegs and profile board selected and cut to determined lengths.
2. Identify and indicate site boundaries	2.1 Survey pegs at corners of site located and identified. 2.2 String lines set accurately into position to identify boundaries of site in accordance with site plan and survey pegs.
3. Set out building line	3.1 Measurements of building line from boundary or existing building determined from site drawings. 3.2 Approximate position and length of line plus 1.5m clearance at each end determined for hurdle location. 3.3 Pegs and profile board installed so that profile approximately level across and between one another with adequate provision to mark footing and wall width on profile board.

		3.4	Location for line accurately marked with nails on profile board and line set taut into position to true alignment with boundary.
4.	Set out right angled corner	4.1	Corner of building determined on set building line to true measurement from adjacent boundary and marked with peg.
		4.2	Right angle set up to line from corner peg using the 3, 4, and 5, principle.
		4.3	Profile board installed to approximate level of other profile board and line set taut to right angled alignment.
5.	Install other building lines	5.1	Profile board for remaining building lines installed to appropriate locations approximately level with established profile board.
		5.2	Measurement for remaining building lines accurately marked and nailed on profile board to dimensions from site drawings.
		5.3	String lines set taut into position to nailed locations on profile board.
6.	Check for square	6.1	Diagonals of main rectangle checked to ensure square and where discrepancy more than 5mm over minimum diagonal length of 5m, lines adjusted to provide square relationship within 5mm.
7.	Clean up	7.1	Unused materials stored/stacked.
		7.2	Tools and equipment cleaned, maintained and stored.

RANGE OF STATEMENT

This unit applies to the setting out of buildings or structures with straight lines and square corners.

It applies to the set out of regular plan shaped buildings, which may be of the following construction:

- timber framed
- brick veneer
- block veneer
- steel framed
- solid brick
- solid stone

Quality assurance requirements may include:

- workplace operations and procedures
- use and maintenance of equipment
- attention to specifications and measurements

Personal protective equipment may include:

- boots
- hard hat
- safety glasses
- ear plugs/muffs
- dust mask/respirator
- jacket

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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- sledge hammer
- hammers
- power saw
- hand saw
- nail bag
- string lines
- spirit levels
- framing square

Site boundaries may be marked by:

- survey pegs
- fence built on line
- building built on line

Fence built on boundary may need to be checked for:

- true line of boundary
- centre of fence line
- face of fence

EVIDENCE GUIDE

Competency is to be demonstrated by the performance of setting out, and establishing profiles board and building lines for a nominated 'L' shaped building on a building block.

(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
- show compliance with organisational quality procedures and processes within the context of setting out the location of a building
- identify location and details of building and site for set out
- select and use appropriate processes, tools and equipment
- use accurate and effective procedures to establish initial building line
- give attention to accuracy in setting line up square to initial line

Critical Aspects of Evidence (Cont'd).

- apply accurate and appropriate procedures to establish profiles for all building lines
- give attention to ensure profiles approximately level
- identify typical faults and problems that occur and necessary action taken to rectify
- set-out completed to all requirements and accurate measurements
- interactively communicate with working partner to ensure safe and effective work procedures

(2) Pre-requisite Relationship of Units

- BCGCOR0031A Draw and interpret simple drawings
- BCGMAS0151A Prepare for brick/block laying
- BCGCOR0242A Carry out levelling

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- working drawing and specifications
- tools and equipment
- measuring
- levelling
- setting out procedures
- construction of profiles
- knowledge of restricted covenant

Skills

The ability to:

- work safely
- organise work
- read and interpret drawings
- use tools and equipment
- measure accurately
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- building site and appropriate drawings for activity
- tools and equipment appropriate for setting out process
- materials appropriate for setting out processes

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of the application process
- inspection of completed set out
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency should be assessed in the normal or simulated workplace environment.

Assessment should be while tasks are undertaken either individually or while working with a partner.

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

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

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

BCGCMH0743A: Undertake rigging

Competency Descriptor:

This unit deals with the skills and knowledge required for carrying out rigging operations, and applies to individuals working in the lifting of loads using hoists and cranes.

Competency Field: General/Civil Construction

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

- | ELEMENT OF COMPETENCY | PERFORMANCE CRITERIA |
|------------------------------|--|
| 1. Plan and prepare work | 1.1 OH&S requirements for workplace environment and crane and rigging operations, recognised and adhered to.
1.2 Site plans/drawings interpreted to certain job requirements.
1.3 Role of rigger, dogman if applicable, and tasks to be undertaken, determined.
1.4 Site information obtained as necessary.
1.5 Access, obstructions and other hazards assessed and appropriate action taken to remove/reduce risk.
1.6 Safety barricades and signs erected to the requirements of OH&S regulations where applicable.
1.7 Load dimensions and centre of gravity of load established in consideration with slinging requirements.
1.8 Appropriate safe working loads calculated for lifting equipment.
1.9 Load position and destination location identified in determining direction and distance of load movement.
1.10 Method of moving load determined by considering hazard prevention, control procedures, relevant Safety Standards, codes of practice and manufacturer's specifications. |
| 2. Select equipment | 2.1 Slings, tackle, lifting/moving machine and accessories selected consistent with needs of lift and safe working capacity of equipment. |

-
- 2.2 Lifting/moving gear inspected and damaged/worn items labelled and rejected.
 - 2.3 Lifting/moving gear assembled consistent with needs of lift and manufacturer's specifications/tables.
 - 2.4 Personal protective equipment selected, correctly fitted and used to the requirements of OH&S regulations.
 - 2.5 Safety equipment for working at heights selected and used to requirements of the statutory regulatory authority.
 - 3. Connect gear
 - 3.1 Anchorage points identified/located/established according to needs of lift and equipment and manufacturer's specifications.
 - 3.2 Load safely slung/connected and packing installed/secured to protect sling and load.
 - 4. Move and position load
 - 4.1 Load moved in accordance with planned procedure.
 - 4.2 Load safely raised, moved and lowered onto temporary dunnage or secured into permanent position.
 - 4.3 Stability of load maintained throughout movement process.
 - 5. Remove slings and lifting accessories
 - 5.1 Care taken to restrain slings, accessories and packing upon removal.
 - 5.2 Slings and lifting accessories removed, cleaned and returned to store.
 - 5.3 Load moving equipment dismantled and safely removed.

RANGE STATEMENT

This unit applies to rigging work carried out in accordance with Safety Standards Rigging.

Equipment range for Basic Rigging is for dogging and rigging work associated with:

- movement of plant and equipment
- steel erection
- particular hoists
- placement of pre-cast concrete
- safety net and static lines
- mast climbers
- perimeter safety screens and shutters
- cantilevered crane loading platforms

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
- rigging and crane operations

Equipment used in rigging processes may include but is not limited to:

- slings
- ropes
- shackles
- eye bolts
- spreaders and equalising gear
- clamps
- puller systems
- winches
- jacks
- skids, skates and sliding shoes

Equipment range for Intermediate Rigging extended on Basic Rigging range is for dogging and rigging work associated with:

- rigging of cranes, conveyors, dredges and excavators
- tilt slabs
- demolition
- dual lifts

Personal protective equipment may include but is not limited to:

- boots
- safety glasses/goggles
- dust masks
- gloves
- hard hat
- body harness

- rollers
- cradle timbers
- chocks and wedges
- packers
- fishplates and bolts
- feeler gauges
- rigging screws
- turfers
- turn belts

Signals for load moving may involve:

- verbal
- hand signals to Internal Standards
- whistle/hooters to International Standards
- two-way radios/telephones
- light signals to Internal Standards

Signalling other than verbal communication to be in accordance with Standards for Cranes Safe use.

All work undertaken to legislative and statutory regulations and in accordance with Work Safety Standards for Users and Operators of Industrial Equipment.

EVIDENCE GUIDE

Competency is to be demonstrated by the performance of carrying out rigging processes for the moving of materials and equipment, and fixing of sections into place.

(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 and rigging operations
- indicate compliance with organisational quality procedures and processes within the context of handling materials and fixing fabricated sections into place
- identify details of work and program schedule of movement and installation
- estimate load, centre of gravity and method of moving load
- select and use appropriate processes, tools and equipment to move and install section
- apply safe and correct procedures for connecting lifting gear and slinging loads
- conduct effective communication with crane operator to ensure safe and effective operations
- apply safe and effective procedures in securing sections and disconnecting crane
- identify typical faults and problems that occur and necessary action taken to rectify

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use plant and equipment
- BCGCOR0111A Handle construction materials and safe disposal of non-toxic waste
- BCGSTW0181A Prepare for steelwork construction
- BCGCMH0733A Undertake dogging

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- rigging gear and equipment
- design and function of lifting gear
- crane operations
- load calculations
- materials and characteristics
- mass of materials
- plant and equipment
- hand tools
- fixing of structural members or components
- methods of signalling
- worksite communications

Skills

The ability to:

- work safely
- organise work
- handle materials
- calculate loads
- use signals
- use tools and equipment
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- worksite operation
- crane operation
- lifting gear and equipment appropriate to supporting dogging and rigging procedures
- plant and equipment to support construction processes
- drawings and specifications applicable to activities

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of application process
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency may be assessed in the normal or simulated workplace environment.

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

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

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

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 SkillsKnowledge

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

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 steefixing 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 SkillsKnowledge

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">Carries out established processesMakes judgement of quality using given criteria	<ul style="list-style-type: none">Manages processSelects the criteria for the evaluation process	<ul style="list-style-type: none">Establishes principles and proceduresEvaluates and reshapes processEstablishes criteria for evaluation
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.

BCGSTW0021A: Use steel fixing tools and equipment

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively use steel fixing tools and equipment in the construction process for fixing steelwork, and applies to all individuals involve in steel-work fixing.

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.
		1.5	Appropriate personal protective equipment selected, correctly fitted and used.
		1.6	Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		1.7	Fixing/fastenings selected to instructions consistent with job requirements.
2.	Prepare work area suitable for construction process	2.1	Activities to be carried out in work area identified from drawing details of proposed construction and supervisor's instructions.
		2.2	Work area prepared for construction process to supervisor's instruction.
3.	Use tools and equipment appropriate for construction process	3.1	Regular hand and power tools suitable for application processes identified to job requirements.
		3.2	Hand and power tools used safely and effectively to instruction to carry out construction processes.

4. Select tools and equipment to cut components	4.1	Tools and equipment correctly used to cut components according to instruction.
	4.2	Correct manual handling techniques used to operate tools and equipment.
	4.3	Abrasive saw used to accurately cut one of or multiple components to the same length to instruction.
5. Clean up	5.1	Work area cleared.
	5.2	Tools and equipment cleaned, maintained and stored.
	5.3	Waste disposed of using appropriate method to EPA and OH&S requirements.

RANGE STATEMENT

This unit applies to the preparation processes associated with steel fixing tools and equipment.

Construction processes includes:

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

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

- reinforced footing and foundation
- support stands for equipment
- reinforced columns and beams
- reinforced concrete slab
- reinforced concrete wall

Quality Assurance requirements may include:

- workplace procedures
- safety requirements
- control of operation of equipment and tools
- quality of equipment and tools
- specifications of work

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

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

Hazards may include but are not limited to:

- pathway obstacles
- unsafe plugs
- 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 reinforcing material.

Tools and equipment may include but are not limited to:

- measuring tape/rule
- squares
- abrasive cut off saw
- power grinders
- support stands
- gin wheel and rope
- bolt cutter
- hammers
- anvil
- axe saw
- bar bender
- bending plates

Fittings and fastenings may include but are not limited to:

- bolts and nuts
- self tapping screws

Material preparation may include:

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

Work area preparation may include:

- clearing area
- setting up equipment
- material storage

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 preparation of 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 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
- carrying out of correct procedures prior to and during application of construction preparation processes
- demonstration of safe and effective operational use of tools, plant and equipment
- interactive communication 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

ITICOR0011A: Carry out data entry and retrieval procedures

Competency Descriptor:

This unit deals with the skills and knowledge required to operate computer to enter, manipulate and retrieve data and to access information and communicate via the Internet.

Competency Field: Information Technology and Communications - Operations

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

1. Initiate computer system	1.1	Equipment and work environment are correctly checked for readiness to perform scheduled tasks.
	1.2	The hardware components of the computer and their functions are correctly identified.
	1.3	Equipment is powered up correctly.
	1.4	Access codes are correctly applied.
	1.5	Appropriate software is selected or loaded from the menu.
2. Enter data	2.1	Types of data for entry correctly identified and collected.
	2.2	Input devices selected and used are appropriate for the intended operations.
	2.3	Manipulative procedures of Input device conform to established practices.
	2.4	Keyboard/mouse is operated within the designated speed and accuracy requirements.
	2.5	Computer files are correctly located or new files are created, named and saved.
	2.6	Data is accurately entered in the appropriate files using specified procedure and format.
	2.7	Data entered is validated in accordance with specified procedures.
	2.8	Anomalous results are corrected or reported in accordance with specified procedures.
	2.9	Back-up made in accordance with operating procedures.

- 3. Retrieve data
 - 3.1 The identity and source of information is established.
 - 3.2 Authority to access data is obtained where required.
 - 3.3 Files and data are correctly located and accessed.
 - 3.4 Integrity and confidentiality of data are maintained.
 - 3.5 The relevant reports or information retrieved using approved procedure.
 - 3.6 Formats to retrieved report or information conform to that required.
 - 3.7 Copy of the data is printed where required.
- 4. Amend data
 - 4.1 Source of data/information for amendment is established.
 - 4.2 Data to be amended is correctly located within the file.
 - 4.3 The correct data/Information is entered, changed or deleted using appropriate input device and approved procedures.
 - 4.4 The Integrity of data is maintained.
- 5. Use document layout and data format facilities
 - 5.1 Requirements for document are verified where necessary.
 - 5.2 The given format and layout are appropriately applied.
 - 5.3 Facilities to achieve the desired format and layout are correctly identified, accessed and used.
 - 5.4 Data manipulating facilities are used correctly.
 - 5.5 Format reflects accuracy and completeness.
- 6. Monitor the operation of equipment
 - 6.1 The system is monitored to ensure correct operation of tasks.
 - 6.2 Routine system messages are promptly and correctly dealt with.
 - 6.3 Non-routine messages are promptly referred in accordance with operating requirements.

	6.4	Error conditions within level of authority are dealt with promptly, and uncorrected errors are promptly reported.
	6.5	Output devices and materials are monitored for quality.
7. Access and transmit information via the Internet	7.1	Access to the Internet is gained in accordance with the provider's operating procedures.
	7.2	Evidence of the ability to negotiate web sites to locate and access specified information and other services is efficiently demonstrated.
	7.3	E-Mail is sent and retrieved competently.
8. Close down computer system	8.1	The correct shut down sequence is followed.
	8.2	Problem with shutting down computer is reported promptly.
	8.3	All safety and protective procedures are observed.
	8.4	The system integrity and security are preserved.
9. Maintain computer equipment	9.1	Cleaning materials and/or solutions used meet specified recommendation.
	9.2	The equipment is cleaned as directed.
	9.3	Wear and faults identified are promptly reported to the appropriate personnel.

RANGE STATEMENT

This unit applies to activities associated with essential operations linked to using and maintaining basic computer equipment.

Equipment:

- install supplied computer
- install supplied peripherals

Work environment:

- equipment
- furniture
- cabling
- power supply

Input devices:

- keyboard
- mouse
- scanner
- microphone
- camera

Software systems to include for:

- word processing
- spread sheet
- internet access

Files save on:

- network
- magnetic media
- personal PC

Data:

- textual
- numerical
- graphical

File operations:

Naming, updating, archiving, traversing field and records in database, use of search, sort, print

Maintenance:

- cleaning: enclosures, screen, input devices, output devices
- checking cables, etc

EVIDENCE GUIDE

Competency is to be demonstrated by the ability to accurately carry out basic data entry and retrieval operations on a computer system 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:

- Initiate the use on the equipment.
- Use document layout and data format facilities.
- Locate and access data.
- Use file operations.
- Manipulate input devices.
- Key-in and format reports.
- Access to the internet.

(2) Pre-requisite Relationship of Units

The pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and SkillsKnowledge

knowledge of:

- safety for working with and around computers
- computer hardware and software systems
- procedure for initiating and closing down computer
- the operation of the data entry management system
- methods of locating files
- organisation's standards applicable to accessing files
- files operations and their applications
- file operation in database setting
- creating, locating and saving files
- using input devices
- using data checking devices
- formatting functions of software
- layout function of software
- graphic productions and manipulation
- regard for accuracy and security of information
- functions on the internet

Skills

The ability to:

- identify computer hardware
- manipulate data input devices
- access data
- use file operations
- key-in and format reports and letters
- retrieve data
- amend data
- print data
- save data
- search and receive data from the internet
- send and receive E-Mail

(4) Resource Implications

Files saved on network, magnetic media, personal Computer

Input devices: Keyboard, mouse, other selection devices

(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.

Competencies in this unit may be determined concurrently. Assessment must be in accordance with the performance criteria .

(6) Context of Assessment

This unit may be assessed on or off the job. Assessment should include practical demonstration either in the workplace or through a simulation. A range of methods to assess underpinning knowledge should support this

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

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level -	
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.

BCGMAS0192A: Apply plaster by projection machine

Competency Descriptor:

This unit specifies the competency required to apply pre-blended plasters and cement render materials on various background surfaces using a projection plastering system. The unit does not include swimming pool or pond application.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
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 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.</p> <p>1.4 Material quantity requirements are calculated in accordance with plans and/or specifications.</p> <p>1.5 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.6 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.</p>
2. Prepare the work area	<p>2.1 Area to receive pre-blended plasters and cement render materials is determined from plans and specifications.</p> <p>2.2 Area is masked up and protection for surrounding areas is applied.</p> <p>2.3 Mixing pump is set up and positioned to suit job requirements.</p> <p>2.4 Application area is cleared for projection plastering application.</p> <p>2.5 Barricades/signage is placed to minimise disruption to application process.</p>

- | | | | |
|----|---|-----|--|
| 3. | Apply pre-blended plasters and render materials | 3.1 | Mixing pump is operated to manufacturers' recommendations and job requirements. |
| | | 3.2 | Material is screeded to correct thickness in accordance with specifications. |
| | | 3.3 | Material is applied using projection-plastering techniques to specifications. |
| | | 3.4 | Required finish is produced on material to job finishes schedule. |
| 4. | Clean up | 4.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification. |
| | | 4.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices. |

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:

Applications are to include:

- walls
- ceilings
- inclined surfaces
- sills
- arches

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

Substrates for application may include:

- block work
- concrete
- stonework
- cement sheet

OH&S requirements cont'd.

- handling of materials
- use of fire fighting equipment
- organisational first aid
- hazard control
- hazardous materials and substances

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

- the conduct of operational risk assessment and treatments associated with manual handling
- lighting
- power sources and cables
- trip hazards
- working in confined areas
- traffic control
- working at heights
- working in proximity to others
- worksite visitors
- the public

Environmental requirements are to include but are not limited to:

- waste management
- noise
- dust
- vibration
- storm water protection
- clean-up management

Quality requirements are to include but not be limited to:

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

Regulatory authorities may include:

- Local Authorities administering the applicable acts
- Regulations
- codes of practice

Materials are to include:

- plaster
- cement render
- cleaning materials

Tools and equipment are to include:

- projection machine and support equipments/tools measuring tape/rule
- spirit levels
- squares
- trowels
- brushes
- straight edges
- scaffolding or working platforms
- joint rules
- small tools
- plumb bobs
- power leads

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

- emergency stopping of equipment
- extinguishing fires
- organisational first aid requirements
- evacuation

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

On site meeting processes may include:

- notification/ scheduling (time, place, purpose) task discussions
- local co-ordination 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 application of plaster by projection machine
- regulatory/legislative requirements pertaining to the application of plaster by projection machine
- manufacturers' specifications and instructions where specified
- organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel
- relevant Standards

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

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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- mix, blend and apply plaster by projection machine to walls and ceilings to a specified finish

(2) Pre-requisite Relationship of Units

- BCGCOR0011A - Carryout OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- quality requirements
- plastering terminology
- projection machine equipment types, characteristics, uses and limitations
- projection machine application techniques
- properties, characteristics and limitations of plastering and cement rendering materials for use with projection machines
- processes for the calculation of material requirements
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- safe work method statement

Skill

The ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with organisational policies and procedures
- use tools, plant and equipment safely and effectively
- communicate and work effectively with others
- mix, blend and apply plaster by projection machine

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to the application of plaster/render
- hand and power tools, plant and equipment appropriate to the application of plaster/render
- 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.

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

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

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

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

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

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 SkillsKnowledge

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

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.

BCGCMH0752A: Operate hoist

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and operate a hoist, and applies to individuals engaged in the operation of cantilever, platform and personnel/materials.

Competency Field:

General and Civil Construction

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

- | | | | |
|----|----------------------------|-----|---|
| 1. | Plan and prepare work | 1.1 | Occupational Health & Safety (OH&S) requirements for workplace environment and operating mechanical hoists recognised and adhered to. |
| | | 1.2 | Appropriate personal protective equipment selected, correctly fitted and used. |
| | | 1.3 | Hoisting details for particular day identified from proposed work schedule. |
| | | 1.4 | Signalling system confirmed with associated site personnel. |
| | | 1.5 | Detailed daily hoist work program developed in conjunction with authorised personnel. |
| | | 1.6 | Site hazards identified and hazard control strategies implemented to minimise risk to self and others. |
| | | 1.7 | Precautions taken to accommodate effects of inclement weather or night work on operating hoist. |
| 2. | Conduct daily safety check | 2.1 | Prior to operation, equipment and site visually checked for evidence of damage, structural weakness or interference. |
| | | 2.2 | Standard daily safety checks on mechanical/electrical/safety functions carried out to requirements of hoist operator's manual and checklists. |
| | | 2.3 | Test run conducted through full height of travel without load at start of work to check hoist operation, security of mast and wall bolting. |

3	Record results	3.1	Results of checks and tests recorded in hoist book to the requirements of state regulatory authority.
		3.2	Faults reported to responsible person in accordance with company policy.
4	Operate hoist	4.1	Loads checked for conformity to safe load capacity of hoist.
		4.2	Hoist safely operated to the requirements of operator's manual and stated regulatory authority.
		4.3	Hoist shut down, rendered safe and secured at end of work period to requirements of company and operator's manual.

RANGE STATEMENT

This unit applies to the operation of all configurations of cantilever, platform and personnel/materials hoists.

Materials platform hoists are for the hoisting of goods and materials only and may, but not include limited to:

- car
- bucket
- platform

Personnel and materials hoists are for the hoisting of personnel, goods and materials and may be:

- cantilevered hoist
- tower hoist
- multiple winch operation

Cantilevered from and travelling up and down the face of the support structure.

Personnel and materials hoists consist of a car, structure and machinery or other equipment associated with the hoist.

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
- operating of hoists

Personal protective equipment may include:

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

Reporting of faults should be in accordance with worksite operation procedures and may be verbal or written.

All work and work practices undertaken to legislative and statutory regulations in accordance with Work safety and the National Standards for Users and Operators of Industrial Equipment.

EVIDENCE GUIDE

Competency is to be demonstrated by operating a mechanical hoist.

(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 and hoist operations
- indicate compliance with organisational quality procedures and processes within the context of operating mechanical hoists and handling materials
- identify work program and details of materials and equipment to be moved
- correctly apply safety check procedures for pre-operation of hoist under load
- apply correct procedures in placing material loads to hoist platform
- accurately record information related to checks and tests
- safe and effective procedures applied for operational use of hoist
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with other personnel to carry out safe and effective hoist operations

(2) Pre-requisite Relationship of Units

- BGCOR0011A Carry out OH&S requirements
- BGCOR0061A Use plant and equipment
- BGCOR0111A Handle construction materials and safe disposal of waste
- BGCOR0272A Operate elevating platform

(3) Underpinning Knowledge and Skills

Knowledge
knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations
- regulations governing hoist operations
- materials
- plant and equipment
- loading factors
- delivery documentation
- mechanical connections and maintenance
- site communications

Skills
The ability to:

- work safely
- organise work
- handle materials
- use tools and equipment
- communicate effectively
- record information

(4) Resource Implications

The following resources should be provided:

- worksite operation
- mechanical hoist
- daily schedule and documented details

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

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

(6) Context of Assessment

Competency may be assessed in the normal or simulated workplace environment.

Assessment should be while tasks are being done under direct 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

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

**BCGMAS0052A: Resurface concrete**

Competency Descriptor:

This unit specifies the competency required to resurface existing concrete to repair, reface or decorate the surface of concrete components. The unit includes abrasive blasting, grinding, polishing and scabbling preparation techniques and resurfacing.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare	<ul style="list-style-type: none">1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied.1.2 Safety requirements are followed in accordance with safety plans and policies.1.3 Signage/barricade requirements are identified and implemented.1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement.1.5 Material quantity requirements are calculated in accordance with plans and/or specifications.1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.1.7 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.
2. Prepare for concrete resurfacing	<ul style="list-style-type: none">2.1 Concrete is prepared for resurfacing and correct technique is to be applied.2.2 Resurfacing and preparation equipment is selected for the process.2.3 Retardant materials are prepared for application where specified.



- 2.4 Preparation technique is performed using the selected application according to specifications.
 - 2.5 Existing control joints in the substrate are checked to ensure they are carried through and reflected in the proposed topping.
 - 2.6 Concrete resurfacing material is prepared, applied and finished in accordance with specifications.
 3. Cure/seal concrete
 - 3.1 Curing/sealing application is applied to concrete to specifications, following setting.
 - 3.2 Curing/sealing is maintained to period specified in accordance with specifications.
 4. Clean up
 - 4.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification.
 - 4.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

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

Preparation techniques may include but not be limited to:

- abrasive blasting (sand or grit)
- grinding
- scabbling/hackling
- polishing and acid etching
- chemical staining

Resurfacing is to include:

- placement of concrete
- standard finishing techniques
- decorative finishes

Curing agents may include but not be limited to:

- water
- silicate compounds
- water based compounds
- acrylic copolymers
- resin based compounds



Curing techniques may include but not be limited to:

- hosing
- sprinklers
- ponding
- curing agents
- plastic film

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

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

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

Environmental requirements are to include but are not limited to:

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

Quality requirements are to include but not be limited to:

- relevant regulations
- internal company quality policy and standards
- workplace operations and procedures
- manufacturers' specifications where specified

Regulatory authorities may include:

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



Materials are to include:

- concrete
- surface retardants
- bonding agents
- curing compounds
- chemical stains
- acid solutions for cleaning and etching

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

On site meeting processes may include:

- notification/scheduling (time, Place, purpose)
- task discussions
- local co-ordination of procedural and operational issues

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

- trowels
- floats
- brooms
- hoses
- shovels
- wheel barrows
- screeds and may include:
- power trowels
- rollers
- concrete mixers
- polishers
- grinders and water blasters .

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 resurfacing concrete
- regulatory/legislative requirements pertaining to resurfacing concrete
- manufacturers' specifications and instructions where specified
- 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

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

- 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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- completion of resurfacing using one of the preparation techniques to prepare, resurface and finish a minimum of 10sqm of existing concrete to specifications

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – Carry out OH&S requirements

(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
- concrete resurfacing techniques
- concrete resurfacing materials
- processes for the calculation of material requirements
- material safety data sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- mortar mix composition and additives
- placing and finishing of concrete
- concrete structures
- control joints
- safe work method statements
- chemical stains and acid solutions

**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 applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- carryout safe and effective operational use of tools, plant and equipment
- communicate and work effectively and safely with others.

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to resurfacing concrete
- hand and power tools, plant and equipment appropriate to resurfacing concrete
- 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.
- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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.



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

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.

BCGMAS0082A: Carry out repair and rectification of concrete

Competency Descriptor:

This unit specifies the competency required to repair or rectify minor or major defects on concrete work to fix damaged areas.
The unit includes patching, refinishing, sealing and colouring concrete.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
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 selected to carry out tasks 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. Carry out minor repairs	<p>2.1 Colour variations are repaired by the application of a concrete staining agent.</p> <p>2.2 The effects of dusting are repaired by the correct application of an appropriate surface hardener/dust inhibiting agent or removal of the weak top layer.</p>

- 2.3 Damaged or blistered concrete is repaired either by grinding or topping.
 - 2.4 Repair mortars and self-levelling floor compounds are applied according to manufacturers' specification.
 - 2.5 Sealers and coloured paints are applied to concrete surfaces in accordance with manufacturers' specification.
 3. Carry out rectification of cracks and other major defects.
 - 3.1 Root cause of the defect is determined and rectified.
 - 3.2 Concrete is prepared and flexible epoxy resins applied to manufacturers' specification.
 - 3.3 Toppings are applied to concrete using correct materials and techniques.
 - 3.4 Acid etching/cleaning is applied safely in accordance with manufacturers' requirements.
4. Clean up
 - 4.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification.
 - 4.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

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
- self levelling compounds
- formwork
- replacement of concrete

Repair work may include but not be limited to:

- drilling
- dowelling
- patching
- resurfacing

Types of surface which may require repair may include but not be limited to:

- slabs
- pathways
- concrete aprons
- columns
- walls
- beams
- ramps
- stairs
- abutments
- bridge deck

Dusting is a fault where the concrete is too soft as a result of poor curing or where the surface is breaking up.

Defects and minor repairs are to include but not be limited to:

- dusting
- blistering
- blow holes
- wavy or uneven surfaces
- spalling
- rain damage
- stencilled concrete defects
- stamped concrete defects

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

Major repairs are to include but not be limited to:

- cracks (wet, live, dormant)
- subsidence
- non-compliant surfaces
- the bonding of new to old interfaces

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

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

Environmental requirements are to include but are not limited to:

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

Quality requirements are to include but not be limited to:

- relevant regulations including
- internal company quality policy and standards
- workplace operations and procedures
- manufacturers' specifications where specified

Regulatory authorities may include:

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

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

- extinguishing fires
- organisational first aid requirements
- evacuation

Materials are to include:

- concrete
- retardants
- bonding agents
- curing compounds

Communications are to include but not limited to:

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

On site meeting processes may include:

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

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

- trowels
- floats
- brooms
- hoses
- shovels
- wheel barrows
- screeds
- power trowels
- rollers
- concrete mixers
- polishers
- grinders
- water blasters
- concrete saws/cutters
- safe work procedures related to repairing concrete
- regulatory/legislative requirements pertaining to repairing concrete

manufacturers' specifications and instructions where specified

- organisation work specifications and requirements

instructions issued by authorised organisational or external personnel

General repairs may involve but not be limited to:

- mortars
- acid etching/cleaning
- slippery surfaces
- topping existing concrete
- bonded toppings
- un-bonded toppings
- levelling compounds
- hazard control
- hazardous materials and substances

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

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

- trowels
- floats
- brooms
- hoses
- shovels

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

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

- 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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- removal of a section or whole defective area, cleaning and preparing of the effected area, applying the necessary bonding, identify and apply the correct rectification method and top coat to a minimum of 1sqm of effected area for 3 of the minor repairs and 1 major repair listed in the Range Statement

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – Carry out OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- Workplace and equipment safety requirements
- quality requirements
- general Construction terminology
- plant, tools and equipment types, characteristics, uses and limitations
- concrete repairing techniques
- concrete repairing materials
- processes for the calculation of material requirements
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- mortar mix composition and additives
- placing and finishing of concrete
- levelling techniques
- formwork and reinforcement
- concrete structures
- control joints
- Safe work method statements

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 applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- remove a section or whole
- defective area, cleaning and preparing of effected area, applying the necessary bonding, identify and apply the correct rectification method and top coat to a minimum of 1sqm of effected area for 3 of the minor repairs and 1 major repair listed in the Range Statement

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to repairing concrete
- hand and power tools, plant and equipment appropriate to repairing concrete
- 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.
- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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 Australian 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

BCGMAS0092A: Cut and core concrete

Competency Descriptor:

This unit specifies the competency required planning, preparing, cut and core concrete for the provision of service holes, core samples, construction joints and joining new components.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare	1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied. 1.2 Safety requirements are followed in accordance with safety plans and policies. 1.3 Signage/barricade requirements are identified and implemented. 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement. 1.5 Material quantity requirements are calculated in accordance with plans and/or specifications. 1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.
2. Cut and core concrete	2.1 Cutting/coring requirements are identified and assessed. 2.2 Equipment for sawing/drilling is selected according to the task. 2.3 Sawn joint is cut to specifications and job requirements. 2.4 Sawn joint is cut in to penetrate to specified depth.

- 2.5 Cored hole is drilled to specifications and job requirements.
 - 2.6 Cored hole is drilled clear through the concrete to the specified diameter.
 - 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. Clean up

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

Cutting of concrete is to include but not be limited to:

- construction joints/anti cracking joints/structural joints/control joints/articulation joints/expansion and contraction joints
- join new concrete components
- removal of failed section of slabs

Coring of concrete is to include but not be limited to:

- the provision of holes to accommodate services
- for testing of core samples
- provide for fixtures

Saw types are to include but not be limited to:

- hand held
- walk behind

Drill types are to include but not be limited to

- diamond tip drills

Cutting and coring activities may include but not be limited to:

- being applicable to foundations
- pits
- slabs
- columns
- walls
- plinths
- kerbs
- gutters
- pathways
- hardstands
- driveways
- residential
- and commercial buildings

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

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices

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

Environmental requirements are to include but are not limited to:

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

Quality requirements are to include but not be limited to:

- Relevant regulations including Jamaican Standards
- internal company quality policy and standards workplace operations and procedures manufacturers' specifications where specified

Regulatory authorities may include:

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

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:

concrete saws
concrete drilling equipment
coring equipment
diamond tip drill bits

and may include:

- nips
- bolt cutters
- measuring tapes
- hoses

Materials are to include water as a cooling agent and may include:

- other specialist cooling agents

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

Environmental requirements are to include but are not limited to:

- waste management
- noise
- dust
- vibration
- storm water management
- clean-up management.

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

On site meeting processes may include:

- notification/ scheduling (time, place, purpose)
- task discussions
- local co-ordination of procedural and operational issues
- safe work procedures related to cutting and coring concrete
- regulatory/legislative requirements pertaining to cutting and coring concrete
- manufacturers' specifications and instructions where specified
- 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

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

- 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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- completion of saw cutting a construction joint to a minimum of 3 metres straight or to the set line, to job specifications
- core a hole in a designated surface, clear through a minimum of 100mm in depth, to job specifications

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – Carry out OH&S requirements

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- workplace and equipment safety requirements
- quality requirements
- general Construction terminology/technology
- plant, tools and equipment types, characteristics, uses and limitations
- concrete cutting and coring techniques
- cooling drills and saws
- processes for the calculation of joint requirements
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- substructure construction
- control joints
- Safe work method statements

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 applicable to workplace operations
- comply with organisational policies and procedures including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- complete saw cutting of a construction joint to a minimum of 3 metres straight or to the set line, to job specifications
- core a hole in a designated surface, clear through a minimum of 100mm in depth, to job specifications
- clear through a minimum of 100mm in depth, to job specifications

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to cutting and coring concrete
- hand and power tools, plant and equipment appropriate to cutting and coring concrete
- 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.
- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.
- Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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 Australian 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"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

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.

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 SkillsKnowledge

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

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.

BCGSTW0222A: Oxy-acetylene cutting

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively set up and use oxyacetylene cutting equipment, and applies to all individuals involved in carrying out basic cutting of steel in the construction industry.

Competency Field:

General/Civil Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1	Set up	1.1	OH&S requirements for oxy-acetylene tasks and workplace environment recognised and adhered to.
		1.2	Quality Assurance requirements for company's construction operations recognised and adhered to.
		1.3	Appropriate personal protective equipment selected, correctly fitted and used.
		1.4	Equipment selected in accordance with application tasks, checked for serviceability and any faults reported to supervisor.
		1.5	Hazards identified and removed and the correct fire extinguisher made readily accessible prior to commencing operations.
		1.6	Regulators attached to both oxy and acetylene bottles using current safety procedures in accordance with manufacturer's specifications and OH&S regulations.
		1.7	Equipment tested for leaks and corrective action taken or faults reported to supervisor.
		1.8	Correct pressures and cutting tips used in accordance with material to be cut and manufacturer's specifications.
		1.9	Lines correctly purged prior to lighting up according to manufacturer's recommendations.
		1.10	Material marked accurately and, where applicable and where required, clamped ready for cutting.
2	Cut material	2.1	Torch correctly and safely lit according to manufacturer's specifications and recommendations.
		2.2	Setting of flame correctly adjusted for cutting to manufacturer's recommendations.

		2.3	Correct cutting position adopted .
		2.4	Material safely and correctly cut to set out mark.
3	Shut-down	3.1	Correct closing down procedures used to switch off torch and shut off gas supply.
4	Clean-up	4.1	Debris and unwanted materials removed safely from worksite.
		4.2	Equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to the use of oxy acetylene equipment to carry out basic cutting of steel

Basic cutting to include:

- cutting up waste for salvage
- cutting reinforcement steel
- cutting holes in plate

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

- use of oxy acetylene equipment
- safety hazards and hazard control
- protective clothing and equipment
- handling of materials

Quality Assurance requirements may include:

- work procedures
- safety requirements
- control of handling
- use of plant and equipment

Personal protective equipment may include but is not limited to:

- coveralls
- boots
- hard hat/cap
- leather apron
- safety goggles
- leather gloves

Equipment may include but is not limited to:

- cylinders
- regulators
- gas tubing
- cutting blowpipe
- flint lighters
- measuring tape/rule
- clamps
- support stands

Hazards may include but are not limited to:

- flammable materials
- pathway obstacles
- off cut material

Debris and unwanted material may include:

- off cut material
- empty containers
- cardboard
- paper

Work must be done under supervision.

Reporting of faults may be verbal or written.

EVIDENCE GUIDE

Competency is to be demonstrated safely and effectively when cutting material in accordance with the range listed within the range of variables statement.

(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
- show compliance with organisational policies and procedures including Quality Assurance requirements
- adopt and carry out correct procedures prior to setting up oxy acetylene equipment and during the cutting process
- demonstrate safe and effective operational use of tools, plant and equipment
- demonstrate correct procedures in setting up and shutting down oxy acetylene equipment
- give particular attention to safety and elimination of hazards
- demonstrate safe handling of material
- interactively communicate with others to ensure safe operations
- demonstrate effective cutting to produce designed cut material

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- 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 including relevant OH&S legislation and regulations
- oxy-acetylene equipment
- hand tools and equipment
- materials relative to oxy-acetylene cutting procedures
- manual handling
- measurement
- drawings, sketches and instructions

Skills

The ability to:

- work safely to instructions
- interpret relative drawings and instructions
- use power tools and hand tools
- select material
- measure relative to cutting processes
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- construction materials relative to oxy-acetylene cutting
- oxy-acetylene equipment appropriate to cutting operations
- hand tools and related equipment appropriate to cutting process
- suitable work area appropriate to application activities

(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.

Assessment may be by direct observation of application to tasks or by questioning related to underpinning knowledge.

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

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

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

BCGSTW0262A: Carry out steel-fixing

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively fabricate and place concrete reinforcement to formworks and footings, and applies to individuals carrying out steelfixing work in building and 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 application tasks and workplace environment recognised and adhered to.
		1.3	Reinforcement, type of fixing and locations identified from instructions/reinforcement schedule, job drawings and specifications.
		1.4	Formwork/excavation checked for completion and conformity to receive reinforcement.
		1.5	Appropriate personal protective equipment selected, correctly fitted and used.
		1.6	Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		1.7	Delivered reinforcement checked for correct size type and quantities against reinforcement schedule/details shown in job detail drawings.
2	Prepare for reinforcement placement	2.1	Reinforcement bars cut and bent to required set -out and drawing details.
		2.2	Bars tied to designed configuration from drawings.
		2.3	Reinforcement sheets cut to required sizes, where applicable.
		2.4	Stiffening rods attached to panels to instructions as required to facilitate handling processes.

-
- | | | | |
|---|--|-----|---|
| | | 2.5 | Bar chairs/spacers located to requirements of reinforcement schedule and job drawings. |
| 3 | Place and fix reinforcement | 3.1 | Fabric reinforcement sheets positioned correctly in accordance with approved drawings and schedule. |
| | | 3.2 | Reinforcement bars located according to specification and positioned in accordance with approved drawings and schedule. |
| | | 3.3 | Reinforcement correctly placed using bar chairs, ligatures and spacers according to specification and schedule . |
| | | 3.4 | Reinforcement fabric and/or bars tied and/or welded in correct placement in accordance with approved drawings/job specification and AS1554.3. |
| | | 3.5 | Cast-in items secured to reinforcement to specifications. |
| | | 3.6 | Ends of protruding reinforcement covered and protected in accordance with specifications. |
| 4 | Inspect reinforcement prior to concrete pour | 4.1 | Location and position of ties and/or welded fabric/bar reinforcement checked for accuracy and spacing before concrete placement. |
| 5 | Clean up | 5.1 | Area cleared to specification. |
| | | 5.2 | Waste material removed and placed in job waste bins or rubbish stockpiles. |
| | | 5.3 | Tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to the fabrication and placement of steel reinforcement to concrete forms and excavations for footings on site.

Forms for concrete structural members and footing excavations may include:

- beam footings
- beams
- slab on ground
- suspended slabs
- columns
- stairs
- pads
- walls

Reinforcing may include:

- deformed bars
- plain rods
- mesh sheets of plain bars
- mesh sheets of deformed bars

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- respirators
- hard hat

Tools and equipment may include but are not limited to:

- bolt cutters
- hacksaw
- wire nippers
- tie wire spool
- welding equipment
- measuring tape/rule
- reinforcement benders
- mesh guillotine
- range of general hand and power tools

Quality Assurance requirements may include:

- preparation of reinforcing
- placement and support
- concrete coverage
- control of handling

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

- protective clothing and equipment
- cutting and handling of material
- working from scaffolding
- using tools and equipment
- worksite environment and safety
- handling of materials

Welding of reinforcement fabric and/or bars to be in accordance with:

- AS1554.3 – 1983 Welding of Reinforcing Steel

Instructions and reporting of faults may be verbal or written, with instructions being part of a supervisor's directions.

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

EVIDENCE GUIDE

Competence is to be demonstrated by the safe and effective placement of reinforcing to at least three (3) of the separate types of structures/members/footings listed within the range of variables.

(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
- show compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment
- apply organisational quality procedures and processes within the context of fixing steel reinforcing
- check materials for conformity with specifications and job requirements
- Identify and follow assembly location and placement sequence
- demonstrate safe and effective use of tools and equipment and handling of materials
- place and tie/weld reinforcement to specification
- interactively communicate with others to ensure safe and effective operations in fixing the reinforcing

(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 SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- formwork for concrete
- portable power tools, hand tools
- plant and equipment
- materials relevant to steel-fixing
- materials handling
- measurement and calculation
- drawings and specifications
- reinforcement schedule
- appropriate steel-fixing procedures and legislative requirements

Skills

The ability to:

- work safely to instructions
- interpret drawings and specifications/instructions
- use power tools and hand tools
- handle materials
- select materials
- measure relative to the process
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- reinforcement materials appropriate to construction process
- hand tools and power tools appropriate to steel fixing process
- plant and equipment appropriate to steel fixing process
- suitable formwork or excavation appropriate to construction process

(5) Method of Assessment

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

Competence 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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
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.

BCGCOR0272A: Operate elevated work platforms (EWP)

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively and safely operate elevated work platforms to lift and lower loads at construction and other related work sites, and applies to individuals operating ancillary construction equipment.

Competency Field:

General Construction

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

- | | |
|---------------------------------------|---|
| 1. Plan and prepare work | 1.1 OH&S requirements associated with operating elevating work platforms and workplace environment recognised and adhered to. |
| | 1.2 Workplace operations plan identified in accordance with job requirements and surrounding activities and environment. |
| | 1.3 Appropriate personal protective equipment selected, correctly fitted and used. |
| | 1.4 Equipment selected consistent with job requirements and checked for serviceability. |
| | 1.5 Safety hazards identified and correct procedures used to minimise risks to self and others. |
| | 1.6 Materials selected in accordance with job drawings and/or from specifications/supervisor's instructions. |
| 2. Conduct routine checks of platform | 2.1 Power source determined where applicable and connected to platform equipment to manufacturer's specifications. |
| | 2.2 Routine pre-operational equipment checks carried out in accordance with checklist from operator's manual. |
| | 2.3 Equipment switched on in accordance with start up procedures and controls checked for correct operation and ease of movement. |

-
- | | | |
|---|-----|--|
| | 2.4 | Emergency safety devices checked to instructions from operator's manual. |
| | 2.5 | Work location checked for level ground and floor surface to determine stabilising and safe working area requirements. |
| 3. Locate equipment in place for work application | 3.1 | Platform located in position for work application and stabilisers engaged to set equipment base level into place. |
| | 3.2 | Barricades and signage erected to isolate safe working area where applicable. |
| | 3.3 | Tools, equipment and materials placed into bucket/platform to job application requirements. |
| 4. Elevate platform to work location | 4.1 | Controls operated to manufacturer's recommendations and platform elevated to work position. |
| | 4.2 | Power switched off and locking devices engaged to operator's manual. |
| | 4.3 | Work carried out to job specification and safety requirements of operator's manual. |
| 5. Lower platform and shut down | 5.1 | Controls operated to manufacturer's recommendations and platform lowered to down position. |
| | 5.2 | Shut down procedures carried out to operator's manual and equipment switched off. |
| 6. Clean up | 6.1 | Waste material removed and disposed of safely. |
| | 6.2 | Unused materials sealed and stored/stacked. |
| | 6.3 | Tools and equipment removed, cleaned, maintained and stored. |
| | 6.4 | Stabilisers disengaged, equipment stored and secured and unit removed from location. |
| | 6.5 | Routine post-operational checks carried out in accordance with checklist from operator's manual and any faults reported to supervisor. |

RANGE OF VARIABLES

This unit applies to mobile hydraulic and mechanical platforms not exceeding 11 metres in lift capacity, which may be operated from ground, pavement or floor surfaces.

Work applications may include but are not limited to: Elevating work platforms include but are not limited to:

- painting
 - erecting signs
 - fixing steelwork
 - minor repair work to buildings
- scissor type
 - extending arm (cherry picker)

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

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

Personal protective equipment may include:

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

Safety hazards may include but are not limited to:

- obstacles in pathway or on face of walls
- limited space
- other activities within vicinity
- weather conditions

Work is to be undertaken in a team situation under supervision where instructions would be part of supervisor's directions. Instructions and reporting of faults may be verbal or written.

EVIDENCE GUIDE

Competency is to be demonstrated by the safe and effective operation of any of the EWP's 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
- show compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to, during and after use of elevating work platform
- demonstrate safe and effective operational use of plant, tools and equipment
- demonstrate safe and effective work application while in set elevated position
- interactively communicate with others to ensure safe and effective workplace operations

(2) Pre-requisite Relationship of Units

Competency in this unit may be determined concurrently with other units relevant to the work orientation, based upon integrated project work.

Pre-requisites for this unit are:

- 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 relative to EWP's
- a range of EWP's
- operation and maintenance of equipment
- use of hand and power tools
- drawings and specifications
- communication processes – verbal and signalling
- materials and material fixing

Skills

The ability to:

- work safely to instructions
- interpret drawings and specifications
- use hand tools
- use plant and equipment
- fix materials
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- appropriate elevating work platform
- plant and equipment appropriate to EWP
- hand tools and materials appropriate to work application from EWP
- suitable work area appropriate to operation of EWP
- appropriate operation and manufacturer's specification manual

(5) Method of Assessment

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

Assessment should be by direct observation of tasks and questioning related to underpinning knowledge.

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

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 Guide lines for advice on how to use the Critical Employability Skills.

BCGMAS1472A: Lay segmental/unit paving

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and carry out segmental/unit paving, and applies to individuals working in masonry/concreting work in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Define soil type and determine paving material	1.1 Quality Assurance requirements of company's paving operations recognised and adhered to. 1.2 Area and location of paving identified from job drawings. 1.3 Sub-soil and footing type identified and classified according to Standards–Methods of Testing Soils for Engineering Purposes. 1.4 Base material selected according to type of paver, manufacturer's specifications and identified substrate. 1.5 Paving material selected to specification in accordance with required finish of surface and paving/stonework pattern. 1.6 Bedding sand selected free from deleterious material likely to cause efflorescence or reduce skid resistance. 1.7 Required quantity of materials calculated in details from project drawings/site location and specifications.
2. Prepare to lay paving	2.1 OH&S requirements for workplace environment and processes of preparing base and laying pavers identified and adhered to. 2.2 Appropriate personal protective equipment selected, correctly fitted and used. 2.3 Tools and equipment selected to carry out processes consistent with requirements of job and checked for serviceability. 2.4 Safety hazards identified and correct procedures used to eliminate hazards and reduce risks to self and others.
3. Construct paving	3.1 Location and shape of paving area set out to dimensions from job drawings. 3.2 Excavation carried out to required depth, allowing for base and thickness of unit and specified finished level. 3.3 Drainage pipes positioned in sub-soil to local regulations or specification requirements. 3.4 Mortar for masonry paving mixed to specifications and Standards– Masonry in Buildings, where applicable.

- 3.5 Base material spread and compacted to specifications, where applicable.
 - 3.6 Bedding material spread and screeded to designed level and alignment, where applicable.
 - 3.7 Edge boards positioned to set out and adhere to specifications, where applicable.
 - 3.8 Where drainage is necessary, paving surface is graded to fall evenly without ponding to outlets or surface and a run-off system should be provided.
 - 3.9 Paving units/segments cut and laid to designed pattern and specifications.
 - 3.10 Initial starting line of laying pavers determined and pavers laid to designed line conforming with specified pattern.
 - 3.11 Paving units/segments laid with joints according to specifications and surface finish aligned.
 - 3.12 Finished level maintained across junctions between different finishes.
 - 3.13 Paving installation completed with joints finished to specifications.
 - 3.14 Paving surface cleaned on completion to the requirements of specifications.
4. Clean up
- 4.1 Area cleared to specification with waste, materials and equipment removed.
 - 4.2 Waste and unwanted material disposed of safely.
 - 4.3 Unused materials stored/stacked.
 - 4.4 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit covers the laying of all types of segmental paving to both level and inclined surfacing.

Areas for paving may include:

- footpaths
- roads
- cycle and walking tracks
- malls
- podiums
- sports arenas
- platforms
- ramps
- inclined surfaces
- plazas

Paving material may be:

- clay bricks
- clay pavers
- stone segments
- slate (random and regular)
- concrete blocks
- concrete pavers

Pavers may be laid on different substrates which include:

- compacted crushed rock
- concrete

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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- rakes
- vibrating plate
- concrete mixer
- wheelbarrows
- masonry saws
- trowels
- screed board
- shovels
- mallets
- string lines
- hammers
- spirit level
- power leads

Finishing of joints of pavers may be:

- closed joints
- closed with sand brushed in
- mortar joints

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
- finishing of paved surfaces

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- respirators
- knee pads

EVIDENCE GUIDE

Competency is to be demonstrated by laying two separate types of segmental/unit paving from those listed in the range of variables, one to be laid to mortar bedding and the other to sand.

(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 and paving operations
- select and use appropriate processes, tools and equipment to carry out tasks
- apply organisational quality procedures and processes within context of laying segmental/unit paving
- adopt and use safe and effective procedures to prepare substrate and bedding material
- ensure pattern consistent with drawings and specification
- give attention to levels and ensuring no ponding on paved area
- finish paved areas to even surface and to line either level or to specified gradient
- identify typical faults and problems that occur or likely to occur and necessary action taken to rectify

(2) Pre-requisite Relationship of Units

- BGCOR0051A Use hand and power tools
- BGCOR0061A Use plant and equipment
- BCGMAS0101A Carry out concrete work to simple forms
- BGCOR0242A Carry out levelling
- BGCOR0433A Carry out basic setting out

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- types of pavement units and material characteristics
- methods of laying pavement units
- working drawings and specifications
- mortar mix specification
- range of mortar additives including plasticisers, colours and waterproofing agents
- base preparation and materials
- tools, plant and equipment
- calculation of material requirements
- measuring and levelling

Skills

The ability to:

- work safely
- organise work
- interpret drawings and specifications
- set out area
- operate basic plant and equipment
- use tools and equipment
- communicate effectively
- calculate material quantities

(4) Resource Implications

The following resources should be provided:

- workplace location for proposed activity
- tools and equipment appropriate to installation processes
- materials relevant to proposed installation
- drawings and specifications relevant to activity

(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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	To measure self-performance
Communicate ideas and information	Level 2	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 3	As an aid to measure and schedule tasks
Solve problems	Level 1	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.

BCGCAR0282A: Use explosive power tools (EPT)

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively set up and use explosive power tools, and applies to individuals that use fasteners in the construction processes.

Competency Field:

General/Civil Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare work	1.1	Quality Assurance requirements for company's construction operations recognised and adhered to.
		1.2	Occupational Health & Safety requirements associated with application tasks and workplace environment recognised and adhered to.
		1.3	Job requirements assessed to determine access and appropriate fastener and charge to suit material and base to be fixed.
		1.4	Explosive power tools, attachments and equipment selected consistent with requirements of job, checked for serviceability and any faults reported to supervisor.
		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	Scaffolding erected, where applicable, and according to OH&S requirements.
		1.8	Explosive power tool operations carried out in accordance with manufacturer's recommendations.
2.	Set out for fasteners	2.1	Material or base set out for location of fasteners in accordance with detailed drawings and specifications.
		2.2	Minimum distances from edge of material adhered to in accordance with manufacturer's specifications.

-
- | | | |
|----|---------------------------|--|
| | 2.3 | Material located and temporarily held or fixed into designed position of detailed drawings. |
| 3. | Use explosive power tools | |
| | 3.1 | Fastener selected to requirements of job. |
| | 3.2 | Charge selected to assess requirements for material, base and penetration. |
| | 3.3 | Attachments and/or accessories installed to explosive power tool in accordance with manufacturer's specifications. |
| | 3.4 | Explosive power tool checked for operation to manufacturer's specifications. |
| | 3.5 | Fastener and charge located in explosive power tool to manufacturer's specification. |
| | 3.6 | Personal protective equipment fitted and worn in accordance with manufacturer's recommendations. |
| | 3.7 | Explosive power tool operated safely and fastener fixed into place. |
| | 3.8 | Fastening penetration checked and determined for appropriate depth into material. |
| | 3.9 | Power regulating device adjusted for conditions where required. |
| | 3.10 | Misfire procedures carried out where required to manufacturer's recommendations. |
| 4. | Clean up | |
| | 4.1 | Temporary holding/fixing removed without damage to material. |
| | 4.2 | Explosive power tool cleared, attachments removed and tool and attachments cleaned. |
| | 4.3 | Charges stored in designated container in accordance with requirement and used charges recorded. |
| | 4.4 | Unused fasteners, explosive power tool and attachments stored in carry case according to manufacturer's recommendations. |
| | 4.5 | Area cleared and waste material disposed of safely. |

5. Maintain explosive power tool and kit	5.1	Safety features of tool checked for serviceability in accordance with manufacturer's operating manual.
	5.2	Tool cleaned and lubricated to manufacturer's recommendation.
	5.3	Periodic maintenance service carried out to manufacturer's specifications.
	5.4	Log book checked and maintenance recorded to manufacturer's recommendations.
	5.5	Diminished stocks of charges and fasteners replenished to designed effectiveness of power tool kit.

RANGE STATEMENT

This unit applies to both direct action and indirect action explosive powered fastening tools.

Use of these tools is to be in accordance with relevant Statutory Legislation requirements and:

- Recommended procedures for the usage of Explosive-Powered Hand held Fastening Tools, Fasteners and Explosive Charges

Tools used to fasten materials or fix fasteners to bases of:

- concrete
- masonry
- steel

Quality Assurance requirements may include:

- workplace operations and work procedures
- safety requirements
- quality of materials
- application relevant to specifications of work

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

- workplace environment and safety
- use of explosive power tools
- isolation of working areas
- use of tools and equipment
- protective clothing and equipment
- working from scaffolding
- emergency procedures

Personal protective equipment is to incorporate requirements of:

- Acoustics – Hearing Protection
- Eye Protection for Industrial Application

In addition to ear plugs/muffs and safety glasses/goggles, other personal protective equipment may include:

- gloves
- boots
- hard hat
- overalls
- dust mask/respirator

Safety hazards may include but are not limited to:

- obstacles close to operation location
- other activities within vicinity
- limited space

Reporting of faults may be verbal or written.

EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective operational use of an EPT in application to the various types of bases listed within the range of variables 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 explosive power tools and workplace operations
- show compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during application of fixing/fastening process
- demonstrate safe and effective operational use of explosive power tools and equipment
- show correct interpreting of manufacturer's manual and reporting procedures
- interactively communicate with others to ensure safe and effective workplace operations

(2) Pre-requisite Relationship of Units

Competency in this unit may be determined concurrently with other relevant units based upon integrated project works relative to the work orientation.

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

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant OH&S statutory regulations
- explosive power tools
- hand tools and equipment
- materials relevant to the operation of (EPT's)
- measurements and calculations
- drawings and specifications
- Quality Assurance
- operational procedures in accordance with manufacturer's specifications maintenance of equipment
- fixing of materials

Skills

The ability to:

- work safely to instructions
- use hand and power tools
- measure relative to fixing of materials
- demonstrate operational procedures for EPT
- communicate effectively identify drawing details relevant to operation of Explosive Power Tools (EPT)
- maintain accurate records

(4) Resource Implications

The following resources should be made available:

- explosive power tool and complete kit
- general construction materials relevant to operation applications of EPT
- hand and power tools and supportive equipment appropriate to operation applications of EPT
- suitable work area appropriate to operation applications of EPT
- manufacturer's manual of operations

(5) Method of Assessment

Competency should be assessed while work is carried out under direct supervision.

Assessment should be by direct observation of tasks and questioning related to underpinning knowledge.

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

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
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.

BCGMAS1393A: Carry out veneer construction

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and carry out brickwork veneer construction, and applies to individuals working in masonry in 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 for workplace environment and preparing for and laying bricks/blocks for veneer construction identified and adhered to.
		1.3	Material and quantity requirements determined from job drawings and specifications.
		1.4	All work to comply with Standards for: Clay Building Bricks, 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	Tools and equipment selected consistent with requirements of brick and block veneer construction, checked for serviceability and faults reported to supervisor.
2.	Set out brickwork/block-work	2.1	Location and structural details of brickwork/ block-work identified from drawings and job specifications.
		2.2	Brickwork/block-work set out to location and dimensions from drawings and specifications.
3.	Construct base brickwork/ block-work	3.1	Mortar mixed and bricks/blocks laid to set out to specifications.
		3.2	Brickwork/block-work gauge determined and set out rod prepared.
		3.3	Base brickwork/block-work constructed for veneer construction to Standard requirements.
4.	Construct veneer walls	4.1	Timber/steel structural frame checked to ensure completed ready for brick/block veneer with no protrusions into cavity requirements.
		4.2	Brickwork/block-work laid and completed to job drawings and specifications.
		4.3	Damp proof courses laid/built in to job specifications.

- 4.4 Ventilation for veneer construction built in to specifications to requirements of as per Standard and Building Code.
- 4.5 Wall ties positioned and correctly fixed to timber/steel framework to specification.
- 4.6 Openings constructed and flashings installed to job specifications.
- 4.7 Cavities kept clear of mortar droppings and bridging.
- 4.8 Lintels installed to job specifications.
- 4.9 Top brickwork/block work constructed to eaves level to Standard requirements.
- 4.10 Scaffolding erected as required in accordance with job requirements and OH&S regulations.
- 4.11 Walls built to gauge straight and true in plumb, line and level within tolerances set out in specification.
- 4.12 Control joints formed in accordance with locations on job drawings and specifications and standard requirements.
- 4.13 Weep holes, brick/block reinforcing, vermin proofing and wall flashing located and built in, where required, to job specifications.
- 4.14 Sill bricks cut where required and laid to line in accordance with job specifications.
- 5. Rake/rule joints
 - 5.1 Joints of laid brickwork/block work raked or ruled to correct depth and profile in accordance with job specifications.
 - 5.2 Brickwork/block work brushed down prior to drying to remove unwanted mortar.
- 6. Clean up
 - 6.1 Area cleared to specification.
 - 6.2 Cavities cleaned free of mortar and debris.
 - 6.3 Waste and unwanted materials removed and placed into job waste bins or rubbish stockpile.
 - 6.4 Unused materials stored.
 - 6.5 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit covers all straight, square and plumb brick/block veneer construction incorporating wall ties and reinforcement as specified.

Quality Assurance requirements may include:

- workplace operations and procedures
- quality of materials
- use and maintenance of equipment
- attention to work specifications
- colour and shape of bricks/blocks
- mortar mix/composition
- control of handling procedures
- application procedures
- 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
- use of tools and equipment
- handling of materials
- working platforms and scaffolding
- safety hazards

Tools and equipment may include:

- measuring tape/rule
- hammers
- spirit level
- dumpy level
- concrete mixer
- bolsters
- wheelbarrows
- shovels
- masonry saw
- trowels
- straight edges
- plumb rule
- jointing tools
- string line
- line pins
- profiles
- scaffolding
- mortar boards
- masons square
- angle grinder
- power leads

Personal protective equipment may include:

- safety goggles/glasses
- overalls
- boots
- gloves
- dust masks/respirators
- cap
- overalls

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 laying brickwork/block-work to provide a veneer construction to a timber or metal stud framed structure.

(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 and brick laying operations
- select and use appropriate processes, tools and equipment for carrying out veneer construction
- apply organisational quality procedures and processes within context of brick/block veneer construction
- select bricks/blocks and mortar consistent with specification of required job
- demonstrate accurate measuring and setting out techniques
- determine wall location and set out accurately
- lay bricks to line level, plumb and gauge
- apply safe and effective procedures in erecting of scaffold
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective work operations are carried out
- clean up cavities, wall and work area
- complete base and brick/block veneer construction to specification

(2) Concurrent Assessment and Pre-requisite Relationship of Units

- BCGCOR0061A Use plant and equipment
- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGCOR0081A Use simple levelling devices
- BCGMAS0151A Prepare for construction process (brick/block-work)
- BCGCOR0242A Carry out levelling.
- BCGMAS1423A Lay bricks and blocks (wall and corner)

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- workplace and equipment safety requirements including regulations, codes and standards
- job drawings and specifications
- brick and block expansion and growth
- control and articulation joints
- mortar mix composition

Skills

The ability to:

- work safely
- read and interpret drawings
- interpret documentation from a wide range of sources
- use tools and equipment suitable for erection of brick/block veneer construction

Underpinning Knowledge and Skills (Cont'd)Knowledge

Knowledge of:

- range of mortar additives including plasticisers and their application
- Relevant Building Code and Standards of Jamaica
- materials and their characteristics
- tools and equipment
- quantities
- scaffolding

Skills

The ability to:

- height set out work
- lay bricks and blocks
- communicate effectively
- calculate quantities
- erect restricted scaffolding

(4) Resource Implications

The following resources should be provided:

- workplace location
- tools, plant and equipment appropriate to installation of brick/block wall in veneer construction
- scaffolding
- appropriate materials required for activity
- drawings and specifications relevant to task

(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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	To measure self-performance
Communicate ideas and information	Level 2	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 3	As an aid to measure and schedule tasks
Solve problems	Level 2	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.

**BCGMAS0803A: Install glass block work**

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and install glasswork building blocks, and applies to individuals working in laying building blocks in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	<ul style="list-style-type: none">1.1 Quality Assurance requirements for company's construction operations recognised and adhered to.1.2 OH&S requirements for workplace environment and preparing and installing glass block work recognised and adhered to.1.3 Materials and quantity requirements determined from job drawings, specifications and manufacturer's recommendations.1.4 Appropriate personal protective equipment selected, correctly fitted and used.1.5 Tools and equipment selected to carry out processes consistent with job requirements and checked for serviceability.1.6 Safety hazards identified and correct procedures used to minimise risk to self and others.1.7 Adhesive checked for manufacturer's recommendations and conformity to specifications.1.8 Location and dimensions of block work determined from job drawings.
2. Set out and prepare base	<ul style="list-style-type: none">2.1 Area correctly located, base and abutting surfaces checked for level/plumb and finished to specification.2.2 Surface for block work checked for clean and dry and prepared according to manufacturer's and job specification.2.3 Wall or section of block work set out to base details from job drawings.
3. Install glass blocks	<ul style="list-style-type: none">3.1 Adhesive applied according to manufacturer's recommendations and job specifications.3.2 Spacers and connectors located and positioned in accordance with manufacturer's and job specifications.



- 3.3 Glass blocks laid to set out line, plumb, level and to designed pattern according to specifications.
- 3.4 Scaffolding erected, where required, in accordance with OH&S regulations.
- 3.5 Block work completed to job drawings and specifications.
- 3.6 Joints tool finished to achieve specified finish.
4. Clean-up
 - 4.1 Excess adhesive removed and block work face cleaned with manufacturer's approved cleaning fluid.
 - 4.2 Area cleared and waste material disposed of safely.
 - 4.3 Unused materials sealed and stored/stacked.
 - 4.4 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to block work constructed using glass blocks with silicone type adhesive or sealant.

Glass block work may also be installed using cement mortar joints.

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
- use of adhesives

Safety hazards may include:

- noise from nearby work
- other work personnel
- obstructions to access
- barricades
- inadequate lighting
- height consideration

Tools and equipment may include but are not limited to:

- measuring tape/rule
- string lines
- trowels
- caulking gun
- knives
- jointing tools
- spirit level
- shovel
- concrete mixer
- rubber mallet
- straight edge
- scaffolding
- wheelbarrow

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:

- safety goggles/glasses
- boots
- gloves
- respirators



EVIDENCE GUIDE

Competency is to be demonstrated by laying glass blocks using both cement mortar and flexible sealant/adhesive.

(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
- select and use appropriate processes, tools and equipment
- apply organisational quality procedures and processes within the context of installing glass block work
- check installation area for size, plumb, level obstructions, location and safety hazards
- prepare surfaces for the application of jointing materials in accordance with manufacturer's specifications
- maintain bond/pattern of block work consistent with drawings and specifications
- maintain alignment, level of courses and plumb
- 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 block work installation to specifications

(2) Pre-requisite Relationship of Units

- BCGCOR0051A Use hand and power tools
- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGCOR0081A Use simple levelling devices
- BCGMAS0151A Prepare for construction process (brick/block work)
- BCGCOR0212A Prepare surfaces
- BCGCOR0242A Carry out levelling
- BCGMAS1422A Lay bricks and blocks (wall and corner)

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

Knowledge of:

- workplace and equipment safety requirements
- working drawings and specifications
- glass block work construction
- hazards associated with solvents and adhesives used with glass blocks
- expansion joints for walls using clay, concrete or glass bricks/blocks
- mortar mix specification
- materials
- tools and equipment
- calculation of material requirements

Skills

The ability to:

- work safely
- interpret drawings and specifications
- organise work
- use tools and equipment
- communicate effectively
- calculate material quantities

(4) Resource Implications

The following resources should be provided:

- workplace location
- tools and equipment appropriate to installation processes
- scaffolding applicable to installation where required
- glass blocks and associate materials
- drawings and specifications relevant to activity

(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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

BCGMAS1013A: Construct fireplace and chimney

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct fireplace and chimney, and applies to individuals working in masonry trades in 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 for workplace environment and for constructing chimney and fireplace adhered to. 1.3 Materials and quantity requirements determined from job drawings and specifications. 1.4 Appropriate personal protective equipment selected, correctly fitted and used. 1.5 Tools and equipment selected are consistent with job requirements and checked for serviceability. 1.6 Materials and quantities checked for conformity to ordered quantities and specification.
2. Set out and prepare base	2.1 Footing checked for conformity to dimensions and location as per job drawings and specifications and in accordance with building standards for Slabs and Footings. 2.2 Fireplace base set out to correct measurements and location in association with adjoining wall if applicable, to job drawings.
3. Construct base	3.1 Mortar mixed and bricks/blocks/stone laid to set out for base, to specifications. 3.2 Bricks/stone laid to line and level and constructed in accordance with Building Standards for Masonry in Buildings. 3.3 Bricks/stone laid to job drawings and specifications.
4. Construct hearth and firebox	4.1 Damp proof courses built in to specifications and in accordance with Standards for Damp-proof Courses and Flashings

- 4.2 Bricks/blocks/stone laid to form hearth to designed shape, pattern and specifications.
 - 4.3 Brick/stone laid to job drawings and specifications.
- 5. Construct fire box and face brickwork
 - 5.1 Specified stone for fire box and face brickwork where different, selected to specifications.
 - 5.2 Firebox constructed with stone laid to form curvature and shape of rear and side walls to specifications.
 - 5.3 Face brickwork laid to form shape of openings to designed dimensions and finish of drawings and specifications.
 - 5.4 Lintel, where applicable, installed to specifications.
 - 5.5 Face-work laid to bond/pattern/colour finish to wall and aligned to specification.
 - 5.6 Protrusions and/or mantle piece formed and finished to designed shape and specifications.
 - 5.7 Plumb and level maintained for straight work.
- 6. Form throat and chimney shaft
 - 6.1 Throat formed, rendered and shaped to design and specifications for fire box and chimney.
 - 6.2 Parging to flue completed to specifications.
 - 6.3 Brick/stone laid to build outer skin and form chimney shaft to specifications.
 - 6.4 Baffles built in, where designed, to location and specifications.
- 7. Complete chimney
 - 7.1 Chimney constructed to extend minimum 600mm above the highest roof ridge or point.
 - 7.2 Head of chimney completed to designed finish to drawings and specifications.
 - 7.3 Scaffolding erected as required in accordance with job requirements and OH&S regulations.
- 8. Rake/rule joints
 - 8.1 Joints to laid brickwork/block-work/stonework raked or ruled to designed depth in accordance with the job specifications.
 - 8.2 Joints to laid brickwork/block-work/stonework raked out for provision of apron and stepped flashing at roof line.
 - 8.3 Brickwork/block-work/stonework brushed down prior to drying using appropriate brushing tool.

- | | | | |
|----|----------|-----|--|
| 9. | Clean-up | 9.1 | Area cleaned and waste, materials and equipment removed. |
| | | 9.2 | Unused materials stored/stacked. |
| | | 9.3 | Waste and unwanted material removed and placed into job waste bins or rubbish stockpile. |
| | | 9.4 | Tools and equipment cleaned, maintained and stored. |

RANGE OF VARIABLES

This unit covers the construction of open fireplaces and chimneys constructed in brick/block veneer and solid brick/block/stone wall structured buildings.

All construction should comply with:

- Building Standards/Codes for Masonry Cement
- Building Standards/Codes for Wall Ties for Masonry Construction
- Building Standards/Codes for Damp–Proof Courses and Flashings
- Building Standards/Codes for Masonry in Buildings

Brick/block types may include:

- clay wire cut bricks
- clay pressed bricks
- fire-rated concrete blocks

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

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
- brick/block laying operation and procedures

Personal protective equipment may include:

- safety goggles/glasses
- boots
- gloves
- cap
- respirator/dust masks

Stone sections may be:

- regular size
- random size

Tools and equipment may include:

- measuring tape/rule
- concrete mixer
- wheelbarrows
- masonry saws
- trowels
- mortar boards
- shovels
- spirit level
- string lines
- straight edge
- hammers
- pointing and raking tools
- brushes
- hoses

EVIDENCE GUIDE

Competence is to be demonstrated by carrying out the safe and effective construction of a fireplace and chimney using any of the materials listed within the range of variables.

(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
- select and use appropriate processes, tools and equipment consistent with requirement of activity
- apply organisational quality procedures and process within the context of constructing masonry fireplaces and chimneys
- demonstrate accurate measuring and setting out techniques
- determine chimney and fireplace location and set out accurately
- select bricks/blocks/stones and mortar consistent with specification or job required
- lay bricks or blocks to line, level and gauge
- apply safe and effective procedures in erecting scaffolding
- give attention to correct forming and size of throat related to fireplace
- identify typical faults that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective construction operations
- complete chimney and fireplace to specifications

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGMAS0151A Prepare for construction process (brick/block laying)
- BCGCOR0433A Carry out basic setting out
- BCGMAS1393A Carry out veneer construction
- BCGMAS1403A Carry out solid brick construction

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- site drawings and specifications
- brick expansion and growth
- characteristics of masonry materials
- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- mortar mix composition
- range of mortar additives including plasticiser/s and/or application
- National Building Code and Standards
- use of tools and equipment
- scaffolding
- measuring, levelling and calculations

Skills

The ability to:

- work safely
- interpret drawings and specifications
- organise work
- use tools and equipment
- measure and calculate quantities
- select materials appropriate to the task
- set out work
- lay bricks or blocks or stone
- erect scaffolding
- communicate effectively

(4) Resource Implications

- workplace location
- tools plant and equipment appropriate to construction processes
- materials relevant to activity
- scaffolding
- drawings and specifications relevant to activity

(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.

Competency should be assessed under general guidance checking at various stages of the process and at the 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 while tasks are undertaken either individually or as part of a team under 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

BCGCAR1193A: Carry out fire-rated wall and ceiling construction

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare frames and install fire-resistance material to wall and ceiling frames, and applies to individuals working in carpentry in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1 Quality Assurance requirements of company's construction operations recognised and adhered to.</p> <p>1.2 OH&S requirements for workplace environment and framing construction and lining processes recognised and adhered to.</p> <p>1.3 Type of fire resistant construction and material requirements determined from job drawings and specifications.</p> <p>1.4 Appropriate personal protective equipment selected, correctly fitted and used.</p> <p>1.5 Tools and equipment selected consistent with requirements of construction of fire rated walls and ceilings and checked for serviceability.</p> <p>1.6 Materials checked for conformity to quantities and specifications.</p> <p>1.7 All construction and materials to comply with the Building Code and Standards - for Fire Tests on Buildings and Structures, Materials and Components.</p> <p>1.8 Location and composition of wall structure identified from job drawings and specifications.</p>
2. Construct steel stud wall system - non-loading bearing	<p>2.1 Steel structural frame constructed, erected and fastened into place and sheeted in accordance with sheet manufacturer's design and specifications.</p> <p>2.2 Fire resistant plasterboard sheets fixed vertically to metal studs using steel screws to manufacturer's specification.</p> <p>2.3 Double thickness sheets, where required, fitted and fixed with vertical joints staggered to joints of underneath sheets.</p>

- | | | | |
|----|--|-----|---|
| 3. | Construct steel stud walls with fire doors | 3.1 | Structural frame constructed with boxed doors studs erected and fastened into place and sheeted in accordance with sheet manufacturer's design and specifications. |
| | | 3.2 | Fire door assembly fitted and fixed to designed location in wall according to specification. |
| | | 3.3 | Fire resistant plasterboard sheets fixed vertically to metal studs using steel screws to manufacturer's specification. |
| | | 3.4 | Double thickness sheets, where required, fitted and fixed with vertical joints staggered to those of underneath sheets. |
| 4. | Construct staggered steel wall system | 4.1 | Steel structural frame constructed with staggered studs, erected and fastened into place and sheeted in accordance with sheet manufacturer's design specifications. |
| | | 4.2 | Fire resistant plasterboard sheets fixed vertically to metal studs using specified screws to manufacturer's specification. |
| | | 4.3 | Double thickness sheets, where required, fitted and fixed with vertical joints staggered to those of underneath sheets. |
| 5. | Construct steel studded chase walls | 5.1 | Steel structural frames constructed, erected and fastened in place with space between for service ducting and sheeted in accordance with sheet manufacturer's design specification. |
| | | 5.2 | Fire resistant plasterboard sheets fixed vertically to metal studs using specified screws to manufacturer's specification. |
| | | 5.3 | Double thickness sheets, where required, fitted and fixed with vertical joints staggered to those of underneath sheets. |
| 6. | Construct shaftwall systems - non load bearing | 6.1 | Shaftwall structure constructed of steel framing components and two types of plasterboard sheets to job and manufacturer's specifications. |

- | | | | |
|----|--|---|--|
| | 6.2 | Shaftwall erected and fixed in location to job drawings and sheets to manufacturer's specification. | |
| | 6.3 | Fire door assembly fitted and fixed to designed location in shaftwall to specification. | |
| | 6.4 | Fire resistant access panels and dampers with access panels built into locations in shaftwall according to specification. | |
| | 6.5 | Lift landing doors and frames built in according to locations in shaftwall to specification. | |
| 7. | Construct masonry wall systems | 7.1 | Masonry wall constructed at location using specified bricks/blocks laid to specification. |
| | | 7.2 | Plasterboard sheeting fixed vertically direct to masonry face by specified adhesive or by screwing to metal furring channel affixed to masonry to job specification. |
| | | 7.3 | Upgrading of existing fire resistant level carried out by fixing sheeting to existing masonry wall to job and manufacturer's specifications. |
| 8. | Construct timber stud wall system - non-load bearing | 8.1 | Structural timber frame constructed, erected and fixed into place and sheeted horizontally in accordance with sheet manufacturer's design specifications. |
| 9. | Construct timber stud wall system load bearing | 9.1 | Structural timber frame constructed, erected into place and fixed to job specifications. |
| | | 9.2 | Fire resistant plasterboard sheets fixed vertically to wall frame to manufacturer's specification in accordance with specified fire resistant level. |
| | | 9.3 | Double stud walls constructed for separating wall erected with specified space between. |
| | | 9.4 | Fire stops, where applicable, installed using compressed rockwool, timber or fire resistant plasterboard to specified minimum thickness to manufacturer's specification. |
| | | 9.5 | Rockwool batts fitted to one inner face of separating wall structure to provide acoustic requirement, where specified. |

- 10. Construct ceiling system
 - 10.1 Design of timber or metal ceiling construction determined from job drawings and specifications.
 - 10.2 Fire resistant plasterboard sheets fixed to ceiling joists/bottom chord/upper floor joists in accordance with manufacturer's specifications.
 - 10.3 Metal furring channels, where specified, fixed to underneath floor joists or ceiling joists to line and level.
 - 10.4 Plasterboard sheets fixed to furring channels using screws to manufacturer's specifications.
- 11. Construct suspended ceiling system
 - 11.1 Suspension/framework system installed to line and level in accordance with job drawings and specifications.
 - 11.2 Plasterboard sheets fixed to furring channels using screws to manufacturer's specifications.
- 12. Finish joints and junctions
 - 12.1 Fireseal rockwool compressed to form continuous fireblock between separating wall structure and roof covering.
 - 12.2 Service penetrations made to architect's specifications to maintain integrity of design.
 - 12.3 Fireseal strip fixed full length to gap between stud wall and cladding.
 - 12.4 Vermiculite plaster applied to stop gaps between ceiling & wall sheets.
 - 12.5 Vermiculite plaster filled and fitted to ceiling and wall junctions to close gap behind cornice moulding.
 - 12.6 Screw and nail holes stopped using specified material to flush finish.
 - 12.7 Plaster joints stopped using perforated paper tape and base coat applied to manufacturer's specifications.
 - 12.8 Joints finished with finishing coat applied to manufacturer's specification.
- 13. Clean up
 - 13.1 Area cleared to specification.
 - 13.2 Waste and unwanted material disposed of into job waste bins or rubbish stockpile.
 - 13.3 Unused materials stored/stacked.
 - 13.4 Tools and equipment cleaned, maintained and stored.

RANGE STATEMENT

This unit applies to the fixing of plasterboard to timber and steel wall and ceiling framing to form a fire resistant construction.

All work undertaken in accordance with:

- Standards for Fire Tests on Building Materials, Components and Structures.
- Relevant Building Code

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

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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit level
- squares
- nail bag
- hand saws
- key hole saw
- mitre box
- broad knives
- plasterer's trowel
- curved trowels
- taping knives
- internal angle taping tool
- internal angle finishing tool
- sanding float
- t-square
- jointing cement mixer
- power saws
- power drills
- electric screw gun
- power leads
- explosive power gun and fasteners
- trestles
- scaffolding
- planks

Materials include:

- steel wall framing
- timber wall framing
- steel suspended ceiling systems
- fire resistant plasterboard sheets
- fire resistant doors and jamb
- plasterboard adhesive
- jointing compound
- perforated paper jointing tape
- fire seal
- vermiculite stopping plaster

Fixing methods may include:

- screws
- clouts
- nails
- threaded nails
- adhesive
- explosive powered fastenings
- expansion anchors
- toggle bolts

Personal protective equipment may include:

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

Fixing applications may include:

- timber steel framing
- concrete walls and ceilings
- masonry walls

EVIDENCE GUIDE

Competence is to be demonstrated by carrying out at least six of the firerated construction elements referred to in the competency standard.

(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 quality procedures and processes within context of constructing firerated walls and ceilings
- identify location and details of materials and firerated construction
- demonstrate accurate measuring and setting out techniques
- select and safely use appropriate processes, tools and equipment
- use safe and effective procedures to construct framework and fix lining materials
- employ appropriate attention and application to finishing joints and junctions
- interactively communicate with others to ensure safe and effective work operations
- complete installation of safe firerating application to specifications

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGMAS0141A Prepare for dry-wall plastering
- BCGCAR1173A Install plasterboard, plaster-glass, fibro cement/cornice to wall/ceiling
- BCGCAR1163A Install framed ceiling (sheets and boards)

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- working drawings and specifications
- Building Code of Jamaica and relevant Standards for installation of fire resistance structures
- materials/schedules
- tools and equipment
- scaffolding
- plastering
- calculating material requirements
- fixing and fasteners

Skills

The ability to:

- work safely
- select and handle materials safely
- read and interpret drawings
- organise work
- measure relative to process
- interpret documentation from a wide range of sources
- use tools and equipment
- communicate effectively
- calculate material quantities
- erect restricted height scaffolding

(4) Resource Implications

The following resources should be provided:

- workplace location
- scaffolding
- tools and equipment appropriate for installation of fire resistant walls and ceilings
- materials appropriate to construction processes
- drawings and specifications relevant to tasks

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of application process
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency should be assessed in the normal or simulated workplace environment.

Assessment should be conducted while tasks are undertaken either individually or while working with a partner.

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

Collect, analyse and organise information	Level 3	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 3	
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.

BCGMAS1003A: Construct battered masonry surfaces

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct battered masonry surfaces, and applies to individuals working in the masonry trade in 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 for workplace environment and laying masonry to sloping surfaces recognised and adhered to. 1.3 Job material and equipment requirements determined from drawings and specifications. 1.4 Safety and protection requirements determined for work personnel, public and environment. 1.5 Appropriate personal protective equipment selected, correctly fitted and used. 1.6 Tools and equipment selected to carry out processes consistent with job requirements and checked for serviceability.
2. Prepare base for masonry or stone	2.1 Battered slope compacted and finished to specification. 2.2 Rock or stone slope faced with cohesive soil and reinforcing to form flat base or rendered to specification. 2.3 Crushed rock spread to thickness of 50mm and compacted to form base to specification. 2.4 Steep slopes and mortar bedded masonry and stone bases finished to flat surface with sprayed concrete over reinforcement sheets. 2.5 Impervious or permeable membrane laid, where required, in accordance with specifications.
3. Lay masonry or stone to sand bedding	3.1 Bedding sand laid and screeded to specified depth. 3.2 Layout of masonry or stone determined and set out in accordance with drawings and specifications.

- | | | |
|----|------------------------------------|---|
| | 3.3 | First stone or masonry unit laid into place to proposed face and alignment of batter to specifications. |
| | 3.4 | Stone or masonry units laid individually into position maintaining pattern or bond and surface alignment to specifications. |
| | 3.5 | Joints maintained to tolerance in accordance with specifications. |
| | 3.6 | Random shaped stones selected in accordance with abutting stones and maximum specified joints. |
| 4. | Lay masonry or stone to mortar bed | 4.1 Mortar materials proportioned and mixed to specifications. |
| | 4.2 | Layout of masonry or stone determined and set out in accordance with drawings and specifications. |
| | 4.3 | Stone laid into place to pattern/bond and surface alignment to specifications. |
| | 4.4 | Mortar joints struck or raked in accordance with specifications. |
| 5. | Clean-up | 5.1 Masonry surface cleaned and free of waste. |
| | 5.2 | Area cleared and waste material disposed of safely. |
| | 5.3 | Unused materials stored/stacked. |
| | 5.4 | Tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to the facing of battered surfaces using masonry units.

Masonry units may include but are not limited to:

- clay bricks/pavers
- concrete blocks
- concrete pavers
- slate
- stone (regular and random)

Joints may be:

- dry
- brush sanded
- mortar

Mortar used should be in accordance with the Building Standards for Masonry cement

Tools and equipment may include but are not limited to:

- measuring tape/rule
- concrete mixer
- wheelbarrows
- masonry saws
- trowels
- mortar boards
- shovels
- straight edge
- spirit level
- hammers
- string lines
- power leads
- buckets

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

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:

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

EVIDENCE GUIDE

Competency is to be demonstrated by carrying out the safe and effective preparation and laying of at least two separate types of masonry materials to construct battered masonry surfaces, using any of those listed within the range of variables statement.

(1) Critical Aspects of Evidence

Competence should 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
- select and use appropriate processes, tools and equipment to carry out tasks
- apply organisational quality procedures and process within the context of masonry work
- prepare base to specification requirements
- select masonry units and mortar consistent with specifications of job required
- apply safe and effective procedures to set out and lay masonry units to specifications
- lay bricks/blocks/pavers/stones/ to line and gauge where applicable
- identify typical faults and problems that occur and necessary action taken to rectify

(2) Pre-requisite Relationship of Units

- BCGMAS0151A Prepare for construction process (brick/block laying)
- BCGMAS0292A Carry out concrete work
- BCGCOR0113A Carry out basic setting out
- BCGMAS0433A Lay segmental paving

(2) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- drawings and specifications
- brick expansion and growth
- control and articulation joints
- characteristics of masonry materials
- workplace and equipment safety requirements
- mortar mix composition
- range of mortar additives including plasticiser/s and or their application
- The National Building Code
- laying of masonry
- tools and equipment

Skills

The ability to:

- work safely
- interpret drawings and specifications
- use hand and power tools
- measure and calculate quantities appropriate to task
- select materials appropriate to task
- set out work
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- battered surface appropriate to proposed activity
- tools, plant and equipment appropriate to construction processes
- appropriate communication of documentation relevant to task
- construction materials relevant to tasks

(5) Method of Assessment

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

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

(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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

BCGMAS0163A: Carry out tuck pointing to brick/block work

Competency Descriptor:

This unit specifies the competency required to apply tuck pointing to brickwork to different types and styles of buildings. It includes the planning, preparation, set out and application of tuck-pointing.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<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 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. Prepare work location	<p>2.1 Materials and existing brickwork are checked for consideration of colour wash, composition of mortar stopping mix and mixing putty for beading.</p> <p>2.2 Work platform is erected in accordance with regulatory authorities' requirements.</p> <p>2.3 Area proximate to work area is isolated by use of barricades and signage or fall protection in accordance with regulatory and job requirements.</p>

- 2.4 Loose or broken bricks are removed and reinstalled individually and mortar removed from joints in brickwork by raking out mortar to specified depth.
 - 2.5 Surface of work area is cleaned and prepared for application.
 - 2.6 Surface of work area is colour washed consistent with brick colour.
 - 2.7 Position of bed and cross-joints are determined, measured and struck with chalk line.
 - 2.8 Mortar is prepared to determined composition, colour and mix for stopping application to brickwork.
 - 2.9 Mortar stopping mix is applied to ensure joints are full and brickwork/blockwork re-pointed to meet job requirements.
 - 2.10 Jointer tool is used to form an indent key to receive putty point.
3. Apply putty/mortar point material to bed and perpend joints
 - 3.1 Materials are identified, selected and prepared to determined composition and consistency used for pointing or beading putty in accordance with job requirements.
 - 3.2 Pointing putty/mortar is applied with the use of jointer tool to fill, indent and form joints.
 - 3.3 Surplus pointing putty/mortar present on horizontal and vertical joints is removed with the aid of a Frenchman tool to form finite shape and edges to tuck-pointing.
 - 3.4 Tuck pointed work area is completed, allowed to dry and any imperfections gently removed and lightly brushed clean.
4. Clean up
 - 4.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification.
 - 4.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.

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 may be present for this particular unit:

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

Restoration of brickwork structures will vary in accordance with factors that may include:

- types of bricks (length and width, height, types of clay, colour and surface finish)
- types of bonding
- types and composition of mortar

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

- emergency shutdown and stopping
- extinguishing fires
- organisational first aid requirements
- evacuation
- The unit requires the application of a decorative finish to masonry brickwork/blockwork by tuck pointing

Environmental requirements are to include but are not limited to:

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

Range of bonds used in period brickwork may include:

- stretcher
- header
- English
- Flemish
- English cross
- colonial
- Dutch

Mortars for brickwork will vary in accordance with their compatibility with the composition of each type of brick as well as:

- their own adhesive ability
- stability
- durability

Personal protective equipment is to include:

- that prescribed under legislation/regulation/codes of practice
- workplace policies and practices
- Tuck pointing has particular application in heritage and restoration work

Quality requirements are to include but not be limited to:

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

Tools and equipment are to include but not limited to:

- brushes
- buckets
- sponges
- float
- gauging equipment
- sieve
- Frenchman tools
- jointer tools
- measuring tapes/rules
- hammers (brickies, club, scutch)
- spirit levels
- pointing trowels
- straight bevelled edges
- plugging chisels
- straight edges
- pointing tools
- squares
- hawks
- profiles
- line blocks
- line pins
- string lines
- scaffolds
- pointing or raking tools

Regulatory authorities may include:

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

Tools and equipment may include:

- wheelbarrows
- concrete mixers
- small petrol/diesel
- engines/compressors/mixers

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) underground services (water, gas, electricity, communications)
- 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

On site meeting processes may include:

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

Materials are to include but not limited to:

- mortar
- colouring agents and pigments
- slaked rock lime

Information sources may include but not be limited to:

- verbal or written and graphical instructions
- signage
- work schedules/plans/specifications
- work bulletins
- hand drawings
- memos
- material safety data sheets (MSDS)
- diagrams or sketches
- safe work procedures related to tuck pointing of brickwork/blockwork
- regulatory/legislative requirements pertaining to tuck pointing of brickwork/blockwork
- Manufacturers' specifications and instructions where specified
- Organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel

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

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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- as a minimum, tuck point a new or existing area of brickwork/blockwork of at least 1m square, ensuring:
 - correct identification of requirement and finishing of the task
 - correct selection and use of appropriate processes, tools and equipment
 - completing all work to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0011A – Carry out OH&S requirements

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- heritage brickwork materials and bonding techniques
- finishing of brick joints
- brick expansion and growth and control joints
- communication processes verbal and signalling
- Safe work method statement
- quality requirements
- general Construction terminology
- plant, tools and equipment types, characteristics, uses and limitations
- the techniques of tuck pointing of brickwork/blockwork
- characteristics and applications of materials for tuck pointing of brickwork/blockwork
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- measurement and calculation
- heritage brickwork materials and bonding techniques
- finishing of brick/block joints
- brick expansion and growth and control joints
- communication processes verbal and signalling
- safe work method statement

Skill

The ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan and OH&S legislations/codes of practice applicable to workplace
- communicate and work effectively and safely with others
- correctly identify requirement and finishing task
- correctly select and use appropriate processes, tools and equipment
- Complete all work to specification

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- materials relevant to tuck pointing of brickwork/blockwork
- hand and power tools, plant and equipment appropriate to tuck pointing of brickwork/block work
- realistic tasks 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.

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

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

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

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

Assessment is to comply with relevant regulatory or Standards 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.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria. 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
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 1	

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

BCGCAR1183A: Install pre-cast decorative mouldings

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and install pre-cast decorative mouldings, and applies to individuals working in masonry and trades in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1 Quality Assurance requirements of company's construction operations recognised and adhered to.</p> <p>1.2 OH&S requirements for workplace environment and installing decorative pre-cast fibrous plaster recognised and adhered to.</p> <p>1.3 Delivered materials selected and checked against drawings and specifications for quality and description.</p> <p>1.4 Appropriate personal protective equipment selected, correctly fitted and used.</p> <p>1.5 Tools and equipment selected consistent with requirements of installing pre-cast decorative mouldings, checked for serviceability and any faults reported to supervisor.</p> <p>1.6 Safety hazards identified and correct procedures used to eliminate hazards to self and others according to OH&S legislation and company policy.</p>
2. Fix and stop plasterboard and/or plaster-glass archway	<p>2.1 Plasterboards/glass wall sheets fitted and fixed to position.</p> <p>2.2 Archway profile located, set out and cut to architect's drawings and specifications.</p> <p>2.3 Timber arch soffit templates cut and fixed to position.</p> <p>2.4 Plasterboard strip cut and fixed to arch soffit and reveals of opening.</p> <p>2.5 Arch beads cut and fixed to arch soffit.</p> <p>2.6 External corner beads cut and fixed to vertical reveals.</p> <p>2.7 Archiving jointed to specified finish.</p>
3. Fix and stop plaster panelled ceiling	<p>3.1 Scaffolding erected, where required, to OH&S requirements.</p> <p>3.2 Ceiling battens for cornice margins and flush mounted panels correctly positioned and spaced, straight and level to the requirements of job drawings.</p>

- | | | | |
|----|------------------------|---|---|
| | 3.3 | Panels centrally located on ceiling, flush joints levelled and panel placed members in line, nailed and scrimmed in position to architect's specifications. | |
| | 3.4 | Suspension rods, clips and top/bottom rails for suspended panels assembled and fixed in position to manufacturer's specifications. | |
| | 3.5 | Furring channels spaced and fixed according to dimensions of panels. | |
| | 3.6 | Ceiling panels located and screwed to suspension frame. | |
| | 3.7 | Jointing applied and finished smooth and level to flush joints. | |
| 4. | Fix ornamental cornice | 4.1 | Cornice fixed by clouting or bonding with adhesive, straight and level to architect's specifications. |
| | | 4.2 | Cornice fixed with accurate butt joints and mitred corners with ornamentation matched and in alignment. |
| 5. | Clean up | 5.1 | Area cleared to specification. |
| | | 5.2 | Waste and unwanted material disposed of safely. |
| | | 5.3 | Unused materials stored. |
| | | 5.4 | Tools and equipment cleaned, maintained and stored. |

RANGE OF VARIABLES

This unit applies to the installation of all decorative and ornate plaster features.

All work undertaken in accordance with the Building Standards for the erection and fixing of Glass Fibro Reinforced Gypsum Plaster Products.

Decorative applications include:

- cornices
- panels
- roses
- arches

Installation processes will vary in accordance with the following aspects of a decorative feature:

- shape and size
- volume/weight of sections
- fixed whole or in segments

Fixing methods may include:

- screws
- clouts
- nails
- threaded nails
- adhesive

Fixing applications may include:

- timber and steel framing
- concrete walls and ceilings
- masonry walls

Protruding or recessed features require ceiling structural support.

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

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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit level
- squares
- nail bag
- hand saws
- key hole saw
- mitre box
- broad knives
- plasterer's trowel
- curved trowels
- taping knives
- internal angle finishing tool
- sanding float
- t-square
- jointing cement mixer
- power drills
- electric screw gun
- power leads
- explosive power gun and fasteners
- trestles
- scaffolding
- planks

Materials include:

- plasterboard
- plaster glass
- glass fibro reinforced moulding panels
- corner beads
- adhesives
- perforated plastic tape
- jointing material
- scrim

Personal protective equipment may include:

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

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

EVIDENCE GUIDE

Competence is to be demonstrated by installing decorative plaster to at least one of each of the application elements within the competency standard.

(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 quality procedures and processes within context of installing decorative fibrous plaster to archways, ceilings and cornices
- identify location and details of each proposed decorative plastering installation
- select and safely use appropriate processes, tools and equipment
- demonstrate accurate measuring and setting out techniques
- use safe and effective procedures to construct framework for fixing of plaster
- use safe and effective procedures to install and finish plaster to designed specification
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective installation operations
- complete installation of plasterboard arch to specification
- complete installation of panelled ceiling and ornamental cornice to specification

(2) Pre-requisite Relationship of Units

- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGMAS0141A Prepare for construction process (dry-wall plastering)
- BCGCAR1173A Install plasterboard, plasterglass, fibro cement/cornice to wall/ceiling

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- dry wall plastering
- types of decorative mouldings
- methods of installing decorative mouldings
- structural support to decorative mouldings
- working drawings and specifications
- materials/schedules
- Relevant Building Standard
- tools and equipment
- scaffolding
- adhesives and fixings methods

Skills

The ability to:

- work safely
- select and handle material safely
- read and interpret drawings
- organise work
- measure relative to the process
- use tools and equipment
- fix plaster
- communicate effectively
- erect restricted height scaffolding

(4) Resource Implications

The following resources should be provided:

- workplace location
- scaffolding
- tools and equipment appropriate to the installation of pre-cast decorative mouldings
- materials appropriate to proposed installation
- drawings and specifications relevant to proposed installation

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of application process
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency should be assessed in the normal or simulated workplace environment.

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

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

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

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

BCGMAS1363A: Install curtain walling

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare, fit and fix curtain walling to structures, and relates to individuals engaged in the installation of cladding and panelling work in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	<p>1.1 Quality Assurance requirements of company's construction operations recognised and adhered to.</p> <p>1.2 OH&S requirements for workplace environment and installing curtain walling recognised and adhered to.</p> <p>1.3 Design of curtain walling and structural connections identified from site drawings and specifications.</p> <p>1.4 Appropriate personal protective equipment selected, correctly fitted and used.</p> <p>1.5 Tools and equipment selected to carry out processes consistent with job requirements, checked for serviceability and any faults reported to supervisor.</p> <p>1.6 Location of curtain wall installation connections set out to job drawings and specifications.</p> <p>1.7 Area below construction face cleared and isolated with designed barricade according to OH&S and job requirements.</p> <p>1.8 Surface of structure to receive curtain walling inspected for conformity and prepared to receive fixings according to job detail drawings and specifications.</p> <p>1.9 Scaffolding erected in accordance with job requirements and OH&S regulations.</p> <p>1.10 Slings, clutches and other pre-determined lifting gear and equipment selected to job requirements and inspected for serviceable condition.</p>

- | | | | |
|----|----------------------------|-----|---|
| 2. | Install curtain walling | 2.1 | Curtain wall fixing brackets installed correctly to set out points in accordance with manufacturer's specifications and site structural drawings. |
| | | 2.2 | Curtain walling sections lifted and raised to installation location by crane operations. |
| | | 2.3 | Curtain walling located and fixed into correct position in accordance with job drawings, specifications and manufacturer's requirements. |
| | | 2.4 | Installed curtain-walling plumbed/levelled aligned and finally fixed into place according to specifications. |
| | | 2.5 | Junctions between placed sections of curtain walling fitted and secured to specifications for fixing. |
| | | 2.6 | Curtain wall trims installed in accordance with manufacturer's specifications and detail drawings, where applicable. |
| 3. | Caulk seal curtain walling | 3.1 | Installed curtain walling and trims caulk sealed in accordance with job specifications, where applicable. |
| 4. | Clean-up | 4.1 | Area cleaned to specification. |
| | | 4.2 | Waste materials removed and placed into waste bins. |
| | | 4.3 | Tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to the fitting and fixing of curtain walling facades to multi– storey structures

Curtain wall types include:

- fabricated framework and metal cladding
- fabricated framework and glass panels
- pre-cast concrete panels
- manufactured and natural stone panel

Types of structures include:

- structural steel
- in-situ reinforced concrete
- pre-cast concrete

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
- working with cranes

Personal protective equipment may include:

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

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammers
- spirit level
- levelling equipment
- squares
- spanners
- power grinder
- explosive power tool
- power drills including impact drills
- wedges
- power leads

Work to be carried out in a team situation working with plant operators.

Plant to be run by operators with appropriate credentials and in accordance with work safety standards for Users and Operators of Industrial Equipment.

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

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
- crane operations and procedures

Preparation to structure for fixings may include:

- drilling of holes
- installing masonry anchors
- fixing of brackets to steelwork
- trimming of concrete surfaces for flatness

Support plant and equipment may include

- cranes
- compressors, hoses and fittings
- winches
- elevating work platforms
- scaffolding
- welding equipment

EVIDENCE GUIDE

Competency is to be demonstrated by the performance of working as part of a team with plant operators to install a curtain walling system.

(1) Critical Aspects of Evidence

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

- demonstrate compliance with Occupational Health and Safety Regulations and Statutory Legislation applicable to workplace operations
- indicate compliance with organisational policies and procedures including quality assurance requirements
- select and use appropriate processes, tools and equipment to carry out tasks
- apply organisational quality procedures and processes within context of installing curtain walling
- check external surfaces receiving fixings for conformity with tolerances for plumb and line
- accurately set out and fix supporting and securing brackets or fittings
- adopt and use safe and effective procedures to place and fix sections
- identify faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective installation operations
- complete installation and finish to specifications

(2) Pre-requisite Relationship of Units

Prerequisites for this unit are:

- BCGCOR0061A Use small plant and equipment
- BCGCOR0212A Prepare surfaces
- BCGCOR0242A Carry out levelling
- BCGCOR0272A Operate elevated work platforms

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- curtain walling systems
- drawings and specifications
- tools and equipment
- plant and equipment
- structures
- crane and general plant operations
- scaffolding
- materials and fixing methods
- basic signalling
- measuring and levelling

Skills

The ability to:

- work safely
- interpret drawings and specifications
- organise work
- set out work
- use power tools and hand tools
- fix materials
- work to levels and alignment
- communicate effectively
- use welding equipment

(4) Resource Implications

The following resources should be made available:

- workplace location for installation activity
- tools, plant and equipment appropriate to installation processes
- scaffolding required for activity
- materials or components relevant to curtain walling installation
- drawings and specifications relevant to activity

(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 at various stages of the process and at completion of the activity against performance criteria and specifications.

(6) Context of Assessment

Competency should be assessed in the workplace or simulated workplace.

Assessment should be while task is 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 3	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
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.

BCGMAS0063A: Carry out decorative finishes to concrete**Competency Descriptor:**

This unit specifies the competency required to apply decorative finishes to concrete surfaces providing a distinct featured face finish for driveways, patios, paths, or other areas requiring a decorative finish.

Competency Field: General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied. 1.2 Safety requirements are followed in accordance with safety plans and policies. 1.3 Signage/barricade requirements are identified and implemented. 1.4 Plant, tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement. 1.5 Material quantity requirements are calculated in accordance with plans and/or specifications. 1.6 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied.
2. Carry out stencil finishes	2.1 Stencil for pattern finish is prepared so that any lapping will maintain alignment and bond. 2.2 Stencil is laid carefully onto screeded surface to specifications ensuring alignment, bond and flat. 2.3 Dry topping mix of colour, stone dust and cement is prepared and applied to specifications. 2.4 Surface is finished with wood or steel float to a consistent texture in accordance with specifications.

- 2.5 Stencil is lifted in accordance with setting time to manufacturers' recommendations.
 - 2.6 Control joints are inserted during placement and/or cut into applied finish after setting, to specifications.
- 3. Carry out stamp finishes
 - 3.1 Method of applying pattern is determined in accordance with designed finish and specifications.
 - 3.2 Stamped pattern equipment is checked for cleanliness and serviceability.
 - 3.3 Design layout is planned and initial starting point determined to specifications and design.
 - 3.4 Base colour and topping dust is prepared and applied to specifications.
 - 3.5 Base colour is floated into surface to specifications.
 - 3.6 Colour(s) are randomly applied, where specified onto surface at random locations to create decorative type colourings.
 - 3.7 Release agent is prepared and applied to specifications.
 - 3.8 Stamp is used to create designed pattern and surface effect to specifications.
 - 3.9 Control joints are inserted during placement and/or cut into applied finish after setting, to specifications
- 4. Carry out exposed aggregate finishes
 - 4.1 Selected aggregates are incorporated in concrete mix or applied to concrete surface and floated to specifications.
 - 4.2 Surface matrix is removed to expose aggregate.
 - 4.3 Exposed aggregate is left clean and free to designed effect and specifications.
 - 4.4 Control joints are inserted during placement and/or cut into applied finish after setting, to specifications.
- 5. Carryout textured finishes
 - 5.1 Method of applying texture is determined in accordance with designed finish and specifications.
 - 5.2 Base colour and topping dust are prepared and applied to specifications.
 - 5.3 Base colour is floated into surface to specifications.

- | | |
|-------------|--|
| 5.4 | Colour(s) are randomly applied, where specified, onto surface at random locations to create decorative type colourings. |
| 5,5 | Finish is applied with trowel to create designed pattern and surface effect to specifications. |
| 5.6 | Control joints are inserted during placement and/or cut into applied finish after setting, to specifications. |
| 6. Clean up | |
| 6.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with legislation/regulations/codes of practice and job specification. |
| 6.2 | Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices. |

RANGE STATEMENT

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

Quality requirements are to include but not be limited to:

- relevant regulations including Jamaican Standards
- internal company quality policy and standards
- workplace operations and procedures and
- manufacturers' specifications where specified

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

This may include:

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

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

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

OH&S requirements are to be in accordance with legislation/regulations/codes of practice and may include:

- organisational safety policies and procedures and
- project safety plan

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

- Shovels
- Trowels
- Floats
- hoses and hand tools and may include:
 - power trowels
 - brooms
 - stipple
 - devices
 - rollers
 - wheel barrows
 - concrete mixers
 - spray bottles
 - stamps and spray attachments

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 and hazardous materials and substances

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

Materials may include but not be limited to:

- stencils
- colourants
- release agents
- mortar additives and
- river gravel aggregates

Stencil finishes are applied with a decorative designed, pre-prepared and cut roll of material specified to customer's requirements, floated into the surface of the concrete and includes the application of colour.

Stamped finishes are applied with individual specially designed rubber mats providing a slate look impression which are pressed into the concrete surface by even distribution of weight and includes the application of colour

Exposed aggregate finishes are achieved by hosing off the top layer of cement slurry from the concrete, which exposes the added naturally coloured stone finish determined by the customer

Textured finishes may include but not be limited to a polished finish a rough textured finish (non slip) applied with a trowel or stipple device and includes the application of colour

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 of Evidence

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

- 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
- safe and effective operational use of tools, plant and equipment
- communication and working effectively and safely with others
- completion of decorative finish projects to a minimum of 20sqm each of concrete utilising 2 out of 4 of the decorative techniques specified in the Range Statement to job specification

(2) Pre-requisites Relationship of Units

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

- Workplace and equipment safety requirements
- Quality requirements
- General Construction terminology
- Plant, tools and equipment types, characteristics, uses and limitations
- processes for the calculation of material requirements
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- concrete placement, finishing and curing
- control joints
- safe work method statements

Skills

The ability to:

- comply with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations
- comply with organisational policies and carry out procedures including quality requirements
- Carry out safe and effective operational use of tools, plant and equipment
- Communicate and work effectively and safely with others
- Complete decorative finish projects to a minimum of 20sqm each of concrete
- utilise 2 out of 4 of the decorative techniques specified in the Range Statement to job specification

(4) Resource Implications

The following resources should be provided:

- workplace location or simulated workplace
- materials relevant to decorative finish concreting
- hand and power tools, plant and equipment appropriate to decorative finishing of concrete
- realistic activities covering the mandatory task requirements
- specifications and work instructions

(5) Method of Assessment

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

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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 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 Australian 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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
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 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.

BCGMAS0953A: Carry out tilt slab construction

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and carry out tilt slab construction, and applies to individuals working in carpentry, steel/fixing and masonry trades in the construction industry.

Competency Descriptor: 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 & Safety (OH&S) requirements for application to tasks and workplace environment recognised and adhered to.
	1.3	Work schedule, material and equipment requirements determined from project program, drawings and specifications.
	1.4	Construction and erection planned in accordance with the specifications tilt slab concrete construction.
	1.5	Appropriate personal protective equipment selected, correctly fitted and used.
	1.6	Plant, tools and equipment selected to carry out processes consistent with job requirements and checked for serviceability.
2. Set-out and prepare formwork for slab	2.1	Location and size of slab set out to the requirements of job drawings and specifications.
	2.2	Slab base prepared and sheeted to face level and alignment in accordance with specifications and drawings.
	2.3	Edge formwork prepared, placed and fixed to plumb and alignment to specification requirements and set out.
	2.4	Form oil/separative applied to formwork with mop/brush according to specifications.
3. Place and tie reinforcement and cast in fittings	3.1	Reinforcement, accessories and cast-in fittings checked for conformity to design and specifications.

- 3.2 Reinforcement and accessories located in position to drawings and specifications.
 - 3.3 Reinforcement tied and/or welded in correct placement in accordance with drawings, specifications and the Standards for Welding of Reinforcing Steel.
 - 4. Place, finish and cure concrete
 - 4.1 Where requirements concrete slump tested and samples taken for tests to check conformity to specification for concrete.
 - 4.2 Concrete placed evenly and consolidated using approved vibration method to specification.
 - 4.3 Concrete surface screeded and finished to specification ensuring cast-in fittings clear.
 - 4.4 Curing process of concrete applied in accordance with specification.
- 5. Tilt, position and hold slabs
 - 5.1 Edge formwork stripped carefully ensuring no damage to slab.
 - 5.2 Braces prepared and located ready for erection process.
 - 5.3 Crane and lifting equipment located in position for safe and efficient operation.
 - 5.4 Barricades and signage, where applicable, erected to isolate safe working area.
 - 5.5 Lifting points checked and lifting equipment attached to slab and connected to crane in accordance with designed lifting arrangement.
 - 5.6 Slab/panel raised and located safely into true position.
 - 5.7 Braces fitted, fixed to floor or alternative location and secured, maintaining plumb and alignment position of panel in accordance with specifications.
 - 5.8 Lifting equipment and crane removed and remaining formwork stripped and dismantled safely.

- | | | | |
|----|----------|-----|--|
| 6. | Clean-up | 6.1 | Area cleared of waste and equipment. |
| | | 6.2 | Waste and unwanted material disposed of safely. |
| | | 6.3 | Serviceable and unused materials stored/stacked. |
| | | 6.4 | Plant, tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to reinforced concrete panels poured onsite alongside the position to which they are raised and located. The reinforced concrete slab/panels may be poured on concrete slab or sheet formwork.

Bracing to hold slabs/panels in vertical positions may be fixed to internal slab floor, internal columns or external anchors.

Construction and erection governed by Building Codes - Tilt-up concrete and pre-cast concrete elements for use in buildings.

Quality Assurance requirements may include but not limited to:

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

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

Tools and equipment may include but not limited to:

- | | |
|--|---|
| <ul style="list-style-type: none"> • measuring tape/rule • hammer • spirit level • squares • saw stools • power saws • masonry drills • spanners | <ul style="list-style-type: none"> • nail gun • air compressor and hoses • power leads • shovels • rakes • screed boards • vibrators • wheelbarrows |
|--|---|

Personal protective equipment may include:

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

EVIDENCE GUIDE

Competence is to be demonstrated by working with a team and pouring, placing, raising and locating concrete panels on-site.

(1) Critical Aspects and Evidence

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

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures
- select and use appropriate processes, tools and equipment to carry out tasks
- apply organisational quality procedures and processes within the context of tilt slab construction
- give attention to accurate construction of formwork to specifications
- accurately place reinforcement, block outs and attachments for slab
- select and use appropriate concrete handling/transportation method
- place concrete ensuring no segregation and adequate compaction
- check formwork and support system periodically during pour
- screed and finish concrete to specifications
- construct and erect in accordance with Building Codes
- adopt safe and effective procedures in lifting and placement processes
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective workplace operations

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0061A Use small plant and equipment
- BCGSTW0262A Carry out steel fixing
- BCGMAS0292A Carry out concrete work
- BCGMAS0892A Finish concrete
- BCGMAS0923A Cure concrete
- BCGMAS0912A Place concrete

This unit may be concurrently assessed with:

- BCGMAS0912A Place concrete
- BCGMAS0892A Finish concrete
- BCGMAS0923A Cure concrete

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations and codes
- reinforced concrete construction
- methods of finishing concrete
- formwork for concrete
- factors affecting concrete bonding, curing and strength
- crane operations
- plant, tools and equipment
- measuring and levelling
- Building Standards for tilt slab construction
- basic signalling
- Quality Assurance
- worksite communications

Skills

The ability to:

- work safely
- organise work
- set out work
- use hand tools and equipment
- select and identify materials
- work to measurements and levels
- fix materials
- assist with crane operations
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- work location to carry out proposed activity
- materials appropriate to application tasks
- tools, plant and equipment appropriate to construction and erection processes
- appropriate communication of documentation relevant to proposed activity

(5) Method of Assessment

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

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

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

(6) Context of Assessment

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

Assessment will be while tasks are undertaken either individually or as part of a team under 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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

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

BCGMAS1613A: Carry out concrete slump test

Competency Descriptor:

This unit deals with the skills and knowledge required to conduct a slump test to concrete to ensure the mix is workable and complies with the delivery documentation and specified order. The unit includes sampling and slump testing to a set range or tolerance.

Competency Field: Construction Frontline Supervision

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare	1.1 Job instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied. 1.2 Safety requirements are implemented in accordance with safety plans and policies. 1.3 Signage/barricade requirements are implemented as required. 1.4 Tools and equipment selected are consistent with the requirements of concrete slump testing. 1.5 Environmental protection requirements are applied in accordance with environmental plans and regulatory obligations.
2. Slump test concrete	2.1 Standard slumping cone is cleaned in preparation for testing. 2.2 Sample of concrete, using the correct sampling procedure, is taken directly from the delivery trucks initial discharge. 2.3 Slumping cone is placed on a steel tray and cone filled to one third of its capacity. 2.4 Concrete is compacted by rodding 25 times in an even pattern with a steel rod. 2.5 Slumping cone is filled to two thirds its capacity and rodding 25 times applied to penetrate the previous layer. 2.6 Slumping cone is filled to overflowing and rodding 25 times applied to penetrate the previous layer. 2.7 Slumping cone is levelled off with the steel rod and surplus concrete cleared from steel plate and slumping cone.

- | | | |
|----|----------------------|---|
| | 2.8 | Slumping cone is raised without moving the sample. |
| | 2.9 | Sample is measured against height of the slumping cone for conformity. |
| | 2.10 | Collapsed or sheared samples are recorded. |
| 3. | Co-ordinate clean up | |
| | 3.1 | Work area is cleared and materials disposed of, reused or recycled in accordance with codes of practice and job specification. |
| | 3.2 | Tools and equipment are removed from work area, cleaned and stored in accordance with manufacturers' recommendations and standard work practices. |
| | 3.3 | Work completion procedures are followed and relevant personnel notified that the test is finished. |

RANGE STATEMENT

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

The following variables relate to this particular unit:

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

OH&S requirements may include:

- protective clothing and equipment
- use of tools and equipment
- workplace environment and safety
- handling of materials
- organisational first aid
- hazard control and hazardous materials and substances

Roding is to include:

- pushing a steel rod in and out of the concrete to compact it into the slump cone, 25 times for each layer applied

OH&S requirements are to be in accordance with:

- legislation/regulations/codes of practice
- organisational safety policies and procedure
- project safety plan

Personal protective equipment is to include:

- goggles
- safety boots
- cover all
- gloves

Measuring is to include:

- a steel rule, which is placed in the centre of the sample to which the conformity of the slump is tested

Standard slumping cone:

- Is 200mm in diameter at the base, 100mm in diameter at the top and 300mm tall
- include foot pieces for standing on while the sample is added and Roding occurs in the cone
- has handles for raising the cone when Roding is completed

Safe operating procedures include but not limited to the conduct of operational risk assessment, including:

- overhead electrical service apparatus
- 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 and the public

A slump test is successful when:

- the sample remains true and does not collapse or shear
- Note: If the initial test fails a second test must be undertaken, if it also fails the batch should be rejected

Information sources may include but not be limited to:

- verbal or written and graphical instructions, signage, work schedules/plans/specifications, material safety data sheets (MSDS), diagrams or sketches
- safe work procedures related to slump testing concrete
- regulatory/legislative requirements pertaining to slump testing concrete
- engineers design specifications/manufacturers' specifications and instructions where specified
- organisation work specifications and requirements
- instructions issued by authorised organisational or external personnel
- relevant Building Standards

Sampling is to include but not be limited to:

- that taken at initial discharge (after 0.2m³ of the load has been placed)
- routine samples taken at three places during the load

Tools and equipment are to include:

- standard slump cones
- sampling scoops
- bullet nosed rod (600mm long x 16mm diameter)
- steel rule
- steel slump plate (500mm x 500mm)

Environmental requirements are to include but are not limited to:

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

Communications may include:

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

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

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

Communications are to include but not limited to:

- verbal and visual instructions
- fault reporting

Tools and equipment may also to include:

- trowels
- steel trowels
- wooden floats
- buckets
- sponges and brushes

Materials:

- materials are to include concrete

On site meeting processes may include notification/ scheduling (time, place, and purpose), task discussions and local co-ordination 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.

Rodding is to include:

- pushing a steel rod in and out of the concrete to compact it into the slump cone, 25 times for each layer applied

Measuring is to include:

- a steel rule, which is placed in the centre of the sample to which the conformity of the slump is tested

(1) Critical Aspects of 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 organizational policies and procedures including quality requirements
- safe and effective operational use of tools and equipment
- communication and working effectively and safely with others
- completion of three slump tests from different batches in accordance with specifications

(2) Pre-requisite Relationship of Units

BCGCM1001B Follow OH&S policies and procedures

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

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements
- quality requirements
- general Construction terminology
- properties of concrete (strength, water content ratio, transportation, placement, compaction and curing)
- slump testing techniques
- slump testing tools and equipment types, characteristics, uses and limitations
- material Safety Data Sheets
- plans, drawings and specifications
- materials handling, storage and environmentally friendly waste management
- relevant acts, regulations and codes of practice
- jsa's/Safe work method statements

Skills

The ability to:

- collect, organise, interpret and understand the information required for slump testing concrete
- communicate ideas and information orally and in writing
- conduct activities associated with slump testing concrete
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise satisfaction and productivity
- establish safe and effective work processes
- use mathematical ideas and techniques to correctly calculate time to complete tasks, estimate measurements, levels, calculate material requirements and establish quality checks
- use workplace technology related to slump testing concrete, including the use of calculators, the use of communication devices and the reporting/recording of results

(4) Resource Implications

The following resources should be made available:

- workplace location or simulated workplace
- equipment and tools appropriate to slump testing concrete
- 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.

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

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of 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 authorized 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 Australian 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 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

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.

BCGCEO00353A: Operate demolition plant and equipment

Competency Descriptor:

This unit deals with the skills and knowledge required to operate demolition plant and equipment effectively and safely, and applies to all operators of the heavy and ancillary equipment listed in the range statement.

Competency Field:

General Construction

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1 Occupational Health and Safety (OH&S) requirements for the worksite environment and the operation of demolition plant and equipment recognised and adhered to. 1.2 Plant and equipment requirements for carrying out the processes determined consistent with the job requirements. 1.3 Appropriate personal protective equipment selected, correctly fitted and used. 1.4 Plant and equipment selected consistent with determined requirements and checked for serviceability.
2. Carry out daily maintenance	2.1 Daily maintenance and periodic servicing carried out to manufacturer's specification and operator's manual. 2.2 Faults identified and corrected or reported to supervisor. 2.3 Servicing and maintenance recorded maintained according to company's requirements.
3. Locate plant and equipment	3.1 Plant and/or equipment located in position according to job and safety plan requirements. 3.2 Attachment of fittings to plant or equipment carried out in accordance with planned operations and manufacturer's recommendations and specifications. 3.3 Safe working area isolated, where applicable, in accordance with OH&S requirements.
4. Operate plant and equipment	4.1 Plant and/or equipment operated correctly in accordance with manufacturer's specifications or operator's manual. 4.2 Plant used correctly to carry out demolition processes and relevant safety requirements. 4.3 Equipment used correctly to carry out demolition process to relevant safety requirements.

- | | | |
|----|-------------------------------|---|
| | 4.4 | Start up, shut down and communication procedures carried out in accordance with manufacturer's and/or site specific requirements. |
| 5. | Maintain safe working area | 5.1 Safe working area around plant and equipment maintained in accordance with job and OH&S requirements. |
| 6. | Shut down plant and equipment | 6.1 Plant shut down and positioned safely according to job safety requirements and operator's manual. |
| | 6.2 | Attached equipment, where applicable, removed, cleaned and stored for re-use in accordance with job procedures. |
| | 6.3 | Tools cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to all general demolition work involving the use of mechanical plant and equipment.

Plant and equipment used in demolition work includes:

- crawler excavator
- skid steer loader
- compressor
- jackhammer
- concrete/rock breaker

Attached equipment may include:

- air hoses
- hose fittings
- brackets
- buckets

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

- inspection of plant and equipment
- pre-start up and post-start up checks
- maintenance and servicing
- manual handling techniques
- operating procedures
- safety of personnel, public and environment
- safe working area
- emergency equipment and procedures

Personal protective equipment may include:

- coveralls
- boots
- gloves
- hard hat
- ear plugs/muffs
- jacket
- dust masks/respirators
- safety glasses/goggles

Plant and machinery run by operators with appropriate credentials and in accordance with work-safety Standards for users and operators of industrial equipment.

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 safely working with mechanical plant and/or operators to demolish a nominated project efficiently and safely, operating at least three of the items listed within the range of statement.

(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 demolition operations and operating plant and equipment
- show compliance with organisational quality procedures and processes within the context of operating plant and equipment
- select appropriate plant and equipment to carry out required tasks
- demonstrate safe and effective use of plant and equipment in application of demolition tasks
- apply correct procedures in start up and shut down of operating plant
- adopt correct procedures for the maintenance and servicing of plant and equipment
- identify typical faults and problems that occur and necessary actions taken to rectify
- interactively communicate with others to ensure safe and effective operations are carried out

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use plant and equipment
- BCGCOR0171A Prepare for demolition process
- BCGCOR0343A Carry out general demolition (manual/mechanical)

This unit may be concurrently assessed with

- BCGCOR0232A Carrying out general demolition

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- construction of buildings
- mechanical plant
- plant and machine operations
- tools and equipment
- servicing equipment
- demolition

Skills

The ability to:

- work safely
- use tools and equipment
- operate basic plant and equipment
- prepare for work application
- solve problems
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- demolition location
- plant and equipment appropriate to demolition processes
- demolition plan

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of the application process
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency should be assessed in the normal or simulated workplace environment.

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

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 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level -	
Use technology	Level 3	

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

BCGDEM0343A: Carry out general demolition (manual/ mechanical)

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively carry out general demolition work, and applies to all individuals demolishing buildings and structures by manual/mechanical process.

Competency Field:

General Construction

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare work	1.1	OH&S requirements for manual and mechanical demolition work recognised and adhered to.
		1.2	Safety and protection requirements for work, personnel, public and the environment identified and determined.
		1.3	Appropriate personal protective equipment selected, correctly fitted and used.
		1.4	Safety hazards identified and correct procedures used to minimise risk to self and others.
		1.5	Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor.
		1.6	Mechanical plant and equipment established on site to their operating locations.
2.	Remove hazardous materials	2.1	Materials identified for separate handling techniques in accordance with their material characteristics.
		2.2	Hazardous materials removed safely in accordance with demolition method statement.
3.	Demolish structure using manual operations	3.1	Structure demolished sequentially according to demolition method statement and OH&S regulations.
		3.2	Tools and equipment used safely to carry out manual/ demolition operations.
		3.3	Safe working area maintained in accordance with job and OH&S requirements.
		3.4	Scaffolding erected, where required, in accordance with job requirements and OH&S regulations.

4.	Demolish structure using mechanical plant	4.1	Mechanical plant used safely to carry out demolition operations.
		4.2	Direction and assistance provided to plant operators during demolition process.
		4.3	Noise maintained with acceptable level and OH&S regulations.
		4.4	Dust and airborne debris maintained within safe levels in accordance with OH&S regulations.
5.	Remove materials from demolished area	5.1	Materials removed from demolition area according to demolition method statement.
		5.2	Re-useable and recyclable materials salvaged and stored for later removal.
6.	Clean up	6.1	Debris and waste materials removed on completion of demolition process.
		6.2	Debris and waste materials placed in stockpiles or job rubbish bins or directly removed from site according to design requirements.
		6.3	Tools and equipment cleaned, maintained and stored.
		6.4	Personal protective equipment removed, inspected, maintained and stored.

RANGE STATEMENT

This unit applies to all general demolition work involving both manual operations and use of mechanical plant.

Manual operations may include:

- all demolition processes
- use of hand tools
- use of pneumatic tools and equipment
- separation of materials
- removal of nails and fasteners, etc.
- removal of demolished area materials

Plant and machinery include:

- excavator
- dozer
- front end loader
- skid steer loader

Personal protective equipment may include:

- coveralls
- jacket
- waterproof pants and jacket
- boots
- gumboots
- hard hat
- safety glasses/goggles
- ear plugs/muff
- gloves
- dust masks/respirators
- body harness

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

- protective clothing and equipment
- workplace environment and safety
- protection of public and environment
- handling of materials
- noise and dust control
- emergency procedures

Direction and assistance may include:

- indicating hazards
- clearing waste/hazards
- providing signals
- fitting attachments

Removal of materials may involve:

- wheelbarrow
- front end loader
- skid steer loader

Tools and equipment may include but are not limited to:

- sledge hammers
- shovels
- fencing bars
- pinch bars
- picks
- hammers
- air compressor
- pneumatic picks, rock breakers
- wheelbarrows
- brooms
- ladders

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

Debris and waste materials may include:

- loose materials
- empty containers

Plant and machines run by operators with appropriate credentials and in accordance with Work safety Standards for Users and Operators of Industrial Equipment.

EVIDENCE GUIDE

Competency is to be demonstrated by working with a team and safely carrying out the demolition process to a nominated project.

(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 demolition operations
- show compliance with organisational policies and procedures within the context of the demolition of a building
- select and use appropriate safe techniques in demolishing building
- correctly identify hazardous materials and appropriate methods applied in handling
- demonstrate safe and effective handling of materials in the process of removal and separating for recycling/reuse
- demonstrate effective maintenance of noise and dust control
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with other to ensure safe and effective operations on site

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0051A Use hand and power tools
- BCGCOR0061A Use small plant and equipment
- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGCOR0111A Handle construction materials and safe disposal of waste
- BCGCOR0171A Prepare for demolition process
- BCGCOR0232A Carry out general demolition

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- workplace and equipment safety requirements including relevant statutory regulations, codes and standards
- construction of buildings
- plant and machinery operations
- tools and equipment
- scaffolding
- materials
- demolition
- basic signalling

Skills

The ability to:

- work safely
- use tools and equipment
- operate basic plant and equipment
- prepare for work application
- solve problems
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- demolition location
- tools, plant, and equipment appropriate to the processes
- demolition plan

(5) Method of Assessment

Competency shall be assessed while tasks are undertaken.

Assessment may involve:

- observation of application process
- questioning related to underpinning knowledge

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

(6) Context of Assessment

Competency should be assessed in the normal or simulated workplace environment.

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

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

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

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

BCGCOR1503A: Erect and dismantle scaffolding - basic

Competency Descriptor:

This unit deals with the skills and knowledge required to erect and dismantle basic scaffolding types and components, and applies to individuals engage in the erection and finishing of structural work in the construction industry.

Competency Field:

General Construction

ELEMENT OF COMPETENCY**PERFORMANCE CRITERIA**

1	Plan and prepare work	1.1	Occupational Health & Safety requirements for workplace environment and erecting and dismantling scaffolding recognised and adhered to. Purpose for scaffolding/equipment and various work tasks confirmed.
		1.2	Expected loading on scaffolding/equipment and supporting structure determined using load tables.
		1.3	Site plans, scaffolding/equipment designs and drawings interpreted as necessary to industry practices.
		1.4	Work specifications interpreted in conjunction with drawings as necessary.
		1.5	Potential hazards identified from plans, drawings and specifications.
		1.6	Types and quantities of components estimated for appropriate types of scaffolding/equipment.
		1.7	Site information obtained as necessary.
		1.8	Potential hazards identified.
		1.9	Optimum prevention/control measures selected.
		1.10	Adequate site access and exit identified.
		1.11	Site sketches drawn and dimensions taken as necessary.
		1.12	Check for appropriate approvals for work and for persons.
		1.13	Job method developed to include hazard prevention, control measures and safety procedures.

- 1.14 Appropriate scaffolding and equipment components selected and inspected with damaged components labelled and rejected.
- 1.15 Rejected components repaired or sent for repair or scrapped.
- 1.16 Tools selected and inspected. Faulty tools repaired or sent for repair or scrapped.
- 1.17 Scaffolding/equipment gear prepared in accordance with codes of practice and guides.
- 1.18 Transport of equipment and tooling co-ordinated and unloading sequenced to suit job method.
- 2 Erect scaffolding/equipment
 - 2.1 Site isolated using barriers as necessary.
 - 2.2 Safety procedures implemented, including necessary signage.
 - 2.3 Lifting device, where applicable, assembled and erected.
 - 2.4 Adequate footing to Scaffolding Standards established for scaffolding/equipment.
 - 2.5 Scaffolding/equipment erected in accordance with planned hazard prevention and control measures, acceptable safe work practices, Scaffolding Standards and manufacturer's requirements.
 - 2.6 Work performed safely while platforms incomplete.
 - 2.7 Erection carried out for appropriate types of scaffolding/equipment.
 - 2.8 Completed scaffolding/equipment inspected for safety and compliance with design and statutory requirements.
 - 2.9 Site left clear of all surplus components, equipment, tools and debris.
 - 2.10 Scaffolding/equipment gear used in accordance with codes of practice and guides.
 - 2.11 Safety nets and static lines erected as necessary.

- | | | | |
|---|---|-----|---|
| 3 | Inspect, repair and alter scaffolding/equipment | 3.1 | Critical structural and safety areas of scaffolding/equipment inspected for damage, corrosion and wear. |
| | | 3.2 | Current use of scaffolding/equipment checked against type of scaffolding equipment. |
| | | 3.3 | Inspection log completed, if applicable. |
| | | 3.4 | Proposed change reviewed to determine if was covered in original planning. |
| | | 3.5 | Scaffolding/equipment inspected to confirm stability. |
| | | 3.6 | Alteration or repair carried out using same principles as for erecting scaffolding/equipment. |
| | | 3.7 | Alteration or repair performed with due regard for critical safety and structural areas of scaffolding/equipment. |
| 4 | Dismantle scaffolding/equipment | 4.1 | Proposed dismantling reviewed to determine if scaffolding and/or equipment remains as detailed in original planning. |
| | | 4.2 | Dismantling carried out using same competencies as for erecting scaffolding/equipment. |
| | | 4.3 | Dismantling performed with due regard for critical structural and safety areas of scaffolding/equipment. |
| 5 | Clean up | 5.1 | Site clearance co-ordinated or undertaken with surplus material, equipment, tools and debris removed and site left in safe condition. |
| | | 5.2 | Tools and equipment cleaned, maintained and stored. |

RANGE STATEMENT

This unit applies to the range of basic scaffolding equipment in accordance with Worksafe Standards.

Equipment range includes and is limited to:

- prefabricated scaffolds
- cantilevered hoist with maximum working load limit not exceeding 500 kilograms (materials only)
- ropes
- gin wheels
- safety nets and static lines
- bracket scaffolds (tank and formwork)

Personal protective equipment may include:

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

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
- use of ladders

Tools and equipment may include but are not limited to:

- measuring tape/rule
- hammer
- spirit level
- block spanners
- nail bag
- spanners
- shovels
- power saws
- power leads

Work to be undertaken as an individual or as part of a team and carried out to statutory regulatory and legislative requirements.

Scaffolding equipment components include:

- steel and aluminium tubes
- couplers and accessories
- scaffolding planks
- prefabricated components
- ropes
- gin wheels
- portable ladders and stairs

Potential hazards include:

- overhead power-lines
- trees
- overhead service lines such as steam, gas, water, telephone
- underground services
- uneven and/or unstable ground
- allowable floor loading as appropriate
- other workers and persons
- surrounding buildings/vessels/structures/equipment
- hazardous materials
- corrosive substances
- barricades
- inadequate lighting
- dynamic loading such as concrete pump lines

EVIDENCE GUIDE

Competency is to be demonstrated by carrying out all elements in accordance with the scaffolding/equipment listed within the range of variables statement.

(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
- apply organisational quality procedures and processes within context of erecting and dismantling scaffolding
- identify location and details of scaffolding requirements
- identify hazards and control measures selected prior to commencing activities
- select and use appropriate processes, tools and equipment to carry out tasks
- use safe and effective procedures to handle materials
- use safe and effective procedures to erect and dismantle scaffolding to regulatory requirements
- identify typical faults and problems that occur and necessary action taken to rectify
- interactively communicate with others to ensure safe and effective operations

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- BCGCOR0071A Erect and dismantle restricted height scaffolding
- BCGCOR0081A Use simple levelling devices

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of

- relevant Statutory OH&S legislation, standards and codes of practice
- workplace and equipment safety requirements
- site drawings and specifications
- scaffolding/equipment components
- materials and characteristics
- tools and equipment
- levelling and measuring

Skills

The ability to

- work safely
- interpret drawings and documentation
- organise work
- use tools and equipment
- erect scaffolding
- communicate effectively

(4) Resource Implications

The following resources should be provided:

- workplace location
- scaffolding components appropriate to tasks
- tools and equipment appropriate to scaffolding processes
- appropriate communication of documentation related to tasks

(5) Method of Assessment

Competency should be assessed while tasks are undertaken.

Assessment may involve:

- observation of the application process
- questioning related to underpinning knowledge

Assessment may be by intermittent checking at various stages of each task 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 shall be while tasks are undertaken either individually or working with 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"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation
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.