

Training Package	General Construction (BCG03)	HSC Requirements and Advice
Title	Use wall and floor tiling tools and equipment	
Unit code BCGWF2002B	Unit Descriptor This unit specifies the competency required safely and effectively use tools and equipment specific to ceramic wall and floor tiling work. This unit includes the identification, selection and use of tools for specific applications.	HSC Indicative Hours

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.

Specific knowledge required to achieve the performance criteria	Relationship to other units	Specific resource requirements for this unit	HSC Requirements and Advice
A knowledge of: <ul style="list-style-type: none"> workplace and equipment safety requirements quality requirements general construction terminology plant, tools and equipment types, characteristics, uses and limitations techniques and procedures for using wall and floor tiling tools and equipment characteristics and applications of wall and floor tiling tools and equipment processes for the calculation of material requirements Material Safety Data Sheets plans, drawings and specifications materials handling, storage and environmentally friendly waste management measuring and marking JSA's/Safe work method statement. 	Pre-requisite units are: <ul style="list-style-type: none"> 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.	The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace materials relevant to using wall and floor tiling tools and equipment hand and power tools, plant and equipment appropriate to using wall and floor tiling tools and equipment realistic activities covering the mandatory task requirements specifications and work instructions. 	Key Terms and Concepts <ul style="list-style-type: none"> barricades clean up clean, maintain and store tiling tools and equipment communication consumables environmental protection general features, purpose and working knowledge of tiling plant, tools and equipment handling, application, transport and storage of tiling materials identify and rectify/report faults Material Safety Data Sheets (MSDS) occupational health and safety (OHS) plan and prepare personal protective equipment (PPE) pre-operational checks project/site safety plan

Context of assessment	Critical aspects of evidence required to demonstrate competency in this unit	Methods of assessment	HSC Requirements and Advice
<p>The application of competency is to be assessed in the workplace or realistically simulated construction site.</p> <p>Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory requirements including specified Australian Standards.</p>	<p>Location, interpretation and application of relevant information, standards and specifications.</p> <p>Compliance with site safety plan and OH&S legislation/regulations/codes of practice applicable to workplace operations.</p> <p>Compliance with organisational policies and procedures including quality requirements.</p> <p>Safe and effective operational use of tools, plant and equipment.</p> <p>Communication and working effectively and safely with others.</p> <p><i>As a minimum, follow work instructions, operating procedures and inspection practices to use the listed wall and floor tiling tools and equipment for their appropriate application, ensuring:</i></p> <ul style="list-style-type: none"> • <i>correct identification, selection and use of appropriate processes, tools and equipment</i> • <i>correct selection and use of appropriate processes, tools and equipment</i> • <i>completing all work to specification</i> • <i>compliance with regulations, standards and organisational quality procedures and processes.</i> 	<p>Assessment must satisfy the endorsed assessment guidelines of the Building and Construction industry's General Construction Training Package.</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.</p> <p>Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies.</p> <p>Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge.</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process.</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <p>Assessment may be in conjunction with assessment of other units of competency, including those listed above.</p>	<ul style="list-style-type: none"> • safe work practices • safety/lockout tagging • signage • waste management • work instructions.

Specific key competencies, underpinning and employability skills required to achieve the performance criteria

These include a number of processes that are learned throughout work and life, which are required in most jobs. Some of these are covered by the national key competencies, although others may be added. The details below highlight how these competencies are to be applied in the attainment of this unit.

Application of the key competencies in this unit are to satisfy the nominated level in which:

Level 1 – relates to working effectively within set conditions and processes;

Level 2 – relates to the management or facilitation of conditions and processes; and

Level 3 – relates to the design, development and evaluation of conditions or process.

How will the candidate apply the following key competency in this unit? **The candidate will need to:**

Collect, analyse and organise information	Level 1	Collect, organise, interpret and understand the information required for using wall and floor tiling tools and equipment, including work instructions, plans/sketches/diagrams, safety instructions, signage, labels, quality procedures, manufacturers' instructions, material safety data sheets and equipment instructions
Communicate ideas and information	Level 1	Communicate ideas and information orally and in writing, in simple English to enable confirmation of work requirements, passage of information and requests to other workers during operations and the reporting and recording of work outcomes
Plan and organise activities	Level 1	Conduct activities associated with using wall and floor tiling tools and equipment, including the co-ordination and use of equipment, materials and tools to avoid backtracking and rework
Work with others and in a team	Level 1	Work with others and in a team by recognising dependencies and using co-operative approaches to optimise satisfaction and productivity
Solve problems	Level 1	Establish safe and effective work processes which anticipate likely problems and blockages and systematically work around these to avoid or minimise reworking and avoid wastage
Use mathematical ideas and techniques	Level 1	Use mathematical ideas and techniques to correctly calculate time to complete tasks, estimate measurements, distances and levels, calculate material requirements and establish quality checks
Use technology	Level 1	Use workplace technology related to using wall and floor tiling tools and equipment, including the use of calculators, the use of communication devices and the reporting/recording of results

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
1 Plan and prepare	1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied	<p>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:</p> <p>Quality Requirements</p> <ul style="list-style-type: none"> Quality requirements are to include but not be limited to relevant regulations including Australian Standards, internal company quality policy and standards, workplace operations and procedures and manufacturers specifications where specified <p>Communications</p> <ul style="list-style-type: none"> Communications are to include but not limited to verbal and visual instructions and fault reporting and <i>may include</i> mobile phone, site specific instructions, written instructions, plans or instructions related to job/task, two way radio and hand signals On site meeting processes <i>may include</i> notification/ scheduling (time, place, purpose), task discussions and local coordination of procedural and operational issues <p>Information</p> <p>Information sources <i>may include</i> but not be limited to</p> <ul style="list-style-type: none"> 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 using wall and floor tiling tools and equipment regulatory/legislative requirements pertaining to using wall and floor tiling tools and equipment manufacturers' specifications and instructions where specified organisation work specifications and requirements 	<p>Learning experiences for the HSC must address:</p> <p>A range of sources for work instructions including:</p> <ul style="list-style-type: none"> work schedules job sheet/plans/specifications organisation/company bulletins/memos Material Safety Data Sheets (MSDS) diagrams/sketches/maps job safety analysis (JSA)/safe work method statements regulations/legislation manufacturer/organisation/site guidelines, policies and procedures Australian Standards. <p>An awareness of various modes of communication to receive work instructions including:</p> <ul style="list-style-type: none"> verbal <ul style="list-style-type: none"> face-to-face (supervisor to employee) telephone/mobile phone two-way radio on-site meetings written communication <ul style="list-style-type: none"> work plans memos/messages job descriptions/statements workplace forms rosters facsimile email intranet non-verbal <ul style="list-style-type: none"> gestures signals signage diagrams. <p>Planning and preparation for a range of wall and floor tiling projects.</p> <p>A basic overview of the role of employees in quality assurance.</p>

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		<ul style="list-style-type: none"> instructions issued by authorised organisational or external personnel relevant Australian Standards 	
	<p>1.2 Safety requirements are followed in accordance with safety plans and policies</p>	<p>Safety (OH&S)</p> <ul style="list-style-type: none"> OH&S requirements are to be in accordance with legislation/regulations/codes of practice, organisational safety policies and procedures and project safety plan. This <i>may include</i> 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/codes of practice and 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 lighting, concealed services (water, power and gas) trip hazards, working with dangerous/hazardous materials, working in confined spaces, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public Emergency procedures related to this unit are to include but may not be limited to extinguishing fires, organisational first aid requirements and evacuation <p>Statutory/Regulatory Authorities</p> <ul style="list-style-type: none"> Statutory/regulatory authorities <i>may include</i> Federal, State and Local Authorities administering the applicable acts, regulations and codes of practice 	<p>Learning experiences for the HSC must address:</p> <p>A basic awareness of occupational health and safety (OHS) regulations and legislation relevant to the construction industry.</p> <p>An awareness of project/site safety plan.</p> <p>An awareness of safe work practices including:</p> <ul style="list-style-type: none"> OHS induction training (general, work activity and site-specific) selection, use and maintenance of personal protective equipment (PPE) access to appropriate communication devices selection of appropriate tools for the task correct use, maintenance and storage of tools, equipment and machinery correct handling, application, transport and storage of hazardous and non-hazardous materials safe posture (sitting, standing, bending, twisting and lifting) correct manual handling (lifting and transferring) correct selection and use of fire fighting equipment <ul style="list-style-type: none"> fire blanket fire extinguisher/s fire hydrant and hose hazard identification and risk control basic first aid training and access to first aid kits access to sufficient drinking water procedures to follow in the event of an emergency effective communication and teamwork adherence to work instructions and organisation/company policy and standard operating procedures.

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	1.3 Signage/barricade requirements are identified and implemented	<p>Communications</p> <ul style="list-style-type: none"> • Communications are to include but not limited to verbal and visual instructions and fault reporting and <i>may include</i> mobile phone, site specific instructions, written instructions, plans or instructions related to job/task, two way radio and hand signals 	<p>Learning experiences for the HSC must address:</p> <p>Selection and use of standard signage and barricades common to the general construction industry as well as specific to wall and floor tiling projects:</p> <ul style="list-style-type: none"> • legislative requirements • meaning of colour and shape • appropriate placement and positioning.
	1.4 Environmental protection requirements are identified for the project in accordance with environmental plans and regulatory obligations and applied	<p>Environmental Requirements</p> <ul style="list-style-type: none"> • Environmental requirements are to include but are not limited to waste management, noise, dust, vibration and clean-up management <p>Statutory/Regulatory Authorities</p> <ul style="list-style-type: none"> • Statutory/regulatory authorities <i>may include</i> Federal, State and Local Authorities administering the applicable acts, regulations and codes of practice 	<p>Learning experiences for the HSC must address:</p> <p>Environmental hazards/threats including:</p> <ul style="list-style-type: none"> • chemical/gas spillage/leakage • faulty tools, equipment and machinery • flood • fire • discharge into waterways • pollution. <p>Consequences of poor environmental planning for the following:</p> <ul style="list-style-type: none"> • waterways • wildlife habitats • neighbouring properties • roads and amenities. <p>An awareness of project environment management plan.</p> <p>Strategies for minimisation of potential negative environmental impacts including:</p> <ul style="list-style-type: none"> • environmental hazard identification and risk minimisation and reporting • minimisation strategies <ul style="list-style-type: none"> - regular maintenance of machinery and equipment - use of biodegradable/non-toxic materials - dust suppression - run-off control • waste minimisation <ul style="list-style-type: none"> - accurate measurements and calculations - recycling - using recyclable products - resource efficiency • improvement strategies

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			<ul style="list-style-type: none"> • environmental monitoring • emergency procedures. <p>A basic awareness of the roles and responsibilities of the:</p> <ul style="list-style-type: none"> • NSW Department of Environment and Conservation [incorporating Environment Protection Authority (EPA)] • local council/government.
2 Identify hand and power tools	2.1 Hand and power tools, their functions, operations and limitations are identified	<p>Unit scope</p> <ul style="list-style-type: none"> • The unit requires the selection and operation of hand and power tools and equipment in wall and floor tiling applications. It involves their identification, their correct application and their effective operation <p>Tools and Equipment</p> <ul style="list-style-type: none"> • Tools and equipment are to include tile cutters and scribes, measuring tapes/rules, straight edges, levelling equipment (including straight edges, line levels, string lines, spirit levels and water levels), wet and dry diamond saws, scrapers, shovels, wooden floats, trowels, spacers/wedges, squares, buckets, sponges, rags, rubber mallets, lump hammers, caulking guns, nippers, squeegees and pointed grouters • Tools and equipment <i>may include</i> adhesive mixers, screeding machines, grouting machines, beating machines, concrete mixers and masonry drill bits • Power tools are to include power drills and power leads • Plant and equipment <i>may include</i> small petrol/diesel engines, small compressors and small generators <p>Safety (OH&S)</p> <ul style="list-style-type: none"> • OH&S requirements are to be in accordance with legislation/regulations/codes of practice, organisational safety policies and procedures 	<p>Learning experiences for the HSC must address:</p> <p>A basic knowledge of a range of hand and power tools including:</p> <ul style="list-style-type: none"> • name • characteristics • use • limitations • hazard controls • maintenance.
	2.2 OH&S requirements for using hand tools are recognised and adhered to		<p>Learning experiences for the HSC must address:</p> <p>Importance of safe work practices for the operation of hand and power tools.</p> <p>A range of PPE for the use of hand and power tools including:</p> <ul style="list-style-type: none"> • footwear • head protection • hearing protection • gloves • mask/respirator • eye protection • clothing • sunscreen.
	2.3 OH&S requirements for using power tools are recognised and adhered to		

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3 Select tools for project	3.1 Tools are selected consistent with job requirements	<ul style="list-style-type: none"> and project safety plan. This <i>may include</i> 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/codes of practice and workplace policies and practices Safe operating procedures are to include but 	<p>Learning experiences for the HSC must address:</p> <p>Considerations for the selection of tools including:</p> <ul style="list-style-type: none"> skills/training licensing requirements time cost OHS requirements <ul style="list-style-type: none"> job safety analysis (JSA)/safe work method statement risk management appropriateness for purpose.
	3.2 Tools, including leads and hoses, are checked for current tags, serviceability and safety and any faults reported in accordance with workplace procedures	<p>not be limited to the conduct of operational risk assessment and treatments associated with lighting, concealed services (water, power and gas) trip hazards, working with dangerous/hazardous materials, working in confined spaces, restricted access barriers, traffic control, working at heights, working in proximity to others, worksite visitors and the public</p> <ul style="list-style-type: none"> Emergency procedures related to this unit are to include but may not be limited to extinguishing fires, organisational first aid requirements and evacuation <p>Environmental Requirements</p> <p>Environmental requirements are to include but are not limited to waste management, noise, dust, vibration and clean-up management</p> <p>Statutory/Regulatory Authorities</p> <ul style="list-style-type: none"> Statutory/regulatory authorities <i>may include</i> Federal, State and Local Authorities administering the applicable acts, regulations and codes of practice 	<p>Learning experiences for the HSC must address:</p> <p>Procedures and documentation for identifying faulty tools and equipment including:</p> <ul style="list-style-type: none"> malfunctions worn, broken or missing components broken or missing safety guards. <p>Personnel to whom problems should be reported:</p> <ul style="list-style-type: none"> supervisor/manager supplier/manufacturere. <p>Reporting of serious faults including:</p> <ul style="list-style-type: none"> verbal notification to appropriate personnel recorded on job card/maintenance log safety/lockout tagging where appropriate. <p>Reasons for safety/lockout tagging including:</p> <ul style="list-style-type: none"> ease of identification evidence of serviceability preventing use until repaired. <p>Solutions to a range of potential faults.</p>
	3.3 Power tools guards, couplings, gauges and controls are checked and maintained in accordance with manufacturers' recommendations and workplace procedures	<p>Quality Requirements</p> <ul style="list-style-type: none"> Quality requirements are to include but not be limited to relevant regulations including Australian Standards, internal company quality policy and standards, workplace operations and procedures and manufacturers specifications where specified 	
	3.4 Equipment to hold or support material during operation is selected		

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	3.5 Pre-operational checks, including lubricants, hydraulic fluid and water, are completed in accordance with manufacturers' recommendations	Communications <ul style="list-style-type: none"> • Communications are to include but not limited to verbal and visual instructions and fault reporting and <i>may include</i> mobile phone, site specific instructions, written instructions, plans or instructions related to job/task, two way radio and hand signals 	Learning experiences for the HSC must address: Pre-operational checks including: <ul style="list-style-type: none"> • safety • consumables • adjustment/alignment for job task.
4 Use tools	4.1 Power and/or compressed air supply is connected to work area	Materials <ul style="list-style-type: none"> • Materials are to include tiles, ceramic, slate, marble and granite, adhesives, cement mortar (with and without additives), caulking compound and grout Information Information sources <i>may include</i> but not be limited to <ul style="list-style-type: none"> • 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 using wall and floor tiling tools and equipment • regulatory/legislative requirements pertaining to using wall and floor tiling tools and equipment • manufacturers' specifications and instructions where specified • organisation work specifications and requirements • instructions issued by authorised organisational or external personnel 	Learning experiences for the HSC must address: Hazards associated with the use of: <ul style="list-style-type: none"> • electricity • compressed air. Awareness of the importance of safe work practices including: <ul style="list-style-type: none"> • use of power supply <ul style="list-style-type: none"> - cut-out switches/earth leakage core balance device(ELCB) - tagging of leads - temporary power boards - correct use of power leads - selection of PPE • use of compressed air <ul style="list-style-type: none"> - safety inspections - checking pressure tanks - lines and connections - overload pressure valves to compressor - purge procedures. Acknowledgement of the importance of securing work pieces when working with power/pneumatic tools.
	4.2 Start up and shut down procedures are performed in accordance with workplace procedures	<ul style="list-style-type: none"> • relevant Australian Standards 	
	4.3 Tools are safely and effectively used according to manufacturers' recommendations and regulatory and workplace requirements		
	4.4 Tools are safely located and switched when not in immediate use		

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5 Select plant and equipment	5.1 Functions and limitations of plant/equipment used in wall and floor tiling are identified		<p>Learning experiences for the HSC must address:</p> <p>A basic knowledge of a range of plant and equipment including:</p> <ul style="list-style-type: none"> • name • characteristics • use • limitations • hazard controls • maintenance. <p>Considerations for the selection of plant and equipment including:</p> <ul style="list-style-type: none"> • skills/training • licensing requirements • time • cost • OHS requirements <ul style="list-style-type: none"> - job safety analysis (JSA)/safe work method statement - risk assessment - emergency procedures • environmental factors <ul style="list-style-type: none"> - confined space - noise restrictions - pollution.
	5.2 Method of operation of plant/equipment is identified		
	5.3 Plant and equipment is checked for safety, and faults reported to supervisor in accordance with workplace procedures		
	5.4 Plant and equipment requirements for guarding, cut off switches, couplings, gauges and controls checked in accordance with workplace procedures		
	5.5 Plant and equipment is selected consistent with hazard minimization and needs of job		

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	5.6 Requirements for operating and using plant and equipment recognised and adhered to in accordance with workplace procedures		
6 Use plant and equipment	6.1 Plant and equipment is safely and effectively used		
	6.2 Plant and equipment is safely located and switched off when not in immediate use		<p>Learning experiences for the HSC must address:</p> <p>Security of plant and equipment including</p> <ul style="list-style-type: none"> • guards • lock up procedures • protective covers.
	6.3 Tools and equipment is inspected, maintained, tagged and faults reported in accordance with workplace procedures		
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	<p>Statutory/Regulatory Authorities</p> <ul style="list-style-type: none"> • Statutory/regulatory authorities <i>may include</i> Federal, State and Local Authorities administering the applicable acts, regulations and codes of practice <p>Environmental Requirements</p> <ul style="list-style-type: none"> • Environmental requirements are to include but are not limited to waste management, noise, dust, vibration and clean-up management <p>Materials</p> <ul style="list-style-type: none"> • Materials are to include tiles, ceramic, slate, marble and granite, adhesives, cement mortar (with and without additives), caulking compound and grout 	<p>Learning experiences for the HSC must address:</p> <p>An awareness of procedures for minimisation of impact on the environment including:</p> <ul style="list-style-type: none"> • removal and disposal of non-reusable materials in a responsible manner <ul style="list-style-type: none"> - work materials - chemicals • safe storage of reusable materials in accordance with company policy • containment of loose materials on site (such as mud, dust, litter and waste material). <p>Environmental requirements for dealing with waste including:</p> <ul style="list-style-type: none"> • recycling <ul style="list-style-type: none"> - paper-based products - plastic - worn components - metal components - construction materials - building components • approved disposal of

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			<ul style="list-style-type: none"> - hazardous material - non-hazardous material.
	<p>7.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices</p>	<p>Environmental Requirements</p> <ul style="list-style-type: none"> • Environmental requirements are to include but are not limited to waste management, noise, dust, vibration and clean-up management <p>Tools and Equipment</p> <ul style="list-style-type: none"> • Tools and equipment are to include tile cutters and scribes, measuring tapes/rules, straight edges, levelling equipment (including straight edges, line levels, string lines, spirit levels and water levels), wet and dry diamond saws, scrapers, shovels, wooden floats, trowels, spacers/wedges, squares, buckets, sponges, rags, rubber mallets, lump hammers, caulking guns, nippers, squeegees and pointed grouters • Tools and equipment <i>may include</i> adhesive mixers, screeding machines, grouting machines, beating machines, concrete mixers and masonry drill bits • Power tools are to include power drills and power leads • Plant and equipment <i>may include</i> small petrol/diesel engines, small compressors and small generators 	<p>Learning experiences for the HSC must address:</p> <p>Clean-up procedures with due consideration to the environment and OHS.</p> <p>A range of cleaning techniques including:</p> <ul style="list-style-type: none"> • wiping • washing • brushing • sweeping • scraping • use of cleaning agents (chemicals, solvents and detergents). <p>Cleaning equipment including</p> <ul style="list-style-type: none"> • wet/dry vacuum • scrapers • brooms and brushes • scrapers. <p>Tools and equipment cleaning/maintenance requirements as necessary including:</p> <ul style="list-style-type: none"> • removal of dirt, dust, grease and oil • sharpening • anti-rust treatments • repair/replacement of missing/damaged parts • scheduled servicing • refuel and top-up consumables. <p>An awareness of issues relating to storage of tools and equipment including:</p> <ul style="list-style-type: none"> • climatic effects • OHS considerations • stability • security • ease of access.