

BSA Manual Support Document

Contractors Competency Matrix Guidance

Wall and Floor Tiling

Overview

The purpose of this framework, alongside the Route to Competence and SKEB (Skills, Knowledge, Experience, and Behaviour statements), is to define the competence and qualification requirements for the Wall and Floor Tiling sector. By consulting with sector experts, the framework aims to assess if existing training and qualification methods are adequate and identify any gaps that need addressing.

The Functional Map of the SKEB and the Routes to Competence highlight national variations in competence requirements, ensuring that regional specifics are considered. This framework consolidates all industry-approved training and assessment standards for Wall and Floor Tiling.

The Functional Map outlines the competencies required as agreed by the industry, with each competency further detailed by the Skills, Knowledge, Experience, and Behaviours that make up the function. The Generic skills cover the broader skills needed across the construction industry, while Behaviours are core behavioural standards that must be demonstrated throughout competency assessments.

The Core Trade Competencies detail the essential competence functions, divided into the necessary Skills, Knowledge, and Experience. This framework will be updated iteratively in line with revisions to industry standards, legislation, and consultation outcomes.

Functional Map Activities

Core Construction Competencies	England & Wales	Scotland	Training	Re-validation
Conform to general health, safety and welfare in the workplace	X	X		
Conform to productive working practices in the workplace	X			
Move, handle and store resources	X			
Confirm work activities and resources for the work		X		
Confirm the occupational method of work		X		
Develop and maintain good working relationships		X		
Core Trade Competencies				
Prepare backgrounds for tiling	X	X	Guidelines for tiling - CITB	
	X	X	Guidelines for tiling - CITB Large format tiles for internal tiling - CITB Tiling in wet rooms - CITB	
	X	X		
		X	Internal ceramic tiling to sheet and board substrates - CITB	
		X	Tiling in wet rooms - CITB	

Generic Skills & Knowledge

Interpret Information	Safe work practices	Selection of resources	Minimise the risk of damage	Approach to work
<p>To effectively access and interpret documents like drawings, schedules, job details, method statements, risk assessments, COSHH assessments, manufacturers' information, official guidance, technical data sheets, and electronic data, a clear understanding of their purpose is crucial. These documents provide vital information regarding specifications, safety measures, and technical requirements necessary for successful task completion.</p> <p>When dealing with product and technical data, it's important to interpret specifications, codes of practice, and British Standards to ensure the correct installation of wall and floor tiles and associated systems, all while meeting industry standards and customer expectations. Regularly reviewing specifications and verifying their compliance with customer requirements will help prevent errors. In case of discrepancies, manufacturers' product information should be consulted for resolutions.</p> <p>Identifying and minimizing hazards and risks is essential for maintaining a safe workplace, achieved by adhering to safety procedures, risk assessments, method statements, and work instructions. Understanding and applying organizational procedures ensure safety and operational efficiency, reducing risks.</p> <p>Accurate interpretation of information, such as drawings, work programmes, job details, and technical documents, is necessary to meet standards and prevent errors. Reporting and rectifying inaccuracies is key to maintaining quality. Additionally, leveraging digital tools and systems ensures tasks are completed effectively in line with best practices.</p>	<p>To comply with legislation and guidance, work must be carried out safely, including the proper use of health and safety equipment, access equipment, and the safe storage and handling of materials, tools, and equipment. This includes addressing risks related to asbestos and silica dust and following accident and incident reporting procedures. Tools and PPE must be selected, used, and stored correctly, and workplace hazards should be minimized to ensure safety. Emergency responses should follow organisational procedures for fire, spillages, injuries, and asbestos incidents.</p> <p>Fire extinguisher use should be understood, and appropriate health and safety control equipment (e.g., PPE, RPE, LEV) should be applied. Security procedures for tools, equipment, and personal belongings must be followed. Hazards identified through risk assessments and method statements should be reported as per procedures. Safe and environmentally responsible work practices must be adhered to, ensuring safe handling, storage, and protection of materials and equipment.</p>	<p>To effectively carry out tiling work, it is crucial to select, use, maintain, and store tools and equipment correctly. Understanding the types and sizes of wall and floor tiles, their materials, and their specific uses is essential. Additionally, the selection of appropriate resources such as tiles, materials, components, and fixings should be based on the required work methods.</p> <p>Efficient use of resources, time, and materials is key to maintaining quality while minimizing waste. When selecting materials, it's important to consider wall and floor tiles, primers, levelling compounds, screeds, adhesives, grouts, trims, and ancillaries, ensuring their suitability for the substrates and the installation environment.</p> <p>Understanding the differences between product types—such as their characteristics, qualities, uses, sustainability, limitations, and potential defects—is essential. Recognizing why these aspects matter and knowing how to rectify defects ensures a high-quality finish. Organizational procedures for resource selection provide guidance on best practices and must be followed to meet standards.</p> <p>Confirmation that resources and materials conform to specifications involves understanding different adhesives, grouts, screeds, and render types, as well as waterproof tanking, decoupling, and anti-fracture membranes. It is also necessary to know the correct types of substrates, weight limits, and the appropriate products for each application.</p> <p>Understanding how to report problems associated with resources, such as identifying common issues and how to prevent them, is important for maintaining quality. Additionally, being able to calculate the quantity, length, and wastage of materials ensures accurate resource estimation and reduces waste during the project.</p>	<p>To comply with organisational procedures and minimise the risk of damage to the work and surrounding area, it is essential to:</p> <p>Protect the work and its surrounding area from potential damage during installation or other activities. This can be achieved by using appropriate protection measures such as coverings, barriers, and proper storage for materials.</p> <p>Maintain a safe, clear, and tidy work area at all times. This includes organising tools and materials efficiently and ensuring that any hazards are promptly addressed to prevent accidents. Dispose of waste according to current legislation, following all relevant environmental responsibilities, organisational procedures, and statutory regulations to avoid pollution or environmental harm.</p> <p>In the context of replacing damaged tiles, it is crucial to do so carefully to avoid causing damage to adjacent finishes. This requires skill and precision to remove the damaged tiles while preserving the surrounding materials.</p> <p>Protection of the work area from damage is necessary to prevent disturbances from other workplace activities, occupations, or adverse weather conditions. This ensures the integrity of both the current work and the surrounding environment.</p> <p>Minimising damage to the existing building fabric is vital, particularly in renovations or repairs, as it ensures the quality and longevity of the building.</p> <p>The safe disposal of waste is important to uphold environmental responsibilities and ensure compliance with organisational procedures, manufacturers' guidance, statutory regulations, and official legislation. Proper disposal practices help reduce environmental impact and avoid penalties.</p> <p>Lastly, maintaining a safe, clear, and tidy work area is not only important for efficiency but also to promote a safe working environment, reduce the risk of accidents, and improve overall productivity.</p>	<p>To complete work efficiently and within timeframes, it is essential to effectively manage resources, time, and materials, while coordinating with other occupations. Understanding industry sectors (e.g., residential, commercial, heritage) and construction methods (e.g., steel frame, timber frame) ensures the correct techniques are applied.</p> <p>Identifying and solving common preparation and installation problems, while maintaining teamwork and communication, is key to project success. Mental health awareness, fairness, and respect foster a supportive environment.</p> <p>Properly selecting materials, understanding substrate preparation methods, and using the right cutting and installation techniques are crucial. Removing and replacing tiles without damaging adjacent finishes requires skill and knowledge of different installation methods.</p> <p>When working with modern or historical buildings, recognizing when specialist skills are needed ensures quality. Adhering to safety protocols when working with machinery and at height is essential, as is maintaining tools and equipment.</p> <p>Understanding both modern and traditional construction methods, work schedules, and reporting systems helps keep projects on track.</p>

Behavioural Competencies

- Responsibilities towards safety: Adhering to safety protocols, identifying hazards, maintaining a safe environment for oneself and others.
- Strong work ethic: Being motivated, reliable, and adaptable, and demonstrating dedication to completing tasks efficiently and to a high standard.
- Attention to detail, quality, and continuous improvement: Ensuring work is done to the best possible standard, minimizing mistakes, and striving for improvement.
- Awareness of business mission and goals: Understanding the business's mission, aims, markets, products, and services to align individual work with organizational goals.
- Customer-focused attitude: Prioritizing the client's needs and expectations in all aspects of work.
- Effective communication: Communicating clearly within a team, with clients, or management to ensure smooth workflow, clarity, and efficient problem-solving.

Prepare backgrounds for tiling

Skills	Knowledge
<p>To prepare surfaces for wall and floor tiling, ensure they are level and plumb, adhering to British standards, manufacturers' information, and technical data sheets. This includes conducting any necessary remedial work to meet specifications, applying primers and suitable materials, and installing movement joints as required. Additionally, install membranes to enhance the durability and functionality of the tiled surface. These tasks must be carried out with precision to ensure the finished work meets the required standards and specifications.</p>	<p>To prepare backgrounds for wall and floor tiling, it is essential to select and apply appropriate primers and materials that conform to British standards, manufacturers' instructions, and technical data sheets. This involves preparing various surfaces, including manufactured board, membranes, and gypsum-based wall and floor surfaces, ensuring they are level and plumb. It is crucial to choose the correct background material, such as wall and floorboards, plaster, screed, render, or concrete, to ensure proper adhesion and durability for the tiles.</p> <p>When preparing surfaces, mix and apply different types of screeds, renders, and specialist materials like waterproof tanking, decoupling, and anti-fracture membranes to provide a stable base. Use proprietary materials to repair or make good any surfaces as needed. Additionally, correctly install accessories and locate movement joints to accommodate thermal expansion and prevent cracking. Be mindful of the drying and curing times for various backgrounds to ensure optimal results.</p>

Tile wall and floor surfaces

Skills	Knowledge
<p>To prepare backgrounds and install wall and floor tiles, it is essential to adhere to British standards, ensuring surfaces are properly set out and tiles are fixed accurately. This includes:</p> <ul style="list-style-type: none"> Setting out wall and floor areas to ensure consistent joint widths, with joints being square, parallel, and plumb. Removing and replacing damaged tiles without causing harm to adjacent finishes. Mixing and applying adhesives, then fixing tiles securely to wall and floor surfaces. For wall surfaces, including reveals, cills, and soffits (door and windows), tiles must be fixed according to British standards, manufacturers' information, and technical data sheets. The same applies to floor surfaces, including drainage outlets, treads, and risers, along with the installation of relevant accessories. <p>After tiling, grout and finish the areas appropriately to create a seamless and professional appearance. Any remedial work must be conducted in line with the project specification, ensuring the final result meets all requirements and quality standards.</p>	<p>To install tiles such as porcelain, stone, conglomerate, and mosaics in accordance with British standards, the following methods and techniques should be followed:</p> <ul style="list-style-type: none"> Avoid Tile Cutting: Minimize the need for cutting tiles by planning layouts carefully to reduce waste and preserve the aesthetic of the tiled surface. Fixing Channels and Forming Drainage: Correctly fix channels and form drainage outlets, ensuring proper movement joint placement and using suitable accessories to avoid water damage or movement issues. Reveals, Cills, and Soffits: Accurately form reveals, cills, soffits, and angles, both internal and external, to ensure clean, well-finished edges. Fixing Wall and Floor Tiles: Follow British standards and manufacturers' specifications when fixing tiles to vertical, horizontal, and inclined wall surfaces, including reveals, cills, soffits, and floor surfaces. This also includes drainage outlets, treads, risers, and other accessories. Remedial Work: When required, remove and replace damaged tiles without causing harm to adjacent finishes, ensuring that the replacement is done seamlessly and to the same standard as the original work. Grouting and Finishing: Once tiles are fixed in place, apply the grout and finish the surface properly, ensuring a neat, professional appearance that meets the specified standards. <p>By adhering to these steps and techniques, tiles will be installed effectively, providing long-lasting and aesthetically pleasing results.</p>

Produce complex ceramic, mosaic and stone surface finishes

Skills	Knowledge
<p>To ensure the successful installation of tiled surfaces, it is essential to prepare backgrounds properly, install under-tile heating systems, and follow British Standards throughout the process. This involves selecting the appropriate fixing methods, such as traditional render and screed or modern adhesives and grouts, tailored to the specific work environment and materials. Accurate setting out for tiling wall and floor areas is crucial, ensuring consistent joint widths and level, plumb, and square surfaces. When replacing damaged tiles, care must be taken to avoid damaging adjacent finishes, while mixing and applying adhesives to fix tiles securely. For complex surfaces like reveals, cills, soffits, and staircases, the correct installation of ceramic, porcelain, mosaic, or natural stone tiles must follow manufacturers' instructions. Additionally, intricate tile designs, including patterns, motifs, and curves, must be carefully fixed to meet the required specifications. Grouting and finishing tiles should be done meticulously to ensure a polished result, and any remedial work required should be carried out in line with the specification, ensuring that the final outcome meets both aesthetic and functional standards.</p>	<p>To effectively complete tiling work, it is crucial to use different measuring and setting out procedures to ensure accuracy in the layout. Identifying the suitability of backgrounds before preparation and application is an essential first step. This involves checking the condition and type of surfaces to ensure they are ideal for adhesive and grout application. Preparing and applying adhesives, grouts, primers, and ancillary products must be done following manufacturers' instructions and British Standards to guarantee the durability and safety of the finished surface.</p> <p>When working with complex designs, such as reveals, cills, soffits, staircases, and landings, it is important to fix tiles carefully using appropriate methods for different tile types, including ceramic, porcelain, mosaics, and natural stone. For intricate patterns, motifs, curves, or circles, these must also be fixed according to British Standards, ensuring the installation adheres to the specifications provided in the manufacturer's instructions and technical data sheets.</p> <p>The drying and curing times for various backgrounds should always be considered, as improper timing can affect the adhesion and overall quality of the tile installation. Proper understanding and management of these factors will result in a high-quality, durable finish that meets industry standards.</p>

Lay under-tile heating systems and tile surfaces

Skills	Knowledge
<p>To effectively complete tiling work that conforms to British standards, follow these steps:</p> <ul style="list-style-type: none"> ▪ Prepare Backgrounds: Ensure surfaces are adequately prepared before installing tiles. This includes checking for levelness and plumbness, as well as using appropriate fixing methods tailored to the type of substrate, whether it's traditional render, screed, or modern adhesives and grouts. ▪ Set Out for Under Tile Heating Systems: Plan and set out the installation of under-tile heating systems and tiles, ensuring joint widths are consistent, square, parallel, and plumb. Mark and cut tiles as needed, especially when working around obstacles like pipes, sockets, and drains. ▪ Install Under Tile Heating Systems: Position and secure electrical under-tile heating systems according to British standards and the manufacturer's specifications. This includes ensuring that the system is laid correctly to prevent future issues. ▪ Install Tanking Systems and Membranes: Apply tanking systems and decoupling membranes in line with specifications, ensuring these are correctly installed to prevent moisture damage and ensure the integrity of the tile installation. ▪ Mix Adhesives and Fix Tiles: Mix and apply the appropriate adhesives for the wall and floor surfaces. Fix tiles securely, ensuring they align properly and conform to the specifications outlined in the technical data sheets. ▪ Grouting and Finishing: Once tiles are fixed, apply grout to the joints and finish the surface neatly, ensuring the grouting is consistent and tidy. ▪ Remedial Work: Undertake any necessary remedial work in accordance with the specifications, ensuring the final work meets the required quality and safety standards. <p>By following these procedures, the tile installation will meet British standards, ensuring both functionality and aesthetics in the final result.</p>	<p>To ensure successful installation and maintenance of under-tile and under-floor heating systems, follow these steps:</p> <ul style="list-style-type: none"> ▪ Position and Secure Electrical Under-Tile Heating Systems: Lay heating cables or mats on clean, dry substrates, securing them as per manufacturer instructions to prevent shifting. ▪ Confirm Commission Procedures: Test the system, ensuring wiring, connections, and thermostats are operational before tiling. ▪ Locate and Provide Movement Joints: Install movement joints at room perimeters and transitions to prevent cracking, in line with British Standards. ▪ Lay Tiles Over Under-Tile Heating Systems: Use a flexible adhesive for good adhesion, applying evenly to prevent air pockets, and ensure consistent joint spacing. ▪ Lay Tiles Over Under-Floor Heating Systems: Apply suitable adhesive for floor type, ensuring even distribution and correct alignment. ▪ Install Tanking Systems and Decoupling Membranes: Follow manufacturer guidelines to protect the substrate from moisture or structural movement. ▪ Different Types of Under-Floor Heating: Electric and water-based systems require specific installation steps. Ensure proper heat distribution and tile compatibility. ▪ Installation Requirements for Quality Standards: Follow British Standards and manufacturer instructions for all materials, ensuring proper tools and techniques are used for optimal performance. <p>By adhering to these guidelines and ensuring that each step is performed correctly, you will guarantee that the under-tile and under-floor heating systems function optimally while meeting the relevant quality standards.</p>

Provide drainage for tiled surfaces

Skills	Knowledge
<p>To ensure high-quality tiling work, it is essential to prepare backgrounds appropriately, install under-tile heating systems, and lay tiled surfaces that meet British Standards. Identifying and using the right fixing and installation methods, from traditional render and screed to modern adhesives and grouts, is key to achieving a strong, durable finish. These methods should be tailored to both the work environment and the specific product being installed.</p> <p>Setting out for tiling wall and floor areas requires attention to detail to ensure joint widths are consistent, parallel, and plumb. The ability to remove and replace individual damaged tiles without causing damage to adjacent finishes is also crucial in maintaining a seamless result. Mixing and applying adhesives correctly ensures that tiles are securely fixed to both wall and floor surfaces, while installing tanking systems, decoupling membranes, and underfloor heating must be done in line with relevant specifications and manufacturer guidelines.</p> <p>When it comes to drainage, it's important to install tiled floor surface drainage channels and outlets, as well as proprietary drainage systems, according to British Standards and technical data sheets. After installation, grouting and finishing tiles ensures the surfaces are smooth, functional, and aesthetically pleasing. Finally, undertaking remedial work in accordance with the specification is essential to address any issues that may arise during or after installation, ensuring the finished work meets both the aesthetic and performance requirements.</p>	<p>To identify the suitability of backgrounds prior to preparation and application, it's crucial to assess factors such as surface condition, stability, moisture levels, and compatibility with the adhesive or material to be used. Ensuring the background is clean, dry, and free from contaminants will facilitate proper adhesion and a long-lasting finish.</p> <p>Preparing and applying adhesives, grouts, primers, and ancillary products requires following the manufacturer's guidelines and technical data sheets. Correct application ensures optimal bond strength and durability, while primers enhance surface adhesion and grout ensures an aesthetically finished tile surface.</p> <p>Installing specialist preparations such as waterproof tanking, decoupling, and anti-fracture membranes is essential for providing long-term protection to surfaces in areas exposed to water or movement, particularly in wet rooms or bathrooms. These systems help maintain the integrity of the tiling, preventing water damage and ensuring the system's longevity.</p> <p>When installing tiled floor surface drainage channels and drainage outlets, it's important to follow British Standards and manufacturer recommendations. Proper installation ensures efficient water flow and prevents issues such as water pooling, which can cause damage over time.</p> <p>Proprietary drainage systems, such as those for wet rooms or bathrooms, must be positioned and installed according to British Standards and manufacturers' guidelines. This guarantees that the system functions correctly, prevents leaks, and complies with relevant regulations.</p> <p>In wet room installations, factors like correct tanking, tiling methods, waterproofing, and drainage are crucial to ensure water is effectively contained and the installation remains functional and safe. Understanding these factors helps avoid potential water damage or system failures.</p> <p>The impact of drying and curing times for various backgrounds is an important consideration during the installation process. Different materials and backgrounds require specific curing periods for adhesives and grout to reach full strength. It's vital to follow these guidelines to ensure a secure, durable, and lasting finish.</p>