

BSA Manual Support Document

Contractors Competency Matrix Guidance

Bricklaying

Overview

The goal of this guidance is to outline the current standards and qualifications for bricklayers. By consulting with sector experts, the aim is to determine if effective methods are already in place to train, qualify, and monitor the workforce's competence.

This guidance is designed to bring together all training and assessment standards for bricklayers, as approved by the industry. It will be part of an interactive program that supports chosen training and assessment methods aligned with daily work activities.

Key components include:

- The competencies required by the industry.
- Relevant competencies identified by the working group.
- Core behavioural criteria focused on building safety competence, which should be demonstrated in all competency assessments.
- Core competencies broken down into skills, knowledge, and experience, as defined in the functional map.

The framework will be continuously updated to align with evolving industry standards, legislation, and ongoing consultation.

Functional Map Activities

Core Construction Competencies	England & Wales	Scotland	Training
Conform to general workplace health, safety and welfare	x	x	Fire Safety in buildings Installing fire barriers & breaks
Conform to productive work practices	x		
Move, handle and store resources	x		Materials storage and protection - CITB
Confirm work activities and resources for the work		x	
Develop and maintain good working relationships		x	
Confirm the occupational method of work		x	
Core Trade Competencies			
Erect standard masonry structures			Tolerances and standards for bricklaying <ul style="list-style-type: none"> ▪ Co-ordinating brickwork requirements ▪ Masonry Cutting & Drilling ▪ Types & uses of mortar ▪ Levelling and setting out by tape
Set out to form standard masonry structures			
Erect masonry to form architectural and decorative structures			
Set out to form complex masonry structures			

Generic Skills

Interpret Information	Safe work practices	Selection of resources	Minimise the risk of damage	Approach to work
<p>Interpreting and using key information ensure the project is executed safely and efficiently:</p> <ul style="list-style-type: none"> Drawings provide layout and design details, ensuring work aligns with plans. Specifications outline material and workmanship requirements to meet project standards. Component Schedules list materials and quantities to ensure availability and correctness. Risk Assessments identify hazards and safety measures to minimize accidents. Method Statements describe work processes and safety precautions to follow. COSHH guidelines outline safe handling of hazardous substances to protect workers. Manufacturers' Information ensures correct use and safety of materials and tools. <p>By applying these resources, the work stays compliant, safe, and efficient.</p>	<p>To comply with legislation and official guidance, it's crucial to follow safe work practices across various aspects:</p> <ul style="list-style-type: none"> Methods of Work: Follow approved procedures and risk assessments to ensure safe execution of tasks, minimising risks and hazards. <p>Health and Safety Control</p> <ul style="list-style-type: none"> Equipment: Use personal protective equipment (PPE) and other safety measures as required, ensuring they are maintained and worn correctly. Access Equipment: Ensure safe use of scaffolding, ladders, and other access equipment by following guidelines for setup, maintenance, and use to prevent falls and injuries. Materials, Tools, and Equipment: Safely store, handle, and transport materials, tools, and equipment to prevent accidents. Follow manufacturer's instructions and regulatory guidelines for safe usage. Specific Health Risks: Identify and manage health risks, such as exposure to hazardous substances or noise, by following COSHH guidelines and using appropriate protective measures. <p>Following these practices ensures the work environment remains safe, compliant, and promotes workers' health and well-being.</p>	<p>To select the required quantity and quality of resources for the methods of work, consider the following:</p> <ul style="list-style-type: none"> Materials: Choose materials based on project specifications, durability, and suitability for the task. Ensure the correct quantity is determined through calculations, considering waste factors, and confirm the quality by checking standards, certifications, and manufacturer recommendations. Components and Fixings: Select components and fixings that match the project's design and specifications, ensuring they are strong enough to support the intended loads and environmental conditions. Verify the quantity needed for installation and quality through product specifications and supplier guidelines. Tools and Equipment: Choose tools and equipment that are appropriate for the job, based on the method of work and materials. Ensure the correct quantity of tools is available, and that they are in good working condition. Confirm the quality by checking for proper maintenance, calibration, and suitability for the task. <p>By carefully selecting the right quantity and quality, work can proceed efficiently, safely, and in compliance with project requirements</p>	<p>To minimise the risk of damage to the work and surrounding area, comply with company procedures by:</p> <ul style="list-style-type: none"> Protecting the Work and Surrounding Area: Use physical barriers, coverings, and hoardings to shield work areas from potential damage caused by other activities or adverse conditions. This ensures the integrity of both the project and surrounding environment. Maintaining a Safe, Clear, and Tidy Work Area: Keep the worksite organized by removing debris, securing tools, and ensuring pathways are clear. This prevents accidents and damage to materials, as well as improving overall efficiency. Disposing of Waste in Accordance with Current Legislation: Follow legal and company guidelines for waste disposal, including proper handling, recycling, and disposal of hazardous materials. Compliance ensures safety and minimizes environmental impact. <p>By following these procedures, damage to the work area and surrounding environment is minimized, maintaining both safety and quality throughout the project.</p>	<p>To complete the work in accordance with company procedures, the programme of work, and to meet the needs of others:</p> <ul style="list-style-type: none"> Follow Company Procedures: Adhere to established safety protocols, quality standards, and operational guidelines. This ensures consistency, safety, and compliance with legal requirements throughout the project. Stick to the Programme of Work: Complete tasks within the allocated timeframes, ensuring the project stays on schedule. Monitor progress regularly to address any delays or issues promptly, keeping the project on track. Meet the Needs of Others: Coordinate with other teams or trades involved in the project, ensuring their requirements and schedules are met. Effective communication and collaboration are key to ensuring that the work aligns with broader project goals. <p>By adhering to these principles, the work is completed efficiently, safely, and with consideration for the needs of all stakeholders involved.</p>

Generic Knowledge

Interpret Information	Safe work practices	Selection of resources	Minimise the risk of damage	Approach to work
<p>Company procedures are developed to ensure that work is carried out safely, efficiently, and in compliance with legal and industry standards. These procedures help maintain consistency across operations and minimize the risk of errors, accidents, or non-compliance. They are implemented by establishing clear guidelines, processes, and responsibilities for workers to follow. Different types of information play key roles in these procedures, including:</p> <ul style="list-style-type: none"> ▪ Drawings: These provide visual representations of designs or plans, and they are used to guide the construction process, ensuring that the work aligns with the intended layout and specifications. Drawings are typically sourced from architects, engineers, or designers. ▪ Specifications: These outline the detailed requirements for materials, standards, and methods to be used in construction. Specifications are provided by architects, engineers, or project managers and ensure the work meets quality and safety standards. ▪ Component Schedules: These provide a list of materials and components required for a project, including details like quantities, sizes, and types. They help ensure that the correct materials are used and are available when needed 	<ul style="list-style-type: none"> ▪ To ensure a safe and compliant working environment, it is essential to understand current legislation and guidance, select appropriate fire extinguishers for specific fire types, and identify risks through assessments, work methods, and regulations. Reporting near-misses and accidents is crucial for hazard identification. Emergency situations, such as fires and injuries, should follow company procedures, while asbestos-containing materials must be reported for proper handling. Compliance with environmental regulations, health and safety protocols, and security procedures is necessary, along with the use of safety equipment, including PPE, RPE, LEV, and protective measures, to minimize risks and protect personnel and the environment. 	<ul style="list-style-type: none"> ▪ Understanding the characteristics, quality, uses, sustainability, limitations, and defects of resources is vital to ensure safety, efficiency, and compliance with regulations. Identifying defects early allows for prompt rectification, preventing delays and maintaining project quality. ▪ Company procedures for selecting resources should be followed to ensure suitability for the task, minimizing waste and ensuring compliance with specifications. It is important to verify that materials meet the required standards, often through testing or supplier certification. Identifying hazards associated with resources and work methods ensures safe practices, which can be overcome through proper training, protective measures, and safe work procedures. When calculating quantities and dimensions for bricklaying, careful estimation is essential to avoid wastage. This involves using standard formulas and considering factors like mortar thickness and brick alignment to reduce material waste and ensure project efficiency. 	<ul style="list-style-type: none"> ▪ Protecting the work and surrounding area from damage involves using physical barriers, covering surfaces, and using protective sheeting or hoardings to shield from workplace activities, other occupations, and adverse weather conditions. This ensures the integrity of the project and minimizes interruptions. To minimize damage to existing building fabric, careful handling of materials, and proper planning of work sequences are essential, along with using appropriate tools and methods that avoid unnecessary strain on the structure. ▪ Waste disposal must be conducted safely, considering environmental responsibilities, company procedures, and compliance with statutory regulations, manufacturers' instructions, and official guidance. This includes adhering to the Control of Substances Hazardous to Health (COSHH) regulations to prevent exposure to harmful substances. Ensuring a safe, clear, and tidy work area is crucial for minimizing accidents, maintaining productivity, and providing a safe environment for workers and visitors. Regular housekeeping prevents slips, trips, and falls and ensures that tools and materials are readily accessible for efficient work. 	<ul style="list-style-type: none"> ▪ Progress recording is essential for tracking project development, and systems such as work logs, digital tracking tools, and daily reports are commonly used. Company procedures for reporting circumstances affecting the work program ensure timely adjustments to schedules and resources. The work programme should clearly outline the tasks to be performed, including estimated and allocated time for each activity, with key milestones marking significant project achievements. ▪ Teamwork and communication are crucial for project success, ensuring collaboration, effective problem-solving, and alignment with goals. Mental health awareness and physical well-being are vital for maintaining a productive and safe working environment, as stress or physical strain can impact performance. Fairness, inclusion, and respect should guide interactions, fostering a positive and supportive workplace culture. ▪ Bricklaying often involves coordination with other occupations, requiring understanding and respect for their needs and schedules. Time management and monitoring routines help ensure tasks are completed on schedule and resources are utilized efficiently. Basic project management and planning skills are necessary to balance tasks, allocate resources, and handle unforeseen events. Unplanned circumstances, like weather or supply delays, can disrupt the timeline, so flexibility and proactive problem-solving are essential. ▪ Resource monitoring techniques, such as inventory tracking and progress assessments, ensure that materials and equipment are available when needed. Recognising and responding to defects involves identifying issues promptly and addressing them through corrective measures to avoid delays and ensure quality work.

Behavioural Competencies

- Visible commitment at all levels to a strong safety culture.
- Collaboration with others and effective team working skills.
- Effective communication within and between teams, organisations and individuals
- Listening and feeding back effectively
- Communicating technical information to non-technical audiences
- Communicating effectively through use of oral, written, drawn, digital or graphic information and in accessible formats.
- Acting within limits of own competence (particularly in relation to building safety) and seeking further appropriate advice where necessary
- Maintaining competence including undertaking self-assessment and personal development activities
- Responsibility for own actions and for the actions of those under their supervision or direction
- Anticipating, identifying and challenging unsafe or inappropriate behaviours and escalating concerns through reporting or whistleblowing mechanisms
- Identifying and providing feedback on unsafe process, equipment, procedures, construction products, building systems, standards or quality
- Duties and obligations to act in protecting safety of self, colleagues and the public whilst undertaking work.
- Duty of care to occupants including residents, first responders and people in and around buildings in use.
- Consultation, listening and engagement with occupants or others who are or could be affected by work and responding appropriately

Erect Standard Masonry Structures

Skills	Knowledge
<p>To build solid and cavity walls with openings to design specifications:</p> <ul style="list-style-type: none"> ▪ Set Out and Build Walls: Accurately mark and construct walls, ensuring correct placement of openings. Regularly check alignment, plumb, and level. ▪ Protect Your Work: After each sequence, cover or barrier completed sections to prevent damage. ▪ Tool Selection and Maintenance: Choose appropriate tools, use them safely, and maintain/store them properly for longevity and safety. ▪ Construct Walls with Components: Install lintels, cavity closures, insulation, fire stopping, DPC, and weep holes as per design, ensuring accuracy and alignment. ▪ Quality Checks: Continuously verify work against specifications to ensure compliance and quality. <p>By following these steps, you ensure safe, consistent, and accurate wall construction.</p>	<p>This is a detailed overview of the materials, components, processes, and considerations involved in the construction of cavity and solid walls, blockwork, masonry structures, and specialist masonry elements. It covers various topics, including:</p> <ul style="list-style-type: none"> ▪ Materials and components: various brick and block materials, mortar types, lintels, damp-proof courses, cavity trays, weep holes, masonry supports, and fire barriers. ▪ Setting out and build process: proper setting out and construction techniques for walls, blockwork, and specialist elements, ensuring adherence to design specifications and building regulations. ▪ Bonding and joint finishes: A range of brick bonding types, joint finishes, and wall tie spacing to design specifications. ▪ Construction processes: detailed steps for constructing masonry structures, including cavity and solid walls, mortar joint finishes, lintels, damp proof barriers, and fire breaks. ▪ Health and safety: emphasis on health and safety, including silica risks, PPE selection, and cold weather precautions. Also highlights the importance of safety sequenced construction and approved lift plans. ▪ Specialist skills and competence: recognizing when specialist skills, competence, and training are needed, and knowing when to seek additional guidance. ▪ Quality assurance and regulations: the need to follow design specifications, building regulations, and manufacturer installation instructions, and ensuring that quality checks are carried out and documented. ▪ Communication and teamwork: the importance of communication at all levels and understanding one's limitations, including the roles of supervisors, coordinators, and engineers in temporary works. ▪ Diversity and inclusion: ensuring inclusion, equity, and diversity in the workplace.

Set out to form standard masonry structures

Skills	Knowledge
<p>To set out masonry and meet design specifications:</p> <ul style="list-style-type: none"> ▪ Set Out Masonry: Accurately mark and build masonry, including openings, ensuring compliance with design specifications and building regulations. Use checks for correct alignment, level, and plumb to ensure consistency and safety within the project timeline. ▪ Tool Selection and Maintenance: Choose, use, and maintain appropriate hand tools, portable power tools, and equipment. Store them properly to ensure safety and prolong their lifespan. ▪ Read and Interpret Information: Read and understand drawings and specifications to accurately follow project details and construction requirements. ▪ Set Out to Tolerances: Ensure masonry is set out to precise tolerances, including 90-degree angles, correct positioning of openings, and ensuring all horizontal and vertical elements are properly aligned. <p>By following these steps, you ensure accurate, safe, and compliant masonry construction.</p>	<p>This summary covers key concepts in masonry construction, focusing on the design, setting out, and safety procedures:</p> <ul style="list-style-type: none"> ▪ Design and specifications: emphasise the importance of following design specifications, building regulations, and manufacturer instructions when constructing masonry structures, including foundations and internal walls. ▪ Setting out: describe how to set out masonry structures on level and sloping ground, including the use of profile boards, datum points, and transferring lines and levels to ensure accuracy. ▪ Tools and equipment highlight the correct selection and use of tools and equipment, including hand and power tools, and the need for specialised skills, knowledge, and training for certain tools and tasks. ▪ Health and safety: stress the importance of health, safety, and welfare practices, especially for working at height, and the need to follow risk assessments, method statements, and safe work practices. ▪ Specialist masonry elements: outline the materials and components needed for specialist masonry elements and the installation process, as well as recognising specific requirements for structures of historical or traditional significance. ▪ Quality assurance: ensure that all construction activities are well-planned, sequenced, and adhere to safety protocols, with quality checks recorded and maintained. ▪ Communication: The importance of clear communication at all levels during the construction process to ensure proper execution. <p>Overall, it focuses on the importance of planning, following design specifications, and maintaining safety and quality throughout the masonry construction process.</p>

Erect masonry to form architectural and decorative structures (Scotland)

Skills	Knowledge
<p>To set out and construct decorative brick features and walls:</p> <ul style="list-style-type: none"> Set Out Decorative Brick Features: Accurately mark and build decorative features (arches, chimney stacks, fireplaces, curves, and projections) in solid and cavity walls, ensuring compliance with design specifications. Perform regular checks for alignment, level, and plumb to maintain safety and consistency. Tool Selection and Maintenance: Choose appropriate hand tools, portable power tools, and equipment. Use them safely, maintain them in good condition, and store them properly to ensure efficiency and longevity. Construct Walls and Features: Build solid and cavity walls, including architectural and decorative features, following design specifications. Ensure each element, such as arches and splayed features, is constructed with accuracy and in accordance with safety procedures. <p>By adhering to these practices, you ensure the safe, consistent, and precise construction of decorative brick features and walls</p>	<p>This summary highlights key aspects of masonry construction, covering processes, materials, components, safety, and regulations:</p> <ul style="list-style-type: none"> construction process for walling: focus on cavity and solid walling, including setting out, wall tie formation, and maintaining brickwork gauge, plumb, and cleanliness. Methods for building decorative panels (e.g., Basket weave, herringbone) and forming dental courses, dog-toothing, oversailing, and corbelling. Construction of curved, splayed, and ramped walls with correct bonding and setting out. <p>Special features and structures:</p> <ul style="list-style-type: none"> Construction processes for arches, chimney stacks, fireplaces, and special feature bricks. Considerations for vertical and horizontal reinforcement in walls. <p>Setting out and construction techniques:</p> <ul style="list-style-type: none"> The importance of accurate setting out, including use of profile boards, transferring datum points, and constructing features like curved and splayed walls. Techniques for forming movement joints, repairing masonry, and cutting materials with attention to health and safety, particularly regarding silica. <p>Health, safety, and regulations:</p> <ul style="list-style-type: none"> Emphasises health and safety protocols, including PPE selection, working at height, and the risk of silica exposure. Importance of following design specifications, building regulations, manufacturer guidelines, and quality assurance checks during construction. <p>Specialist masonry elements:</p> <ul style="list-style-type: none"> Installation processes for specialist masonry elements, such as movement joints and structural reinforcements, and considerations for historical buildings <p>Tools and equipment:</p> <ul style="list-style-type: none"> The correct use, maintenance, and storage of hand tools, power tools, and equipment, including those requiring specialist skills and training. Recognising when specific skills or additional guidance are needed for complex tasks. <p>Project management and communication:</p> <ul style="list-style-type: none"> The role of supervisors, coordinators, and engineers in ensuring the project is safely sequenced and adheres to design specifications. Importance of communication at all levels, from site inductions to daily briefings and toolbox talks. <p>Professional and safety standards:</p> <ul style="list-style-type: none"> Awareness of one's limits and the importance of seeking additional guidance, when necessary, with a focus on inclusivity, equity, and diversity in the workplace. <p>This summary underscores the importance of precision, safety, and adherence to regulations in all stages of masonry construction, from setting out to final installation</p>

Set out to form complex masonry structures (Scotland)

Skills	Knowledge
<p>To set out masonry and specialist masonry elements:</p> <ul style="list-style-type: none"> Set Out Masonry and Specialist Elements: Accurately mark and build masonry elements, including decorative brickwork, curved work, arches, block bonding, quoins, and radial or horizontal/vertical masonry, ensuring compliance with design specifications and building regulations. Perform checks for alignment, plumb, and level to maintain safety and consistency within the project schedule. Tool Selection and Maintenance: Select appropriate hand tools, portable power tools, and equipment. Use them safely, maintain them in good working condition, and store them properly to ensure efficiency and longevity. Read and Interpret Drawings: Understand and interpret information from drawings and specifications to accurately follow project details and requirements. Set Out to Tolerances: Ensure masonry work is set out to precise tolerances, including 90-degree angles, curves, arches, and other specified features, for accurate construction. <p>By following these steps, you ensure safe, precise, and consistent construction of masonry and specialist features, in line with design specifications and regulations.</p>	<p>This summary outlines key aspects of masonry construction, focusing on design specifications, setting out, safety, and the use of tools and equipment:</p> <ul style="list-style-type: none"> Design and specifications: emphasise the importance of following design specifications, building regulations, and manufacturer installation instructions when constructing masonry structures. Including the setting out and construction process for masonry structures, foundations and internal walls on both level and sloping ground. Setting out process: How to identify, mark, and transfer datum points when setting out masonry structures, including using tools like trammels, templates, and profiles. Stressing the importance of accurate line and level transfers and following tolerances for angles and openings. Tools and equipment: focus on the selection and correct use of tools and equipment required for masonry work, including hand tools, power tools, and specialist equipment. Highlights the need to maintain and store tools properly and recognise when specialised skills and training are required for certain tools. Masonry structures: discuss the construction of curved and radial masonry structures in line with working drawings, ensuring accuracy and adherence to design specifications. Health, safety, and welfare: stress the importance of following health and safety processes, including the use of correct PPE, working at height safety measures, and adherence to current guidance. Encourage regular site inductions, daily briefings, and toolbox talks to ensure safety and compliance. Specialist masonry elements: Covers the installation and formation of specialist masonry elements, focusing on understanding the structure's behaviour and ensuring correct materials and components are used. Project management and communication: highlight the importance of well-planned, safely sequenced construction activities, as well as clear communication at all levels. Encourage recognising personal limitations and seeking guidance and training when needed. Inclusion and diversity: promote inclusivity, equity, and diversity in the workplace, alongside effective collaboration and communication. <p>This summary underscores the critical importance of following design specifications, maintaining safety protocols, using appropriate tools, and ensuring clear communication throughout the construction process</p>