

# Unit 13: Developing Bricklaying Skills

**Unit reference number:** J/502/3685

**QCF level:** 1

**Credit value:** 4

**Guided learning hours:** 40

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## Unit aim

This unit introduces learners to the hand tools, materials and personal protective equipment (PPE) used in bricklaying, and offers them opportunities to develop the skills needed to construct basic brickwork structures.

## Unit introduction

Emphasis is placed on the correct selection and safe use of the appropriate tools and equipment required to carry out basic bricklaying processes.

Learners will be given the opportunity to practise the bricklaying techniques used to construct basic brickwork structures, and to use these techniques to construct a half-brick wall in an acceptable time.

Although learners will work independently when constructing their half-brick wall, they will also function as effective members of a team by contributing to the maintenance of a clean and tidy workshop, and by working responsibly with others.

When preparing for work in the construction industry it is important that learners are able to seek and respond to guidance from colleagues and tutors during the learning process. This unit will help learners to develop an understanding of the personal qualities that are valued by employers.

It is assumed that learners will either have successfully completed unit 10 *Health and Safety and Welfare in Construction* before starting this unit, or that they will be studying the unit alongside this one, using an integrated delivery and assessment approach.

## Essential resources

Learners will require access to hand tools and materials of a nature and standard typical of a proper work environment. The learning environment must be a safe place of work, with adequate space for spot boards and the safe construction of brickwork models, adequate washing facilities for the removal of mortar from exposed skin, access to first-aid facilities and storage of PPE.

## Learning outcomes, assessment criteria and unit amplification

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria		Unit amplification
1	Know the hand tools used in basic bricklaying processes	1.1	List and describe appropriate hand tools to be used in basic bricklaying processes	<ul style="list-style-type: none"> <li>□ <i>Hand tools:</i> eg.. walling trowel, jointing iron, spirit level, builder's line and pins, tingle, club hammer, bolster chisel, hawk, soft brush</li> </ul>
2	Know the materials used in basic bricklaying processes	2.1	List and describe appropriate materials to be used in basic bricklaying processes	<ul style="list-style-type: none"> <li>□ <i>Materials:</i> bricks; lime-based mortar</li> </ul>
3	Know the personal protective equipment (PPE) used in basic bricklaying processes	3.1	List and describe appropriate PPE to be used in basic bricklaying processes	<ul style="list-style-type: none"> <li>□ <i>Personal protective equipment:</i> hard hat; eye protection; safety boots; high-visibility jacket; hand barrier cream</li> <li>□ <i>Basic bricklaying processes:</i> stack bricks; set out brickwork; lay mortar; butter vertical joints; lay bricks: plumb, level and gauge</li> </ul>
4	Be able to apply safe working practices to produce half-brick walling	4.1	Select and use hand tools safely to lay bricks in stretcher bond, minimum seven bricks in length, minimum five courses high, with one stopped end	<ul style="list-style-type: none"> <li>□ <i>Safe working practices:</i> compliance with advice and guidance given; safe maintenance, use and storage of tools and equipment</li> <li>□ <i>Half-brick walling:</i> straight lengths in stretcher bond; minimum seven bricks in length; minimum five courses high; one stopped end</li> </ul>
5	Be able to work responsibly with others	5.1	Maintain a clean and tidy work environment	<ul style="list-style-type: none"> <li>□ <i>Behaviour:</i> e.g. responsibility, recognition of strengths and skills of self and other team members, cooperation, tidying 'as you go'</li> </ul>
		5.2	Work responsibly in the workshop	

Learning outcomes	Assessment criteria		Unit amplification
6 Be able to seek and respond to guidance when working as part of a team	6.1	Follow instructions when working with others	<ul style="list-style-type: none"> <li>□ <i>Attitudes:</i> e.g. enthusiasm; approachability; communication skills, e.g. listening, questioning, speaking clearly; following instructions</li> </ul>
	6.2	Communicate appropriately with others	

## Information for tutors

### Delivery

This unit will give learners their first experience of the practical skills associated with the production of brickwork, together with the knowledge required to underpin these practical skills. Learners must be allowed considerable opportunity to develop their knowledge and practical skills and this should be facilitated through extensive use of supervised practical workshop activities, allied to group teaching and demonstrations of the tools, equipment, materials, techniques and PPE involved.

Learners and tutors are encouraged to view the unit as a 'taster', in that it gives the learner an opportunity to experience the type of work involved in bricklaying.

All construction craft tasks are problems to be solved (often in three dimensions) with available tools and materials and within a given timescale. The solutions to the problems are the conventional techniques, methods and procedures that craftspeople have developed to address the work they face on a daily basis.

Learners will need to discuss the materials, tools, equipment, PPE and techniques to be used with a responsible and competent person and should respond positively to any advice given. They should then select the tools, equipment, materials and PPE appropriate for the task in hand, and use these to produce the specified brickwork task.

### Outline learning plan

The outline learning plan has been included in this unit as guidance.

Topic and suggested assignments/activities
Know the hand tools used in basic bricklaying processes. Whole-class, tutor-led discussion about hand tools. Individual work on tool identification sheets. Requisition tools from store.
Know the materials used in basic bricklaying processes. Site visit. Presentation from qualified working bricklayer. Trip to builders' merchant.
Know the personal protective equipment (PPE) used in basic bricklaying processes. Whole-class, tutor-led discussion about PPE, when and where it is necessary and how it works. Individual work on PPE identification sheets. Learners complete requisition sheets to obtain PPE from store. Learners given opportunities to select and wear the full range of PPE used in brickwork.
Practise the processes used to produce basic brickwork structures. Practical demonstration of how to keep work areas tidy. The hand-to-eye motor skills associated with bricklaying are best taught by the tutor demonstrating the skills required, followed by the learners practising the skills. The tutor should monitor learners as they practise their skills and provide guidance, advice, correction or praise, as appropriate.
Be able to apply safe working practices to produce half-brick walling. Assessment – Two hours for learners to demonstrate knowledge of the hand tools, materials and PPE to be used in the practical assessment task. Evidence of selection or de-selection of each required. This can be achieved by completion of in-house requisition forms or similar. Four hours to demonstrate use of safe working practices to construct basic brickwork structure.

## Topic and suggested assignments/activities

Be able to work responsibly with others.

Use of health and safety videos/DVDs to demonstrate the dangers of a dirty and untidy workplace. Discussion of important role played by on-site personnel behaving in a cooperative and responsible manner. Constant encouragement from tutors to 'tidy as you go' during practical bricklaying sessions.

Be able to seek and respond to guidance when working as part of a team.

Tutors should encourage learners to ask questions about their work. This could be prompted by tutors asking learners to explain what they are doing, and why they are doing it, or to name a tool or an item of PPE as they work. Learners should be aware that their attitude, and the nature of their responses to any advice provided, will comprise part of the evidence required to achieve the unit. This requires no formal allocation of time and should occur during practice and assessment.

## Assessment

Achievement of assessment criteria should be evidenced through contextualised, vocationally related practical experiences with tasks specifically designed with the assessment criteria in mind. Many criteria will need to be assessed directly by the tutor during practical activities. Where this approach is used, suitable evidence from guided activities would require observation records and/or witness statements.

The use of two assessment instruments is suggested to allow full coverage of the outcomes. The first assessment instrument would comprise 1.1, 2.1 and 3.1 and should focus upon the correct selection of the tools, materials and PPE required to complete the brickwork task and the reason why each is deemed to be appropriate. The second assessment instrument would comprise 4.1, 5.1, 5.2, 6.1 and 6.2, and should focus on the completion of the practical brickwork task.

For 1.1, learners must list and describe commonly used hand tools. This will be evidenced most clearly by completion of appropriate requisition orders.

For 2.1, learners must list and describe the correct materials to be used to complete the brickwork task. This will be evidenced most clearly by completion of appropriate requisition orders.

For 3.1, learners must list and describe the appropriate PPE to be worn or used when completing the brickwork task. This will be evidenced most clearly by completion of appropriate requisition orders.

For 4.1, learners must be able to select and use tools, materials and PPE to construct a brick wall to the following specification: straight lengths in stretcher bond, minimum seven bricks in length, minimum five courses high, one stopped end. Learners must be aware of the need to lay bricks plumb, level and to gauge, but there are no specified tolerances at this level. It is anticipated that considerable guidance will be given to learners. Photographs, observation records and witness statements could be provided as evidence. Learners need to follow safe working practices.

For 5.1 and 5.2, learners must maintain a clean and tidy workspace and work responsibly with others. Learners should be aware of any hazards associated with the practical tasks they perform but they need not produce risk assessments or suggest control measures. The evidence could take the form of a witness statement.

For 6.1 and 6.2, learners must demonstrate responsibility by seeking and listening to guidance and clarification from tutors as and when appropriate, and by acting on the guidance received. They should communicate appropriately with tutors and other learners at all times. The evidence could take the form of a witness statement.

### **Suggested resources**

#### **Books**

Brett P – *A Building Craft Foundation: Levels 1 & 2* (3rd Revised Edition, Nelson Thornes, 2007) ISBN 9780748781843

Brick Development Association – *BDA Guide to Successful Brickwork* (3rd Edition, Butterworth-Heinemann, 2005) ISBN 9780750664691

#### **Websites**

[www.ciob.org.uk](http://www.ciob.org.uk)

[www.citb.org.uk](http://www.citb.org.uk)

[www.hse.gov.uk](http://www.hse.gov.uk)

[www.iosh.co.uk](http://www.iosh.co.uk)

[www.rospa.co.uk](http://www.rospa.co.uk)

[www.rtpi.org.uk](http://www.rtpi.org.uk)