

<b>Title:</b>	<b>Construct Cavity Walls</b>
<b>Level:</b>	2
<b>Credit value:</b>	15
<b>GLH:</b>	117
<b>Unique Reference Number:</b>	<b>R/651/2712</b>
<b>Sector Subject Area:</b>	5.2 Building and Construction
<b>Aim:</b>	The purpose of this unit is to provide learners with the skills and knowledge to be able to interpret information required to complete the construction of cavity walls to given specifications and within tolerances, in accordance with instructions.
<b>Assessment Type:</b>	Observed practical with underpinning knowledge questions.
<b>Assessment Guidance:</b>	Learners are assessed through the completion of an NOCN devised practical task and associated knowledge questions (written or verbal). The unit is internally assessed and externally quality assured. An NOCN assessment booklet has been produced and should be used to evidence all learning outcomes.

## Learning outcomes

*The learner will:*

1. Be able to interpret the information required to construct cavity walls.

### Delivery content:

The aim of this learning outcome is to provide the learners with the skills and knowledge to interpret information necessary to construct cavity wall forming masonry structures.

The learner must:

- identify **documentation** and information required to complete given tasks.
- identify different types of **drawings** and their purpose.
- interpret different types of drawings including **common scales**, symbols and hatchings used.
- read and apply measurements from the information correctly.
- identify and report any inaccuracies with the information in accordance with organisational procedures.
- describe the purpose of a datum point.
- **calculate** the area of the wall to be built.

<ul style="list-style-type: none"> <li>• use manufacturers' information to appropriately use resources.</li> </ul>
<p>2. Be able to select tools, equipment and materials required to construct cavity walls and in accordance with manufacturers' guidance.</p>
<p><b>Delivery content:</b></p> <p>The aim of this learning outcome is to provide the learners with the knowledge and skills to identify and select the tools, equipment, and materials required to construct cavity walls.</p> <p>The learner must:</p> <ul style="list-style-type: none"> <li>• select the <b>tools, equipment and materials</b> required from the information and confirm they are correct for the given tasks.</li> <li>• report any discrepancies in accordance with organisational procedures.</li> <li>• <b>carry out checks</b> on all resources selected to ensure they are fit for purpose and free from damage or defects.</li> </ul> <p>report and replace any damaged or defective resources in accordance with organisational procedures and manufacturers'.</p>
<p>3. Be able to prepare work areas and materials to construct cavity walls.</p>
<p><b>Delivery content:</b></p> <p>The aim of this learning outcome is to provide learners with the skills and knowledge to carry out preparations to construct cavity walls.</p> <p>The learner must:</p> <ul style="list-style-type: none"> <li>• interpret risk assessments to identify <b>hazards</b> and ensure relevant <b>personal protective equipment</b> and <b>collective protection equipment</b> are used correctly.</li> <li>• inspect the work area to identify any additional hazards and ensure any present are mitigated.</li> <li>• report issues and mitigating work carried out in accordance with organisational procedures.</li> <li>• ensure that the work area is clear, safe and ready for the given tasks and surrounding areas are protected.</li> <li>• carry out calculations to identify quantities of materials required for the given tasks.</li> <li>• <b>prepare</b> the range of materials required, including <b>mixing mortar</b>.</li> <li>• ensure all resources are in place and set out, safely and logically for the given tasks.</li> </ul>

4. Be able to construct cavity walls.

**Delivery content:**

The aim of this learning outcome is to provide the learners with the skills and knowledge to construct cavity walls in accordance with given tasks.

The learner must:

- identify the datum point and measure from it to set out the required works.
- establish corner positions, **set out** and check diagonals.
- set out and position single wall and corner type profiles.
- **construct** straight lengths and returns of brick and blockwork and produce decorative **features** to specification and tolerances.
- select and install all wall ties, damp proofing and fire stopping in accordance with specification and building regulations.
- select and install insulation in accordance with specification and building regulations.
- joint and point the wall to the agreed **finish**.
- ensure all work is accurate, in accordance with specification and building regulations and complete any necessary **remedial work**.
- apply **protection** to protect **works** from damage and adverse weather.

5. Be able to form openings in cavity walling.

**Delivery content:**

The aim of this learning outcome is to provide the learners with the skills and knowledge to form openings in cavity walls in accordance with given tasks.

The learner must:

- form **openings** as detailed in specification and to tolerance.
- form basic **arches** over openings.
- Check accuracy of work and complete any remedial works

6. Be able to complete works following the construction of cavity walls.

**Delivery content:**

The aim of this learning outcome is to provide the learners with the skills and knowledge to complete work.

The learner must:

- clean, inspect and **store** all tools, equipment and **excess materials** in accordance with manufacturers' guidance.
- report any issues in accordance with organisational procedures.
- clean the work area and **dispose of all waste** in accordance with legislative requirements, manufacturers' guidance and organisational procedures.
- leave the work area in a safe clean condition, using collective protective measures as appropriate.
- complete all final paperwork as required and file correctly.

### Scope of Training

The Scope of Training identifies areas that must be covered during the delivery of this unit. This is the minimum that is expected but tutors are expected to include other areas, knowledge of which will benefit their learners, based on location, types of work available and from the tutors own professional experience.

<b>Documentation</b>	Current legislation relating to health and safety, including: <ul style="list-style-type: none"> <li>• Health and Safety at Work Act</li> <li>• Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)</li> <li>• Control of Substances Hazardous to Health (COSHH)</li> <li>• Provision and Use of Work Equipment Regulations (PUWER)</li> </ul> HSE guidance, including: <ul style="list-style-type: none"> <li>• Manual Handling</li> <li>• Working at Height</li> <li>• Working in Confined Spaces</li> <li>• Asbestos</li> <li>• Maintaining Electrical Equipment Safety</li> <li>• Fire Safety / Fire Extinguishers</li> <li>• Lone Working</li> <li>• Situational Awareness</li> </ul>	Job specification Method statements Site inductions Toolbox talks Risk assessments Manufacturers guidance Building regulations British Standards Warranty provider standards Modern methods of construction, including: Rapid build technology Precast components Corner profiles Alternative frame and cladding systems Masonry support systems
<b>Drawings</b>	2D and 3D drawings BIM related models Extracting information from drawings	Assembly plans Section plans Site and location plans

<b>Common scales</b>	To include: 1:5, 1:10, 1:20, 1:50, 1:100 and 1:500		
<b>Tools</b>	Block cutter Line pins Line blocks Lump hammer Bolster Laser level Brick hammer Tape measure Scutch	Masonry saw Brick trowel Scutch hammer Pointing trowel Board (Craft) Knife Builder's square Chariot Gauge rods	Spirit level Line Corner block Boat/pocket level Chisel Jointing iron Brick jointer Brick clamp
<b>Equipment</b>	Wheel barrow Spot board Profiles	Mixing tub/bucket Shovel <b>Power tools</b>	Sack barrow Brush
<b>Power tools</b> (use and limitations)	Disc cutters	Mixers	Drills
<b>Materials</b> (including the characteristics of each)	Bricks Blocks Wall ties Insulation materials Water Cavity Trays Rolled steel joists Efflorescence	Cavity closers Damp proofing materials Mortar Profiles Weep holes Fire stopping	Waste bags Jamb Lintels (concrete and steel) Cills Wind posts (knowledge only) Building sand
<b>Carry out checks</b>	Hand tools Power tools Materials	Including: pre-use checks, maintenance, sharpening techniques defect or fault escalation, storage techniques	
<b>Prepare</b>	Bricks and blocks Measure	Cut Using hand tools	
<b>Mixing mortar</b>	Cementitious materials Adhesives Grouts Resin Pre-mixed components Gauging Hand mixing	Plasticisers Plasters Bonding agents Colourings Ratios Silos Mechanical mixing	
<b>Hazards</b>	Slips, trips and falls Working at height Confined spaces Cuts and abrasions Fire Manual handling Plant and equipment	Hazardous substances (including lead and asbestos) Electrical equipment and leads	Comply with risk assessments Control measures Method statements Safe systems of work When to report to a manager
<b>Personal protective equipment</b>	Steel toe-capped boots Gloves Goggles Hard hat	High-visibility clothing Respiratory protection equipment (RPE) Hearing protection	
<b>Collective protective equipment</b>	Signage Barriers Sheeting		

<b>Setting out techniques</b>	Including openings and levels Using profiles Using gauge rods and squares Brick walls with raking cut	
<b>Construct</b>	Stretcher bond brick and block cavity wall Brick wall with raking cut Fire stopping	
<b>Features</b>	Brick on edge Stretcher bond Dental course Dog toothing String course Basket weave (stretch content)	Projecting features Oversailing courses Corbels Soldier course Herringbone (stretch content) Banding
<b>Finish</b>	Half round / tooled Weather struck	Flush Recessed
<b>Remedial works</b>	Construction defects	Repair methods
<b>Protection</b>	Signage Barriers Plastic/hessian sheeting	– to protect work from frost, water and construction damage
<b>Works</b>	Complete Incomplete, work in progress	
<b>Openings</b>	Installing a lintel with soldiers, Cavity tray Damp proof course (DPC)	Weep holes Cills (brick and edge cill) Closure around opening
<b>Arches</b>	Segmental Welsh	Semi-circular
<b>Store excess materials</b>	Stock rotation Date order	Recycle Reuse
<b>Dispose of waste</b>	Avoiding surface water contamination Safe disposal Impact on the environment	

### Mapping to BRICKLAYER Apprenticeship Standard ST0095 (version 1.2)

Learning Outcome	Knowledge Statements	Skills Statements	Behaviour Statements
1. Be able to interpret the information required to construct cavity walls.	K1, K3, K6, K7, K10, K11, K12, K26	S1, S4, S5, S6, S18	
2. Be able to select tools, equipment and materials required to construct cavity walls and in accordance with manufacturers' guidance.	K7, K8, K10, K13, K14, K26	S1, S4, S5, S6, S8, S9, S18	
3. Be able to prepare work areas and materials to construct cavity walls.	K1, K2, K3, K8, K10, K12, K13, K14, K20, K26	S1, S2, S5, S6, S7, S14, S18	B1
4. Be able to construct cavity walls.	K1, K6, K7, K10, K17, K18, K21, K22, K23, K24, K25	S1, S4, S10, S11, S12, S16, S17, S22	B3, B6

5. Be able to form openings in cavity walling	K6, K7, K10, K21, K22, K24	S4, S10, S11, S16	B3, B6
6. Be able to complete works following the construction of cavity walls	K1, K4, K8, K13, K25, K26	S1, S3, S4, S7, S9, S17, S18	B2, B6

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