

City & Guilds Level 2 Diploma in Bricklaying (6705-23)

March 2022 Version 1.7



Qualification at a glance

Subject area	Construction
City & Guilds number	6705
Age group approved	16-18, 19+
Entry requirements	None
Assessment	Multiple choice/assignment
Support materials	Centre handbook Assessor guidance Task manual
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	GLH	TQT	City & Guilds number	Accreditation number
Level 2 Diploma in Bricklaying	448	490	6705-23	600/7913/7
Level 2 Extended Diploma in Bricklaying	760	830	6705-50	600/9509/X

Version and date	Change detail	Section
1.1 June 2013	Update range in units	Units
1.2 July 2013	Amended the third bullet point under Centre staffing	Centre requirements
1.3 February 2014	Update range in units	Units
1.4 July 2014	Amended Centre staffing	Centre requirements
1.5 December 2015	Updated range for LO 1, 3 and 4 in unit 201	Units
1.6 September 2017	Added GLH and TQT details. Deleted QCF	Qualification at a Glance, Structure Appendix
1.7 March 2022	GLH and TQT clarification corrected table on page 2, added CG to front cover and amended address on the rear	Front rear cover, page 2



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1 Introduction

This document tells you what you need to do to deliver the qualification:

Area	Description
Who is the qualification for?	It is for candidates who work or want to work as a Bricklayer in the construction sector.
What does the qualification cover?	<p>It allows candidates to learn, develop and practise the skills required for employment and/or career progression in Bricklaying.</p> <p>It covers the following skills:</p> <ul style="list-style-type: none">• Interpreting working drawings to set out masonry structures• Producing thin joint masonry and masonry cladding• Building solid walling, isolated and attached piers• Construct cavity walling forming masonry structures
Is the qualification part of a framework or initiative?	The qualification forms the technical certificate for the Construction Building Apprenticeship Framework.
What opportunities for progression are there?	<p>It allows candidates to progress into employment or to the following City & Guilds qualifications:</p> <ul style="list-style-type: none">• Level 2 NVQ Diploma in Trowel Occupations• Level 3 Diploma in Bricklaying

Structure

To achieve the **Level 2 Diploma in Bricklaying (6705-23)**, learners must achieve **49** credits from the mandatory units. Additional credits may be achieved from the elective unit, but will not count towards the qualification.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value	GLH
Mandatory				
A/504/6719	Unit 201/601	Health, safety and welfare in construction	7	70
Y/504/6999	Unit 202/602	Principles of building construction, information and communication	6	55
J/504/6920	Unit 204	Building solid walling, isolated and attached piers	16	151
A/504/6901	Unit 205	Interpreting working drawings to set out masonry structures	6	46
K/504/6926	Unit 206	Construct cavity walling forming masonry structures	14	126
Elective				
L/504/6921	Unit 203	Producing thin joint masonry and masonry cladding	4	40

To achieve the **Level 2 Extended Diploma in Bricklaying (6705-50)** learners must achieve **83** credits from the mandatory units. Additional credits may be achieved from the elective unit, but will not count towards the qualification.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value	GLH
Mandatory				
A/504/6722	Unit 101/501	Principles of building construction, information and communication	6	52

L/504/6885	Unit 102	Contribute to setting out and building of masonry structures up to damp proof course	3	30
R/504/6886	Unit 103	Carrying out blocklaying activities	6	53
Y/504/6887	Unit 104	Carrying out bricklaying activities	8	74
Y/504/6890	Unit 105	Carrying out cavity walling activities	11	103
A/504/6719	Unit 201/601	Health, safety and welfare in construction	7	70
Y/504/6999	Unit 202/602	Principles of building construction, information and communication	6	55
J/504/6920	Unit 204	Building solid walling, isolated and attached piers	16	151
A/504/6901	Unit 205	Interpreting working drawings to set out masonry structures	6	46
K/504/6926	Unit 206	Construct cavity walling forming masonry structures	14	126
Elective				
L/504/6921	Unit 203	Producing thin joint masonry and masonry cladding	4	40

Please Note the Extended Diploma is for learners starting an Apprenticeship at Level 2.

Information for the level 1 units can be found in the Level 1 Bricklaying handbook.

Total Qualification Time

Total Qualification Time (TQT) is the total amount of time, in hours, expected to be spent by a Learner to achieve a qualification. It includes both guided learning hours (which are listed separately) and hours spent in preparation, study and assessment.

Title and level	GLH	TQT
Level 2 Diploma in Bricklaying	760	830
Level 2 Extended Diploma in Bricklaying	448	490



2 Centre requirements

Approval

The approval process for Construction qualifications is available at our website. Please visit www.cityandguilds.com/construction for further information.

Resource requirements

Physical resources and site agreements

Centres will have well equipped workshops with a comprehensive range of hand and portable power tools that meet current industry standards. All powered equipment should be well maintained and PAT certified. Centres will have special designated areas within their Bricklaying workshop (cubicles or project areas) allowing candidates to practice the requirements of the units and carry out the Practical Assignments.

Centre staffing

All staff who assess (tutor/deliver) these qualifications must:

- have recent relevant experience in the specific area they will be teaching;
- be technically competent in the area for which they are delivering training and/or have experience of providing training;
- have a CV available demonstrating relevant experience and any qualifications held.

All staff who quality assure these qualifications must:

- have a good working knowledge and experience within the construction industry;
- have an established strategy and documentary audit trail of internal quality assurance;
- have a good working knowledge of quality assurance procedures;
- have a CV available demonstrating relevant experience and any qualifications held.

While the Assessor/Verifier (A/V) units/TAQA are valued as qualifications for centre staff, they are not currently a requirement for these qualifications. However, we encourage trainers and assessors to qualify to the current TAQA standard.

Continuing professional development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Candidate entry requirements

City & Guilds does not set entry requirements for these qualifications. However, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

Age restrictions

City & Guilds cannot accept any registrations for candidates under 16 as these qualifications are not approved for under 16s.



3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs,
- support and guidance they may need when working towards their qualification
- any units they have already completed, or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner, and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for this qualification:

Description	How to access
Assessor guidance	www.cityandguilds.com
Task Manual	www.cityandguilds.com
Textbook	Can be ordered from Walled Garden, via www.cityandguildsbookshop.com or from your Business Manager
Qualification approval form	www.cityandguilds.com/construction
SmartScreen	www.smartscreen.co.uk



3 Assessment

Unit	Title	Assessment method	Where to obtain assessment materials
201/601	Health, safety and welfare in construction	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all of the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
202/602	Principles of building construction, information and communication	City & Guilds e-volve multiple choice test or on demand externally marked paper. The test covers all of the knowledge in the unit.	Examinations provided on e-volve, or question papers ordered via Walled Garden.
203	Producing thin joint masonry and masonry cladding	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.	www.cityandguilds.com

Unit	Title	Assessment method	Where to obtain assessment materials
204	Building solid walling, isolated and attached piers	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com
205	Interpreting working drawings to set out masonry structures	<p>Multiple choice question paper, covering knowledge outcomes.</p> <p>Practical assignment, covering performance outcomes.</p> <p>Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.</p>	www.cityandguilds.com

Unit	Title	Assessment method	Where to obtain assessment materials
206	Construct cavity walling forming masonry structures	Multiple choice question paper, covering knowledge outcomes. Practical assignment, covering performance outcomes. Both assessments are set by City & Guilds, delivered and marked by the tutor/assessor, and will be externally verified by City & Guilds to make sure they are properly carried out.	www.cityandguilds.com

Test specifications

The way the knowledge is covered by each test is laid out in the tables below:

Test 1: Unit 201/601 Health, safety and welfare in construction

Duration: 1 hour

Unit	Outcome	Number of questions	%
201/601	1 Know the health and safety regulations, roles and responsibilities	7	17.5
	2 Know accident and emergency reporting procedures and documentation	5	12.5
	3 Know how to identify hazards in the workplace	7	17.5
	4 Know about health and welfare in the workplace	3	7.5
	5 Know how to handle materials and equipment safely	2	5
	6 Know about access equipment and working at heights	3	7.5
	7 Know how to work with electrical equipment in the workplace	4	10
	8 Know how to use personal protective equipment (PPE)	5	12.5
	9 Know the cause of fire and fire emergency procedures	4	10

Total **40** **100**

Test 2: Unit 202/602 Principles of building construction, information and communication

Duration: 80 minutes

Unit	Outcome	Number of questions	%
202	1 Understand how to select types of building information	5	12.5
	2 know about environmental considerations in relation to construction	5	12.5
	3 Understand the construction of foundations	7	17.5
	4 Understand construction of internal and external walls	9	22.5
	5 Know about construction of floors	4	10
	6 Know about construction of roofs	3	7.5
	7 Understand how to communicate in the workplace	7	17.5
	Total	40	100

Test 3: Unit 203 Producing thin joint masonry and masonry cladding

Duration: 60 minutes

Unit	Outcome	Number of questions	%
203	1 Know how to construct thin joint masonry for use with concrete and steel-framed buildings	30	100
	Total	30	100

Test 4: Unit 204 Building solid walling, isolated and attached piers

Duration: 45 minutes

Unit	Outcome	Number of questions	%
204	1 Know how to plan and select resources for practical tasks	10	33
	3 Know how to erect solid walling to required specification	14	47
	5 Know how to erect isolated and attached piers to required specification	6	20
	Total	30	100

Test 5: Unit 205 Interpreting working drawings to set out masonry structures

Duration: 40 minutes

Unit	Outcome	Number of questions	%
205	1 Know how to interpret information to establish setting-out requirements	7	28
	3 Know how to prepare construction sites for setting-out activities	6	24
	5 Know how to select resources for setting-out work	4	16
	7 Know how to set out regular-shaped masonry structures on level ground	8	32
	Total	25	100

Test 6: Unit 206 Construct cavity walling forming masonry structures
Duration: 75 minutes

Unit	Outcome	Number of questions	%
206	1 Understand how to plan and select resources for practical tasks	17	42.5
	3 Understand how to erect cavity walling to required specification	14	35
	5 Know how to form openings in cavity walling	9	22.5
	Total	40	100



4 Units

Availability of units

The following units can also be obtained from The Register of Regulated Qualifications: <http://register.ofqual.gov.uk/Unit>

Structure of units

These units each have the following:

- City & Guilds reference number
- unit accreditation number (UAN)
- title
- level
- credit value
- guided learning hours
- unit aim
- learning outcomes which are comprised of a number of assessment criteria

Range explained:

Range gives further scope on what areas within an assessment criteria must be covered. The range in a unit **must** be taught to learners and parts of the range will be assessed.

Glossary of terms

The following key words and terms are used in the units.

Term	Definition
Band Course	One or more courses forming a decorative opening
Barge-Board	A board covering the ends of the horizontal timbers of a roof which would otherwise be exposed at the gable end.
Bat	Part of a brick greater than one-quarter
Beam-Filling	The brickwork between the ends of joists or beams
Bearing	The amount by which a piece of construction rests upon its support
Bridged Cavity	Something that touches both skins of a cavity wall, i.e. lintel, tie wire, cavity liner, mortar droppings
Bulking	Occurs particularly in wet sand and ballast when wet but before saturation
Cantilever	A beam built into a wall and held down at one end and unsupported at the other
Cap or Capping	The top cover of a pier, wall, or chimney stack.
Cast-in-situ	Moulded in the position it will occupy permanently

Cavity Tray	Membrane placed over a bridged cavity, see bridged cavity
Center	A temporary frame shaped to contour for supporting an arch or other feature during its construction, being removed when setting has taken place
Chase	A narrow recess cut in the brickwork (i.e. to take conduit or piping).
Coping	The weathering feature on top of an external wall
Coring Hole	A temporary hole left in a cavity wall at ground level to enable mortar droppings to be removed from cavity.
Creasing	Usually two courses of tiles built in beneath a coping.
Efflorescence	A whit deposit which may form on the surface of new bricks if the latter contain a high proportion of mineral salts.
Expanded Metal	Metal reinforcement made out of sheet metal to form a mesh.
Feathered Edged Coping	A coping that is thinner at one edge than the other.
Flaunching	The cement fillet at the junction around a chimney pot.
Gables	The part of the wall in the triangle formed by the sloping sides of the roof.
Head	Horizontal top member of a door window frame
Honeycombed Wall	A wall with bricks set so as to provide openings at regular intervals to give ventilation through the wall. Used to support ground floor joists.
Horns	The projections on a door head for building into the joints.
Indent	A recess formed in the brickwork.
Jamb	The brickwork on either side of an opening.
Lintel	A horizontal member for spanning an opening to support the structure above.
Overhand Work	Facework executed from the back of the wall.
Oversailing	Projecting from the general face of the wall
Parapet Wall	A low Wall on the edge of a building or a platform.
Party Wall	The dividing wall between adjoining buildings
Insulation	Materials used to retain heat and improve the thermal value of a building, may also be used for managing sound transfer
Joggle	Cavity into which grout is poured, often to form a joint
Jointing	As work proceeds.
Mid Girth	Often referred to as a centre line calculation, used for calculating quantities of materials
Movement Joint	A joint to allow for the co-efficient of thermal expansion in materials enabling expansion and contraction.
Padstone	A masonry unit incorporated in a structure to help spread the load through a wall
Piers	Brickwork used for support in walls or as pillars, attached and detached.

Plinth	The projecting base of a wall or column
Pointing	At a later date.
Pre-cast	Made-up beforehand
Profiles	Often same as "Templet". Boards fixed horizontally to ground pegs at the ends of a wall before construction commences in order that lines may be stretched across to mark the position of the wall
Queen-Closer	Part of a brick, cut to 46 mm on face.
rusticated	A blocking proud of the wall face, usually several courses of bricks followed by one or two flush, commonly used on quoins
Reinforced Brickwork	Brickwork strengthened by inserting reinforcement between the mortar joints.
Reinforced Concrete	Concrete containing metal rods or steel mesh to give additional strength.
Retaining Wall	A wall built for the purpose of keeping in position a volume of earth or liquid.
Reveal	The portion of a wall at the side of a window or door opening when the jambs are recessed or rebated.
Sleeper Walls	Dwarf walls erected at intervals between the main walls To provide intermediate supports to ground floor joists, usually built honeycombed.
Saddle-back	A pointed coping, i.e. with sloping sides.
Screed	A layer of small aggregate concrete approx.. 50 mm thick laid on top of concrete floor to provide a smooth, level floor finish.
Solid Walls	Walls of a thickness of 1 brick and greater
Soldier Course	Course of bricks laid on end.
String Course	A long narrow course projecting from the general face of the brickwork
Struck	Refers to the mortar in pointing work being pressed inwards with the edge of the trowel.
Tensile Forces	A measure of the ability of material to resist a force that tends to pull it apart.
Tile Creasing	The use of flat tiles as a decorative course
Timbering	The operation of supporting earth in trench work, etc., with heavy timbers.
Toothing	Leaving the vertical end of a wall unfinished in its bond to enable the wall to be continued at a later stage.
Wall Plate	A timber bedded on the top of a wall for supporting joists or rafters.
Weep Holes	Small openings in a wall to permit the escape of water from the back of the wall.
Withes	The thin division between adjoining flue liners, sometimes termed mid-feathers.

Unit 201/601 Health, safety and welfare in construction

UAN:	A/504/6719
Level:	2
Credit value:	7
GLH:	70
Endorsement by a sector or regulatory body:	This unit is endorsed by Construction Skills, the Sector Skills Council for the construction industry.
Aim:	The aim of this unit is to provide the learner with the knowledge to carry out safe working practices in construction, in relation to sourcing relevant safety information and using the relevant safety procedures at work

Learning outcome
The learner will: 1. know the health and safety regulations, roles and responsibilities
Assessment criteria
The learner can: 1.1 identify health and safety legislation relevant to and used in the construction environment 1.2 state employer and employee responsibilities under the Health and Safety at Work Act (HASWA) 1.3 state roles and responsibilities of the Health and Safety Executive (HSE) 1.4 identify organisations providing relevant health and safety information 1.5 state the importance of holding on-site safety inductions and toolbox talks.

Range
Health and safety legislation Health and Safety at Work Act, Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Control of Substances Hazardous to Health (COSHH), Construction, Design and Management (CDM) regulations , Provision and Use of Work Equipment Regulations (PUWER), manual handling operations Regulations, Personal Protective Equipment (PPE) at Work Regulations, Work at Height Regulations, Control of Noise at Work Regulations, Control of Vibration at Work Regulations , Electricity at Work Regulations, Lifting operations and Lifting Equipment Regulations (LOLER)

Employer responsibilities

Safe working environment, adequate staff training, health and safety information, site inductions, toolbox talks, risk assessment, supervision, PPE, reporting hazards, accidents and near misses, sections 2 to 9 of Health and Safety at Work Act, CDM reg's, construction phase plans, welfare, display public liability Insurance and health and safety law poster.

Employee responsibilities

Working safely, working in partnership with the employer, reporting hazards, accidents and near misses, following organisational procedures as per Sections 2 to 9 of Health and Safety at Work Act.

Roles and responsibilities:

Enforcement (including fees for intervention), legislation and advice, inspection, investigation eg site investigations.

Organisations

Health and Safety Executive (HSE) website, Institute of Occupational Safety and Health, British Safety Council, 'manufacturer', ROSPA.

Learning outcome

The learner will:

2. know accident and emergency reporting procedures and documentation

Assessment criteria

The learner can:

- 2.1 state legislation used for reporting accidents
- 2.2 state major **types of emergencies** that could occur in the workplace
- 2.3 identify reportable injuries, diseases and dangerous occurrences as per RIDDOR
- 2.4 state main types of **records** used in the event of an accident, emergency and near miss and reasons for reporting them
- 2.5 identify **authorised personnel** involved in dealing with accident and emergency situations
- 2.6 state **actions** to take when discovering an accident.

Range**Types of emergencies**

Fires, security incidents, gas leaks.

Records:

Accident book, first aid records, organisational records and documentation.

Authorised personnel

First aiders, supervisors/managers, health and safety executive, emergency services, safety officer.

Actions

Area made safe, call for help, emergency services.

Learning outcome
The learner will: 3. know how to identify hazards in the workplace
Assessment criteria
The learner can: 3.1 state the importance of good housekeeping 3.2 state reasons for risk assessments and method statements 3.3 identify types of hazards in the workplace 3.4 state the importance of the correct storage of combustibles and chemicals on site 3.5 identify different signs and safety notices used in the workplace.

Range
Good housekeeping: Cleanliness, tidiness, use of skips and chutes, segregation of materials, clear access to fire escapes, clear access to fire extinguishers.
Types of hazards: Fires, slips, trips and falls, hazardous substances (relating to inhalation, absorption, exposure, ingestion, cross-contamination), electrical, asbestos, manual handling, plant and vehicle movement, adverse weather.
Signs and safety notices: Prohibition, mandatory, warning, safe condition, supplementary.

Learning outcome
The learner will: 4. know about health and welfare in the workplace
Assessment criteria
The learner can: 4.1 identify requirements for welfare facilities in the workplace as per Construction Design Management (CDM) 4.2 state health effects of noise and precautions that can be taken 4.3 state risks associated with drugs, alcohol and medication which could affect performance in the workplace.

Range
Precautions Reducing noise at source, PPE, isolation, exposure time.
Risks Reduced risk perception, loss of concentration, balance problems, absenteeism and reduced productivity.

Learning outcome
The learner will: 5. know how to handle materials and equipment safely
Assessment criteria
The learner can: 5.1 identify legislation relating to safe handling of materials and equipment 5.2 state procedures for safe lifting and manual handling activities in accordance with guidance and legislation 5.3 state the importance of using lifting aids when handling materials and equipment.

Range
Lifting aids Wheelbarrow, sack barrow, mechanical lifting aids, pallet truck.

Learning outcome
The learner will: 6. know about access equipment and working at heights
Assessment criteria
The learner can: 6.1 identify legislation relating to working at heights 6.2 identify types of access equipment 6.3 state safe methods of use for access equipment 6.4 identify dangers of working at height.

Range
Access equipment: Stepladders, ladders (pole, extension), trestles, hop-ups, proprietary scaffolding, podium, stilts
Safe methods Regular inspection, check for broken, damaged or missing components, responsible use, consideration of adverse weather conditions, good housekeeping
Dangers Falling tools, falling equipment, falling materials, persons falling from height (injuries to themselves and others).

Learning outcome
The learner will: 7. know how to work with electrical equipment in the workplace
Assessment criteria
The learner can: 7.1 state precautions to take to avoid risks to self and others when working with electrical equipment 7.2 state dangers of using electrical equipment 7.3 identify voltages and voltage colour coding that are used in the workplace 7.4 state methods of storing electrical equipment.

Range
Precautions Check leads, check plugs, use of cable hangers, check tools and equipment, current valid PAT certificate
Dangers: Burns, electrocution, fire.
Voltages Battery powered, 110/115 volts, 230/240 volts and 415 volts.
Methods Components present, equipment cleaned, checked for damage, stored in a clean and secure location.

Learning outcome
The learner will: 8. know how to use Personal Protective Equipment (PPE)
Assessment criteria
The learner can: 8.1 state the legislation governing use of Personal Protective Equipment (PPE) 8.2 state types of PPE used in the workplace 8.3 state the importance of PPE 8.4 state why it is important to store, maintain and use PPE correctly 8.5 state the importance of checking and reporting damaged PPE.

Range
PPE: Head protection, eye protection, ear protection, face/dust masks, breathing apparatus, high visibility clothing, safety footwear, gloves, sun protection, barrier cream, water proofs, knee pads, overalls/disposable clothing

Learning outcome
The learner will: 9. know the cause of fire and fire emergency procedures
Assessment criteria
The learner can: 9.1 state elements essential to creating a fire 9.2 identify methods of fire prevention 9.3 state actions to be taken on discovering a fire 9.4 state types of fire extinguishers and their uses.

Range
Elements Oxygen, fuel, heat. Types of fire extinguishers: Water, foam, CO2, dry powder.

Unit 202/602 Principles of building construction, information and communication

UAN:	Y/504/6999
Level:	2
Credit value:	6
GLH:	55
Endorsement by a sector or regulatory body:	This unit is endorsed by Construction Skills, the Sector Skills Council for the construction industry.
Aim:	<p>The aim of this unit is to provide the learner with the knowledge of building methods and construction technology in relation to:</p> <ul style="list-style-type: none"> • understanding a range of building materials used within the construction industry and their suitability to the construction of modern buildings. • source relevant information and apply it to relevant tasks • calculating the resources from required drawings and specifications.

Learning outcome
The learner will: 10. understand how to select types of building information.
Assessment criteria
The learner can: 10.1 interpret information sources used in construction 10.2 interpret scale, symbols and hatchings on a working drawing 10.3 explain the purpose of benchmarks used in construction.

Range
<p>Information sources Drawings , schedules, specifications, programme of work, organisational chart, method statements, risk assessment, manufacturers’ technical information, bill of quantities, order requisitions, delivery notes, variation orders, permits to work, signs and notices.</p> <p>Symbols WC, sink, bath, door, window</p> <p>Hatchings</p>

Brickwork, timber (wrot and unwrot), blockwork, concrete, hardcore, sub soil, insulation, damp proof course (DPC), damp proof membrane (DPM)

Benchmarks

Site datums, temporary bench marks (TBM), ordnance bench marks (OBM).

Learning outcome

The learner will:

11. know about environmental considerations in relation to construction.

Assessment criteria

The learner can:

- 11.1 describe thermally insulated **materials**
- 11.2 describe **methods** of making buildings water efficient
- 11.3 describe **methods** of making buildings energy efficient
- 11.4 state environmental-friendly **building materials**
- 11.5 state **procedures** for waste management.

Range

Materials

Polyisocyanurate (PIR), Expanded Polystyrene (EP), fibre glass, mineral wool, double glazed units, multi-foil insulation.

Methods (2.2)

Efficient sanitary ware, water harvesting.

Methods (2.3)

Low energy lighting, automatic movement sensors, solar panels, wind turbines, heat source, biomass heating.

Building materials

Locally sourced, managed timber (FSC), lime, sheep wool, recycled materials, straw.

Procedures:

Segregation and recycling of waste, safe disposal of hazardous materials, Local Exhaust Ventilation (LEV).

Learning outcome

The learner will:

12. understand the construction of foundations.

Assessment criteria

The learner can:

- 12.1 describe **factors** to be considered when selecting **foundations**
- 12.2 describe **materials** and mix-ratios used in concrete foundations
- 12.3 explain how to **set out** foundations
- 12.4 explain **factors** to consider when excavating foundations
- 12.5 describe methods of transferring datums
- 12.6 calculate the volume of concrete used in pile foundation.

Range
<p>Factors (3.1) Ground conditions (subsoil), strength, types of building.</p> <p>Foundations Strip, raft, pile, pad.</p> <p>Materials: Course aggregate, fine aggregate, cement, water, steel reinforcement, sulphate-resisting cement, ordinary portland cement, frost proofing, accelerators, retardants.</p> <p>Set out: 3:4:5 method, diagonals, profiles, builder's square.</p> <p>Factors (3.4) Underground services, proximity to neighbouring buildings, tree roots, ground conditions.</p> <p>Methods: Optical/laser level, straight edge and spirit level</p>

Learning outcome
The learner will:
13. understand construction of internal and external walls.
Assessment criteria
The learner can:
13.1 describe wall components
13.2 explain the importance of a Damp Proof Course (DPC)
13.3 calculate the area of a gable
13.4 identify additives used in mortar
13.5 identify different types of bonding
13.6 describe the differences between load-bearing and non-load-bearing internal walls
13.7 calculate the volume of paint required to cover a wall area.

Range
<p>Wall components Brick, block, insulation, Damp Proof Course (DPC), lintels, wall ties, airbrick and liner, cavity closures, stud partition, light density blocks, plasterboard, plaster.</p> <p>Additives: Retardant, accelerant, frost inhibitor, cement dyes, plasticiser.</p> <p>Bonding: Stretcher, English, Flemish.</p>

Learning outcome

The learner will:

14. know about construction of floors.

Assessment criteria

The learner can:

14.1 describe **floor components**

14.2 calculate the linear quantity of floor boarding to cover an irregular shaped area

14.3 calculate additional quantities of wastage using percentage.

Range**Floor components:**

Hardcore, blinding sand, Damp Proof Membrane (DPM), insulation, oversite concrete, block and beam, pre-cast floor panels, screed (dry, self-levelling) sleeper walls, wall plates, DPC, joists, joist hangers, floor covering.

Learning outcome

The learner will:

15. know about construction of roofs.

Assessment criteria

The learner can:

15.1 describe **types** of roofs

15.2 describe **roof components**.

Range**Types**

Gable-ended, flat, hipped, lean-to.

Roof components

Purlins, rafters, truss rafters, ridge, batten/lathe, fascia, soffit, barges, valleys, wall plate, flashings, felt, slate/tile, insulation, joists, wall plate straps.

Learning outcome

The learner will:

16. understand how to communicate in the workplace.

Assessment criteria

The learner can:

16.1 describe **job roles** within building teams

16.2 explain **key personnel** involved in day to day communication

16.3 state **information** needed when requesting materials

16.4 identify methods of communication used to relay information to colleagues and others

16.5 describe advantages and disadvantages of **methods of communication**

- 16.6 state **occasions** when clear communication is vital in the workplace
16.7 explain **benefits** of positive communication with colleagues and others.

Range

Job roles

Professional, technician, trade, general operative.

Key personnel

Site manager, supervisors, fellow operatives.

Information

Dimensions, quantities, type, when and where required, contact name and details.

Methods of communication (7.4)

Letters, emails, telephone, memos, verbal, posters, signs, meetings, radio, text messages

Methods of communication (7.5)

Written, verbal

Occasions

Changes to risk assessments, work restrictions, changes to method statement, permits to work, changes to legislation.

Benefits

Improved motivation, avoid conflict, complying with equality and diversity, meeting deadlines.

Unit 203

Producing thin joint masonry and masonry cladding

UAN:	L/504/6921
Level:	2
Credit value:	4
GLH:	40
Endorsement by a sector or regulatory body:	Endorsed by Construction Skills.
Aim:	The aim of this unit is to provide the learner with the knowledge of block-work, and cladding timber to steel and concrete structures and the skills to be able to construct buildings using thin joint block-work and to apply masonry rain-screen cladding to buildings.

Learning outcome

The learner will:

1. know how to construct thin joint masonry for use with concrete and steel-framed buildings.

Assessment criteria

The learner can:

- 1.1 identify **contents** of resource checklists
- 1.2 describe **methods** of construction
- 1.3 describe **methods** of positioning components
- 1.4 identify **materials** required for producing mortars
- 1.5 identify **mechanical methods** used to mix mortars
- 1.6 identify **methods** of cutting components
- 1.7 identify **hazards** when using thin joint
- 1.8 describe the **importance** of protecting completed work
- 1.9 describe the importance of using damp-proof barriers
- 1.10 describe **methods** of bonding
- 1.11 state **methods** of forming openings in walling
- 1.12 describe the provision for cavity trays in bridged cavities
- 1.13 describe the reasons for provision of insulation
- 1.14 describe the importance of using reinforcement in walling
- 1.15 describe the importance of vertical movement joints
- 1.16 describe **methods** of fixing blockwork to concrete and steel frames.

Range**Contents**

Cement for mortar, plasticiser, suitable sands (fine aggregate) for mortar, suitably clean water for mixes, premixed adhesive/grout, hand tools and equipment (block cutting square, sledge, sanding board, whisk, masonry saw, block rasp, scoop, brick trowel, spirit level, line, corner blocks, boat/pocket level, line pins, lump hammer, bolster chisel, mixing tub/bucket, scutch hammer, pointing trowel), proprietary fixings, movement ties, wall ties, profiles, blocks, Damp Proof Courses (DPC), lintels, cavity trays, weep holes, insulation, materials for horizontal and vertical movement joints, fire stop, brick/block anchors (wall starters), wind post.

Methods (AC1.2)

Follow method statement and risk assessment, level, line, plumb, course 1 (traditional sand & cement), follow manufacturer's guidelines.

Methods (AC1.3)

Cavity, partition, infill panels, external leaf/skin to a structure (rendered finish), cladding.

Materials

Cement, plasticiser, suitable sands (fine aggregate), suitably clean water, premixed adhesive/grout.

Mechanical methods

Mixer (for first course), silo (for first course), whisk (for adhesive).

Methods (AC1.6)**Hand tools**

Lump hammer and bolster chisel, masonry saw.

Mechanical tools

Portable cutters, fixed table saw.

Hazards

Manual handling, dust, cutting, skin irritation/damage, overreaching, working at height, use of power tools.

Importance

Prevent damage (from weather/other trades), prevent injuries, ensure quality of work, control costs.

Methods (AC1.10)

Dry bond, half bond, reverse bond, broken bond, laps to manufacturer's instructions.

Methods (AC1.11)

Provision of reveals (avoiding cold bridging), bridging openings using lintels/proprietary arch centres.

Methods (AC1.16)

Proprietary wall fixings

Drill and plug, cartridge gun

Angle brackets

Drill and plug, cartridge gun.

Learning outcome

The learner will:

2. be able to construct buildings using thin joint masonry for use with concrete and steel-framed buildings.

Assessment criteria

The learner can:

- 2.1 check information sources comply with manufacturers' instructions
- 2.2 interpret drawings to establish the:
 - location
 - shape
 - size and method of construction
- 2.3 produce work method statements
- 2.4 establish safety procedures and safe working practices
- 2.5 protect materials, work and surrounding areas from damage
- 2.6 **transfer levels** from datum point
- 2.7 mix mortars or jointing compounds to manufacturers' instructions
- 2.8 position ranging lines onto profiles and mark walling positions
- 2.9 position components ready for use
- 2.10 prepare and safely cut components
- 2.11 build straight thin joint walling and return corner
- 2.12 use correct access equipment
- 2.13 follow current environmental and relevant health and safety legislation.

Range

Transfer levels

Straight edge, spirit level, optical level, water level, laser level.

Unit 204

Building solid walling, isolated and attached piers

UAN:	J/504/6920
Level:	2
Credit value:	16
GLH:	151
Endorsement by a sector or regulatory body:	Endorsed by Construction Skills.
Aim:	The aim of this unit is to provide the learner with the knowledge of how to select correct resources and how to set out and construct solid walling and isolated and attached piers.

Learning outcome
The learner will: 1. know how to plan and select resources for practical tasks.
Assessment criteria
The learner can: 1.1 describe the different types of drawings used for carrying out solid walling, isolated and attached piers 1.2 identify scales applied to drawings 1.3 describe methods of reporting inaccuracies in information sources 1.4 identify resources required for carrying out solid walling, isolated and attached piers 1.5 name calculations and formulae for identifying quantities of: <ul style="list-style-type: none">• materials• components• fixings 1.6 describe reasons for checking datum heights at corner positions.

Range
Drawings Site plans, general location, assembly, sectional, detailed, orthographic projection (first angle), isometric projection.
Scales 1:100, 1:50, 1:20, 1:10, 1:5.
Methods

Verbal, written.

Resources

Tools: brick trowel, pointing trowel, lump hammer, bolster chisel, plugging chisel, scutch hammer, line and pins, corner blocks, spirit level, boat/pocket level, tape measure, builders square, tingle plate, brick hammer, jointing iron, gauge lathe/rod.

Equipment: bucket, brick tongs/grabs, sack barrow, wheelbarrow, sweeping brush, hand brush, shovel, straight edge, mortar board, portable mixers, PPE.

Materials: bricks, mortar, copings/pier cap, Damp Proof Course (DPC).

Calculations and formulae

Linear measurements (add/subtract/multiply/divide), ratios for mixes, area (length x height), quantity (area x number of bricks per m²), quantity including waste (number of bricks required + allowance for waste).

Learning outcome

The learner will:

2. be able to plan and select resources for practical tasks.

Assessment criteria

The learner can:

- 2.1 interpret drawings to establish the location of solid walling, isolated and attached piers
- 2.2 check specifications and schedules for conformity of information with drawings
- 2.3 use different types of information sources
- 2.4 record and report discrepancies to authorised personnel
- 2.5 produce work method statements to carry out the building of solid walling and attached and detached piers
- 2.6 select resources required to carry out solid walling, isolated and attached piers
- 2.7 select methods of building solid walling, isolated and attached piers to required specifications
- 2.8 calculate quantities of resources required for different forms of solid walling, isolated and attached piers
- 2.9 check suitability of resources for building solid walling, isolated and attached piers
- 2.10 check to establish positioning of datum heights
- 2.11 follow current environmental and relevant health and safety legislation.

Learning outcome
The learner will: 3. know how to erect solid walling to required specification.
Assessment criteria
The learner can: 3.1 describe methods of providing foundations to walling 3.2 identify methods of transferring walling positions onto foundation concrete 3.3 identify locations of: <ul style="list-style-type: none"> • bricks • blocks • other components 3.4 describe methods used to construct walling to given datum heights 3.5 describe methods for the provision of damp-proof barriers to solid walls 3.6 describe methods of establishing face bonds for solid walls 3.7 describe methods of providing decorative features to masonry walling 3.8 describe the use of brick reinforcement in masonry walling 3.9 describe methods used to provide weatherproof finishes to masonry walling 3.10 state the advantages and disadvantages of pointing and jointing 3.11 identify safety procedures and safety standards 3.12 describe methods of protecting work and surrounding areas from damage 3.13 describe the importance of carrying out regular checks to confirm that work being undertaken conforms to working drawings.

Range
Methods (AC3.1) Strip, wide strip, trench fill, stepped, raft, pad, reinforced.
Methods (AC3.2) Plumbing from profile ranging lines, marking concrete base, mortar screed.
Locations position of wall, load out bricks/blocks in relation to face of the wall, position of mortar board and mortar, position of other components ready for use.
Methods (AC3.4) work to drawings, transferring levels, maintaining gauge.
Methods (AC3.5) Horizontal DPC, engineering brick, solid walling, copings and pier caps, oversailing courses, tile creasing, brick on edge.

Methods (AC3.6)

Dry bonding, reverse bond, broken bond, right angle quoins, T-junctions, rules of bonding.

Face bonds

English bond, Flemish bond, English garden wall bond, Flemish garden wall bond.

Methods (AC3.7)

Changing mortar colour, contrasting bricks, recessed/projected bricks, varying joint finishes, brick on edge, soldier course, special bricks, tile creasing, oversailing.

Reinforcement

Horizontal, vertical, expanded metal, plastic, steel reinforcing bar.

Methods (AC3.9)

Brick on edge with tile creasing, oversailing course, copings, cappings, pointed weather struck finish, special bricks.

Safety procedures and safety standards

Method statement, risk assessment.

Methods (AC3.12)

Plastic sheeting, hessian, clean working platforms, clean mortar boards, cover resources, protect decorative features (stonework/plinths), barriers to isolate work area, signage, sweeping/hosing down.

Regular checks

Resources, workmanship.

Learning outcome

The learner will:

4. be able to erect solid walling to required specification.

Assessment criteria

The learner can:

- 4.1 set out positions of ranging lines onto profiles and mark walling positions
- 4.2 position bricks and components ready for use
- 4.3 prepare and safely cut **materials**
- 4.4 **construct** one-brick walling to form:
 - straight lengths
 - returns
 - junctions
- 4.5 provide decorative features to piers and solid walls
- 4.6 produce **jointing and pointing finishes** to walling
- 4.7 select materials, tools and equipment
- 4.8 apply safe working practices relevant to the tasks

<p>4.9 adhere to method statements and risk assessments</p> <p>4.10 protect work and surrounding areas under construction and after completion from damage arising from work activities</p> <p>4.11 perform accuracy checks on building work to meet industrial standards</p> <p>4.12 report problems to authorised personnel</p> <p>4.13 use correct access equipment</p> <p>4.14 follow current environmental and relevant health and safety legislation.</p>

<p>Range</p>
<p>Materials</p> <p>Bricks and copings</p>
<p>Construct</p> <p>In English bond, Flemish bond, garden wall bonds.</p>
<p>Jointing and pointing finishes</p> <p>Half round, recessed, pointing, weather-struck.</p>

<p>Learning outcome</p>
<p>The learner will:</p> <p>5. know how to erect isolated and attached piers to required specification.</p>
<p>Assessment criteria</p>
<p>The learner can:</p> <p>5.1 describe methods of transferring walling positions onto foundation concrete</p> <p>5.2 describe methods of providing foundations to walling</p> <p>5.3 describe methods used to construct walling to given datum heights</p> <p>5.4 describe methods for the provision of damp-proof barriers</p> <p>5.5 describe methods of establishing face bonds for isolated and attached piers</p> <p>5.6 describe methods used to construct attached and isolated piers</p> <p>5.7 describe methods used to maintain industrial standards when erecting isolated and attached piers</p> <p>5.8 describe methods used to provide copings and capping to tops of masonry walling with attached piers</p> <p>5.9 identify relevant safety procedures and safety standards</p> <p>5.10 describe methods of protecting surrounding areas from damage</p> <p>5.11 describe methods to protect work under construction and after completion</p> <p>5.12 describe the importance of carrying out regular checks to work</p> <p>5.13 describe the importance of knowing when to carry out remedial work.</p>

Range**Methods (AC5.1)**

Plumbing from profile ranging lines, marking concrete base, mortar screed.

Methods (AC5.2)

Strip, wide strip, trench fill, stepped, raft, pad, reinforced.

Methods (AC5.3)

Work to drawings, transferring levels, maintaining gauge.

Methods (AC5.4)

Horizontal DPC, engineering brick, solid walling, copings and pier caps, oversailing courses, tile creasing, brick on edge.

Methods (AC5.5)

Dry bonding, maintaining bond (plumbing perps), right angle quoins.

Face bonds

English bond, Flemish bond, English garden wall bond, Flemish garden wall bond.

Methods (AC5.6)

Follow working drawing, dry bonding, check for square, alignment of piers, maintain bond, gauge, level and plumb.

Methods (AC5.7)

Working to drawings, selection of materials, quality of workmanship and materials.

Methods (AC5.8)

Brick on edge, tile creasing, pier capping, oversailing courses, special bricks.

Safety procedures and safety standards

Method statement, risk assessment.

Methods (AC5.10)

Plastic sheeting, clean working platforms, timber sheeting, barriers to isolate work area, signage, sweeping/hosing down.

Methods (AC5.11)

signage, barriers to isolate work area, plastic sheeting, timber sheeting, cover resources, hessian, clean working platforms, clean mortar boards, protect decorative features (stonework/plinths).

Regular checks

Resources, workmanship.

Remedial work

Snagging, repointing, repairing damaged brickwork, cleaning brickwork.

Learning outcome

The learner will:

6. be able to erect isolated and attached piers to required specification.

Assessment criteria

The learner can:

- 6.1 select materials tools and equipment to build isolated and attached piers
- 6.2 set out and mark isolated and attached piers
- 6.3 position bricks, blocks, components ready for use
- 6.4 construct isolated piers up to 600 mm square
- 6.5 construct attached piers to building regulation requirements
- 6.6 provide decorative features to piers
- 6.7 produce **joint finishes** to walling
- 6.8 adhere to method statements and risk assessments
- 6.9 protect work, resources and surrounding areas from damage
- 6.10 perform accuracy checks on building work to ensure that it meets industrial standards/tolerances
- 6.11 report problems associated with the work to authorised personnel
- 6.12 perform remedial work to overcome identified problems within given timescale
- 6.13 use correct access equipment
- 6.14 follow current environmental and relevant health and safety legislation.

Range**Joint finishes**

Half round, recessed, pointing, weather-struck.

UAN:	A/504/6901
Level:	2
Credit value:	6
GLH:	46
Endorsement by a sector or regulatory body:	Endorsed by Construction Skills.
Aim:	The aim of this unit is to provide the learner with the knowledge of how to interpret the information required to select materials, components, tools and equipment and be able to conduct checks on equipment and carry out checks for dimensional accuracy.

Learning outcome
The learner will: 1. know how to interpret information to establish setting-out requirements.
Assessment criteria
The learner can: 1.1 describe types of drawings used for setting out 1.2 identify scales commonly applied to drawings 1.3 describe how to take off measurements from working drawings 1.4 describe methods of reporting inaccuracies 1.5 describe the purpose of using datums in setting out work 1.6 identify types of abbreviations from working drawings 1.7 identify hatchings in relation to working drawings.

Range
Drawings Block plans, site plans, general location, assembly, sectional, detailed, orthographic projection (first angle), isometric projection.
Scales 1:2500, 1:1250, 1:100, 1:50, 1:20, 1:10, 1:5.
Measurements Reading drawing dimensions, using a scale rule.

<p>Methods Verbal, written.</p>
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<p>Learning outcome</p> <p>The learner will:</p> <p>2. be able to establish setting out requirements.</p>
<p>Assessment criteria</p> <p>The learner can:</p> <p>2.1 check specifications and schedules to confirm setting out information</p> <p>2.2 use working drawings to establish the location, shape and size of masonry structures</p> <p>2.3 check that information sources comply with current legislation</p> <p>2.4 record discrepancies in information when setting out</p> <p>2.5 report discrepancies to authorised personnel</p> <p>2.6 produce work method statements</p> <p>2.7 follow current environmental and relevant health and safety legislation.</p>

<p>Range</p> <p>Drawings Block plans, site plans, general location, assembly, sectional, details, orthographic projection (first angle), isometric projection.</p> <p>Information sources Building regulations (approved documents), local authority requirements (location of building line), British standard specifications/codes of practice, health and safety legislation manufacturers' information (catalogues, data/information sheets), Ordnance Survey Bench Marks (OSBM), Temporary Bench Marks (TBM), datums, site datum.</p>

<p>Learning outcome</p> <p>The learner will:</p> <p>3. know how to prepare construction sites for setting-out activities.</p>
<p>Assessment criteria</p> <p>The learner can:</p> <p>3.1 identify requirements for carrying out site clearance activities</p> <p>3.2 describe the importance of site clearance before setting-out activities commence</p> <p>3.3 describe the importance of locating and isolating existing services</p> <p>3.4 describe methods used to locate and isolate existing services</p> <p>3.5 identify welfare requirements for a working site.</p>

<p>Range</p> <p>Requirements Positioning of resources, removal of obstacles on site, flat and sloping, removal of vegetation, sites, site investigation, demolition and surface strip.</p>
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Existing services

Gas, electricity, water, telecoms, drainage.

Methods

Locate: local authority records, site drawings, ground scanning, walk over, utility company records.

Isolate: method statement, permits to work, utility company authorisation and work.

Welfare requirements

Toilets, washing facilities, drinking water, changing (drying) rooms, rest/eating area, first aid facilities.

Learning outcome

The learner will:

4. be able to prepare construction sites for setting out activities.

Assessment criteria

The learner can:

- 4.1 produce checklists of resources required to prepare construction sites for site clearance activities
- 4.2 perform walk-over surveys to establish site conditions
- 4.3 report results of walk-over surveys to establish **site clearance requirements**
- 4.4 use **calculations** required for site clearance activities
- 4.5 follow current environmental and relevant health and safety legislation.

Range**Site clearance requirements**

Site planning, positioning of resources, removal of obstacles on site, hedges and tree tops, flat and sloping sites, demolition and surface strip, types of soil including property of top soil.

Calculations

Materials by volume, areas, perimeter, quantities, costings, mid-girth, measuring skills to set out and check dimensions, percentage for wastage/bulking.

Learning outcome

The learner will:

5. know how to select resources for setting-out work.

Assessment criteria

The learner can:

- 5.1 identify **resources** required for carrying out setting-out activities
- 5.2 identify **resources** required for transferring levels
- 5.3 identify **methods** of checking resources used for levelling

5.4 **calculate** setting out processes.

Range

Resources (AC5.1)

Ranging lines, materials for profiles, measuring tapes, hand tools, optical level and staff, laser level and detector, optical square, spray paint/sand line, straight edge, spirit level, builder's square, setting out pins/pegs, working drawings, calculator.

Resources (AC5.2)

Measuring tapes, hand tools, optical level and staff, laser level and detector, straight edge, spirit level, setting out pins/pegs, working drawings, calculator.

Methods

Visual inspection, calibration of levels and lasers, reversing spirit level and straight edge.

Calculate

Linear measurement, area, diagonals/3:4:5 (Pythagoras' theorem).

Learning outcome

The learner will:

6. be able to select resources for setting out work.

Assessment criteria

The learner can:

- 6.1 produce checklists of **resources** required for setting out activities
- 6.2 use calculations required for setting out activities
- 6.3 locate positions of building lines from working drawings
- 6.4 use site datum points
- 6.5 follow current environmental and relevant health and safety legislation.

Range

Resources

Ranging lines, builder's square, optical squaring equipment, timber for pegs and profiles, measuring tapes, spirit level, straight edge, hand tools, optical level.

Learning outcome

The learner will:

7. know how to set out regular-shaped masonry structures on level ground.

Assessment criteria

The learner can:

- 7.1 describe the importance of building lines
- 7.2 identify **methods** used for setting out right- angled corners

- 7.3 identify **methods** used to transfer levels
- 7.4 describe **methods** of handling of optical equipment
- 7.5 state the importance of using temporary profiles
- 7.6 describe the importance of working space between profiles and excavation
- 7.7 describe the purpose of datum heights
- 7.8 describe the importance of protecting setting-out work
- 7.9 describe how setting-out information is transferred onto foundations.

Range
<p>Methods (AC7.2) Diagonals/3:4:5 (Pythagoras' theorem), builders square, optical square, laser.</p> <p>Methods (AC7.3) Site datum establishment and protection, transferring levels from datum point, transfer of height to establish datum height, straight and corner profiles, ranging lines.</p> <p>Methods (AC7.4) Setting up, using, storing and transporting, in accordance with manufacturer's instructions.</p>

Learning outcome
The learner will: 8. be able to set out regular-shaped masonry structures on level ground.
Assessment criteria
<p>The learner can:</p> <p>8.1 locate positions of setting out</p> <p>8.2 locate positions of building lines</p> <p>8.3 establish corner positions along building lines</p> <p>8.4 set out right-angled corners</p> <p>8.5 mark walling and trench positions onto profiles</p> <p>8.6 transfer levels from given datum heights</p> <p>8.7 check dimensional accuracy of settings</p> <p>8.8 use correct access equipment</p> <p>8.9 follow current environmental and relevant health and safety legislation.</p>

Range
<p>Locate positions Locate positions from block plan, site plan, north point.</p>

UAN:	K/504/6926
Level:	2
Credit value:	14
GLH:	126
Endorsement by a sector or regulatory body:	Endorsed by Construction Skills.
Aim:	The aim of this unit is to provide the learner with the knowledge and skills to construct walling to form masonry structures

Learning outcome
The learner will: 1. understand how to plan and select resources for practical tasks
Assessment criteria
The learner can: 1.1 describe the different types of drawings for forming masonry structures 1.2 identify scales applied to drawings 1.3 identify different types of information sources 1.4 describe methods of reporting inaccuracies in information sources 1.5 identify resources required for constructing cavity walling 1.6 identify risks involved in selecting and handling walling materials and components 1.7 name calculations and formulae for identifying quantities of: <ul style="list-style-type: none"> • materials • components • fixings 1.8 explain reasons for checking datum heights at corner positions 1.9 describe types of drawings used for cavity walling 1.10 describe methods of taking off measurements from drawings 1.11 identify different working details associated with cavity walling.

Range**Drawings**

Floor plans, block plans, site plans, general location, assembly, sectional, detailed, orthographic projection (first angle), isometric projection.

Scales

1:2500, 1:1250, 1:100, 1:50, 1:20, 1:10, 1:5.

Information sources

Building regulations, drawings/specification, method statement, risk assessment, bill of quantities, manufacturer's instructions, schedule.

Methods (AC1.4)

Verbal, written.

Resources

Materials: bricks and blocks (clay, concrete, sand lime, common, facing and engineering brick, lightweight or dense concrete block), mortars, wall ties, DPC, airbrick, cavity/airbrick liner (fixed, telescopic), insulation, tray DPC, weep holes, lintels, cavity closures, profiles (for openings), wheels/cavity insulation clips, movement joints.

Tools: brick trowel, pointing trowel, lump hammer, bolster chisel, scutch hammer, line and pins, corner blocks, spirit level, boat/pocket level, tape measure, builder's square, tingle plate, brick hammer, jointing iron, gauge lath/rod, profiles, storey rod.

Equipment: bucket, brick tongs/grabs, sack barrow, wheelbarrow, sweeping brush, hand brush, shovel, straight edge, mortar board, PPE.

Risks

Manual handling, dust (inhalation/ injury to eyes), skin irritation/damage, overreaching, working at height.

Calculations and formulae

Area (length x height), quantity (area x quantity of materials per m²), quantity including waste (quantity of materials required + allowance for waste), horizontal and vertical measurements (add/subtract/multiply/divide), ratios for mixes.

Drawings

Sectional, detailed.

Methods (AC1.10)

Reading drawing dimensions, using a scale rule.

Working details

foundation, formation of wall from foundation to DPC, brick/blockwork, cavity fill (below DPC if required), specified heights (screed, DPM, joist, wall plate), floor type (suspended or solid), width of cavity, type of insulation (full or partial), position and type of wall ties, position of cavity trays/weep

holes, cill and head details (types of lintels), position and types of DPC, hatchings, floor insulation, airbricks, cavity liners (fixed, telescopic), position of lateral restraint straps, cavity closures.

Learning outcome

The learner will:

2. be able to plan and select resources for practical tasks.

Assessment criteria

The learner can:

- 2.1 check positioning of datum heights
- 2.2 interpret drawings to establish the location of cavity walling
- 2.3 check specifications and schedules for conformity of information with drawings
- 2.4 record and report discrepancies to authorised personnel
- 2.5 produce work method statements to carry out building cavity walling
- 2.6 select resources required to build cavity walling
- 2.7 select methods of building cavity walling
- 2.8 calculate quantities of resources required for cavity walling
- 2.9 check suitability of resources for building a cavity wall
- 2.10 follow current environmental and relevant health and safety legislation.

Learning outcome

The learner will:

3. understand how to erect cavity walling to required specification.

Assessment criteria

The learner can:

- 3.1 describe **methods** of providing foundations to cavity walling
- 3.2 identify **methods** of transferring cavity walling positions onto foundation concrete
- 3.3 identify **locations** of:
 - bricks
 - blocks
 - other components
- 3.4 identify **methods** of cutting and preparing components
- 3.5 describe **methods** used to construct cavity walling to given datum heights
- 3.6 describe **insulation requirements** for cavity walling
- 3.7 describe **methods** for the provision of damp-proof barriers to cavity walls
- 3.8 describe **methods** of establishing face bonds for cavity walls
- 3.9 state the advantages and disadvantages of pointing and jointing
- 3.10 describe **methods** of protecting work and surrounding areas from damage
- 3.11 describe the importance of carrying out **regular checks** to cavity walling

3.12 explain how to prepare the work for other trades when erecting cavity walling.

Range

Methods (AC3.1)

Strip, wide strip, trench fill, stepped, raft, reinforced.

Methods (AC3.2)

Plumbing from profile ranging lines, marking concrete base, mortar screed.

Locations

Position of wall, load out bricks/blocks in relation to face of the wall, position of mortar board and mortar, position of other components ready for use.

Methods (AC3.4)

Measure, mark, cut (power tools and hand tools).

Methods (AC3.5)

Work to drawings, transferring levels, maintaining gauge, maintaining storey height.

Insulation requirements

Partial fill, full fill, thermal values, meets job specification.

Methods (AC3.7)

Horizontal & vertical DPC, cavity tray, DPM.

Methods (AC3.8)

Dry bond, broken bond, reverse bond.

Methods (AC3.10)

Plastic sheeting, hessian, clean working platforms, clean mortar boards, cover resources, protect decorative features/openings (stonework, plinths, cills, reveals), barriers to isolate work area, signage.

Regular checks

Materials used, quality of resources, quality of workmanship, accuracy of measurements, line, gauge, level, plumb and square, work carried out according to specification.

Learning outcome
The learner will: 4. be able to erect cavity walling to required specification.
Assessment criteria
The learner can: 4.1 produce work method statements to carry out building cavity walling 4.2 transfer datum points 4.3 select: <ul style="list-style-type: none"> • materials • tools • equipment 4.4 set out positions of ranging lines onto profiles and mark walling positions 4.5 position bricks, blocks and materials ready for use 4.6 prepare and safely cut materials 4.7 construct cavity walling to form: <ul style="list-style-type: none"> • straight lengths • returns • junctions 4.8 fix insulation to cavity walling 4.9 produce jointing and pointing finishes to cavity walling 4.10 protect work and surrounding areas under construction and after completion from damage 4.11 record and report discrepancies to authorised personnel 4.12 use correct access equipment 4.13 follow current environmental and relevant health and safety legislation.

Range
Materials Dense blocks, bricks, lightweight blocks, trench blocks.
Tools and equipment Toothed masonry saw, block splitter, hammer and bolster, disc cutter.

Learning outcome
The learner will: 5. know how to form openings in cavity walling.
Assessment criteria
The learner can: 5.1 describe methods of forming openings in cavity walling 5.2 describe methods of closing reveals 5.3 describe reasons of positioning damp proof courses 5.4 describe methods of bridging openings 5.5 describe methods of providing brick and proprietary cills 5.6 identify methods to bridge openings 5.7 state the advantages and disadvantages of pointing and jointing 5.8 describe methods of protecting work and surrounding areas from damage 5.9 describe the importance of carrying out regular checks to cavity walling.

Range
Methods (AC5.1) Temporary frames, measurement, built-in frames/profiles.
Methods (AC5.2) Traditional blockwork returns (insulated DPC), proprietary closures.
Methods (AC5.4) Rough ring arches Semi-circular, segmental, proprietary arch centres. Lintels: Pre-cast concrete, steel, stone.
Methods (AC5.5) Traditional brick, specials, tiles, concrete, dressed stone.
Methods (AC5.6) Arches: semi-circular, segmental, gothic, three-centred arch, axed, rough ring, proprietary arch centres. Lintels: pre-cast concrete, steel, stone.
Methods (AC5.8) Plastic sheeting, hessian, clean working platforms, clean mortar boards, cover resources, protect decorative features/openings (stonework, plinths, cills, reveals), barriers to isolate work area, signage.
Regular checks

materials used, quality of resources, quality of workmanship, accuracy of measurements, line, gauge, level, plumb and square, work carried out according to specification.

Learning outcome

The learner will:

6. be able to form openings in cavity walling.

Assessment criteria

The learner can:

6.1 select:

- materials
- tools
- equipment

6.2 set out positions of openings

6.3 prepare and safely cut materials

6.4 **form openings** in cavity walls

6.5 bridge openings in cavity walls

6.6 **produce jointing** and pointing finishes to walling

6.7 describe methods of protecting work and surrounding areas from damage

6.8 record and report discrepancies to authorised personnel

6.9 use correct access equipment

6.10 follow current environmental and relevant health and safety legislation.

Range

Form openings

Semi-circular, segmental, rough ring arches, steel, concrete, soldier arch.

Produce jointing

Rounded or tooled (bucket handle), weather struck, flush, recessed.



Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on www.cityandguilds.com.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Our Quality Assurance Requirements encompasses all of the relevant requirements of key regulatory documents such as:

- Regulatory Arrangements for the Qualifications and Credit Framework (2008)
- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

City & Guilds
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www.cityandguilds.com

Useful contacts

UK learners

General qualification information

T: +44 (0)844 543 0033

E: learnersupport@cityandguilds.com

International learners

General qualification information

T: +44 (0)844 543 0033

F: +44 (0)20 7294 2413

E: intcg@cityandguilds.com

CentresExam entries, Certificates,
Registrations/enrolment, Invoices,
Missing or late exam materials,
Nominal roll reports, Results

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: centresupport@cityandguilds.com

Single subject qualificationsExam entries, Results, Certification,
Missing or late exam materials,
Incorrect exam papers, Forms
request (BB, results entry), Exam
date and time change

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

F: +44 (0)20 7294 2404 (BB forms)

E: singlesubjects@cityandguilds.com

International awardsResults, Entries, Enrolments,
Invoices, Missing or late exam
materials, Nominal roll reports

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: intops@cityandguilds.com

Walled GardenRe-issue of password or username,
Technical problems, Entries, Results,
e-assessment, Navigation,
User/menu option, Problems

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: walledgarden@cityandguilds.com

EmployerEmployer solutions, Mapping,
Accreditation, Development Skills,
Consultancy

T: +44 (0)121 503 8993

E: business@cityandguilds.com

PublicationsLogbooks, Centre documents, Forms,
Free literature

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

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City & Guilds Group

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