QUALIFICATION HANDBOOK

Level 2 Diploma and Extended Diploma in Wall and Floor Tiling (6710-23-50)

September 2017 Version 1.4

City & Guilds

Qualification at a glance

Subject area	**Construction**
City & Guilds number	6710
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 Wall and Floor Tiling	435	450	6710-23	600/8785/7
Level 2 Extended Diploma in Wall and Floor Tiling	757	780	6710-50	600/9225/7

Version and date	Change detail	Section
1.1 October 2013	Unit 233 added to contents page	Contents
1.2 July 2014	Centre staffing amended	Centre requirements
1.3 December 2015	Updated range for LO 1, 3 and 4 in unit 201	Units
1.4 September 2017	Added GLH and TQT details. Deleted QCF	Qualification at a Glance, Structure. Appendix

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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 learners who work or want to work as a Tiler in the construction sector.
What does the qualification cover?	It allows learners to learn, develop and practise the skills required for employment and/or career progression in Tiling. It covers the following skills: • preparing backgrounds for tiling • forming sand and cement screeds • tile wall surfaces • tile floor surfaces.
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?	it allows learners to progress into employment or to the following City & Guilds qualifications: • Level 2 NVQ Diploma in Wall & Floor Tiling.

Structure

To achieve the **Level 2 Diploma in Wall and Floor Tiling (6710-23)**, learners must achieve **45** credits from the mandatory units in the table below.

Unit accreditation number	City & Guilds unit no.	Unit title	Credit value	Guided Learning Hours (GLH)
Mandatory				
A/504/6719	201/601	Health, safety and welfare in construction	7	70
Y/504/6999	202/602	Principles of building construction, information and communication	6	55
L/504/8474	231	Preparing backgrounds for tiling	12	120
T/504/8470	232	Forming sand and cement screeds	5	45
J/504/8473	233	Tile wall surfaces	5	45
R/504/8475	234	Tile floor surfaces	10	100

To achieve the **Level 2 Extended Diploma in Wall and Floor Tiling (6710-50)**, learners must achieve **78** credits from the mandatory units in the table below.

Unit accreditation number	City & Guilds unit no.	Unit title	Credit value	Guided Learning Hours (GLH)
Mandatory				
A/504/6719	201/601	Health, safety and welfare in construction	7	70
Y/504/6999	202/602	Principles of building construction, information and communication	6	55
A/504/6722	101/501	Principles of building construction, information and communication	6	52
A/504/8468	126	Preparing tiles for fixing to wall and floor installations	9	90
T/504/8467	127	Apply and fix tiling materials to wall and floor tiling installations	10	100
H/504/8464	128	Set out tiling components	3	30
K/504/8465	129	Mix tiling materials	3	30
M/504/8466	130	Handle and store tiling materials and accessories	2	20
L/504/8474	231	Preparing backgrounds for tiling	12	120
T/504/8470	232	Forming sand and cement screeds	5	45
J/504/8473	233	Tile wall surfaces	5	45
R/504/8475	234	Tile floor surfaces	10	100

- 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 Wall and Floor Tiling 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 Wall and Floor Tiling	435	450
Level 2 Extended Diploma in Wall and Floor Tiling	757	780

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

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. Facilities for grinding and sharpening hand tools will be available. Centres will have special designated areas within Construction operations workshops (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.

Learner entry requirements

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

Age restrictions

City & Guilds cannot accept any registrations for learners 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 these qualifications:

Description	How to access
Assessor Guidance	**www.cityandguilds.com**
Task Manual	**www.cityandguilds.com**
Qualification Approval Form	**www.cityandguilds.com/construtions**
SmartScreen	**www.cityandguilds.com**

4 Assessment

Unit	Title	Assessment method	Where to obtain assessment materials
201/ 602	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/ 601	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.
231	Preparing backgrounds for tiling	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
232	Forming sand and cement screeds	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**
233	Tile wall surfaces	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**
234	Tile floor surfaces	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 201/601Health, 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 about 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/ 602	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 231 Preparing backgrounds for tiling

Duration: 40 minutes

Unit	Outcome	Number of questions	%
231	1. Know how to interpret information	2	10
	3. Know how to select quality and quantity of resources	8	40
	5. Know how to minimise the risk of damage	2	10
	7. Know preparation methods for new and existing surfaces	8	40
	Total	**20**	**100**

Test 4: Unit 232 Forming sand and cement screeds
Duration: 40 minutes

Unit	Outcome	Number of questions	%
232	1. Know how to interpret information relating to the formation of flat and level surfaces and falls	5	25
	3. Understand how to select materials, accessories and equipment	6	30
	5. Understand how to prepare and lay screeds to levels and falls	9	45
	Total	**20**	**100**

Test 5: Unit 233 Tile wall surfaces
Duration: 40 minutes

Unit	Outcome	Number of questions	%
233	1. Understand how to interpret drawings, schedules and specifications	5	25
	3. Know how to select materials for tiling wall surfaces	6	30
	5. Understand how to apply tiles to wall surfaces	9	45
	Total	**20**	**100**

Test 6: Unit 234 Tile floor surfaces
Duration: 40 minutes

Unit	Outcome	Number of questions	%
233	1. Understand how to interpret drawings, schedules and specifications	2	10
	3. Know how to select materials and tools required to tile floors	4	20
	5. Understand how to install tiles to floor surfaces	14	70
	Total	**20**	**100**

5 Units

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 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 used in the units:

Abrasion resistance	The capability of a grouts surface to resist water.
Adhesion strength	The maximum strength of an adhesive per unit surface area, which can be measured by shear/tensile testing.
Adjustability	The maximum time interval during which the tile's position in the adhesive layer can be adjusted without significant loss of strength.
Cement/sand render	A mixture of cement and sand used to smooth a wall prior to receiving tiles.
Cement/sand screed	A mixture of cement and sand used to smooth a floor prior to receiving tiles.
Cementitious adhesive (C)	A mixture of hydraulic binding agents, aggregates, and organic additives. The adhesives are mixed with water or liquid admix just before use.
Cementitious Grout (CG)	A mixture of hydraulic binding agents, aggregates, and additives the grout has to be mixed with water or liquid mix just before use.
Ceramic tiles	A rigid thin decorative material composed of clays that are fired until they form the correct hardness. The surface is then generally glazed but can be unglazed.
Chemical resistance	The capability of a grout to resist chemical agents.

Chipboard	A product that is made from resin coated particles of softwood. The particles are evenly spread over a flat plate and het bonded together under high pressure. The boards are generally weak and easily defected.
Cleaning time	The time internal between filling the joints and cleaning the tiles.
Coefficient of linear thermal expansion (liner)	The increase in length per unit length per unit rise in temperature.
Compressive strength	The maximum value of grout prism failure determined by exerting a force in compression on two opposite points.
Contaminating layer	Any layer of dust, grease or oil etc that contaminates a substrate or tile fixing surface and interferes with good adhesion.
Crazing	The fine hairline cracking which sometimes appears on the surface of a glazed tile.
Curing	The process of hardening sufficiently prior to usage.
Deformability	The capacity of a hardened adhesive to be deformed by stresses between the tile and fixing surface without damage to the installation.
De-lamination	The failure of a system at one of the layers building up the construction, often at the interface between them.
Dispersion Adhesive (DA)	A mixture of organic binding agents in the form of an aqueous polymer dispersion, organic additives and mineral fillers. The mixture is ready for use.
Dynamic modules of elasticity	A measure of how much a material deflects under load.
Efflorescence	The formation of a white powder on the surface due to the drying of a crystalline hydrate.
Falence tiles	Glazed frost-resistance tiles, made from a fine clay body, or by the cast process.
Flanking noise	Noise or vibration that is transmitted by an indirect path rather than directly through the floor.
Flexural strength	The maximum value of a grout prism failure determined by exerting a force in flexure at three points.
Floating and buttering method	Adhesive is applied to the fixing surface and to the reverse of the tiles. The combined layer of adhesive does not exceed the maximum recommended thickness. The tiles are then fixed before a film forms on the surface of the adhesive.
Floating floor	A floor above an insulating layer that is not connected to a rigid structure, normally made from interlocking chipboard with the insulating layer attached to the underside.
Forced action mixer	A mixer that promotes a shear action e.g. rotating drum with fixed static blades (or vice versa).

Friable	A substrate or fixing surface that is soft and c\n be easily scraped away with a knife.
Fully vitrified tiles and stoneware	Fully vitrified tiles are fired at a higher temperature than ceramic tiles and water absorption levels are lower at <0.5% making them more difficult to adhere to.
Fundamental characteristics	The basic characteristics of an adhesive or characteristics for specific service conditions where enhanced levels of performance are required.
Granite	A very hard and dense igneous rock that produces a hardwearing natural stone finish.
Green screed or concrete	Refers to cementitious material that has not fully dried or cured.
Grouting time	The minimum time interval after installation of tiles, after which the grout can be applied into the joints.
HDF	High density fibre board, in most cases not suitable to receive ceramic tiling.
ISO	Internationals Standards Organisation.
Laitance	Generally referring to concrete. A thin cement rich skin of material that has been brought to the surface by trowelling or vibration while placing/installing.
Limestone	A sedimentary rock composed mainly of calcite. Many forms of Limestone can be finely ground to a smooth polished finish although a rougher finish is often preferred.
Liquid admix or latex additive	Special aqueous polymer dispersions to be mixed with a cementitious adhesive or grout on site.
Marble	A metamorphosed limestone which can be very aesthetically pleasing comes in many forms/colours and can be highly polished.
Maturing time or dwell time	The interval of time between when the cementitious adhesive or grout is mixed and the time when it is ready for use.
MDF	A medium density fibre board only suitable for receiving small tiles on interior walls.
Mechanical fixing	Fixing by mechanical methods, such as screws, clips, rails, clamps, etc.
Mosaic tiles	Generally very small tiles that are supplied on sheets for easy fixing. They can be supplied in many forms including natural stone, fully vitrified or ceramic.
Movement joint	A stress-relieving joint between different substrates, dividing large bays or corners.
Notched trowel	A toothed tool, which makes it possible to apply adhesive as a series of ribs of a uniform thickness onto the fixing surface.
Notched trowel, Floating or thin bed movement	A method used for installing tiles onto a plane surface with an adhesive. The adhesive is usually applied with a trowel to obtain a layer and then combed with a notched trowel to achieve the right thickness and planarity.

Open time	The maximum time interval after application during which tiles can be embedded in the applied adhesive and meet the specified tensile adhesion strength requirement.
Particle size	The largest common grain size of aggregate normally contained within a material.
pH	The measure of acidity or alkalinity of a solution, wet mix or paste. Water is neutral with a ph of 7, while acidic materials have a pH of less than 7 alkalis a pH greater than 7.
Polymer modified	A cementitious adhesive or grout that has had its performance characteristics improved by the inclusion of various polymers. These can be part of the formulation of the powder product or added at the time of mixing in the form of an admixture.
Porcelain tiles and stoneware	Porcelain tiles are fully vitrified and are fired at a higher temperature than ceramic tiles. Water absorption levels are lower at <0.5% making them more difficult to adhere to.
Porosity	A measure of the voids in a material that affects its ability to absorb water.
Pot life	The maximum time period during which the adhesive or grout can be used after mixing.
Priming/sealing	To use a specific liquid to reduce a substrate's porosity, improve the bond strength or prevent a chemical reaction between substrate and adhesive.
Quarry tiles	The traditional term for single extruded natural clay tiles usually not exceeding 6% water absorption.
Reaction resin adhesive (R)	A mixture of synthetic resin, mineral fillers and organic additives in which hardening occurs by chemical reaction. They are available in one or more component forms.
Reaction resin Grout	A mixture of synthetic resin aggregates, inorganic and organic additives in which hardening occurs by chemical reaction. They are available in one or more component forms.
Sandstone	A porous sedimentary rock quartz(silica) grains
Scabble	To remove or roughen the surface layer of a substrate with the use of tools that employ multiple vibrating chisels or needles.
Service time	The minimum time interval before the installation can be put into use.
Shelf life	The period of storage under stated conditions during which an adhesive or grout may be expected to maintain its working properties.
Shrinkage	A reduction in length of a grout prism during hardening.
Slate	A dense metamorphic rock that can be split into thin sheets and generally has a relatively smooth surface.
Slip	The downward movement of a tile applied to a combed adhesive layer on a vertical or inclined surface.

Solids content	The percentage weight, usually of a water based dispersion that would remain after evaporation is complete.
Spacers	Plastic crosses used during installation of tiles to form even joint spaces between tiles.
Special characteristics	Characteristics of the adhesive or grout which provide further information about its general performance.
Substrate	The floor or wall to which tiling is to be fixed.
Suction	The force that draws water or liquid into a substrate or tile
Tanking system	As system to stop water leaking into water sensitive substrates such as plywood of gypsum.
Terracotta	A traditional red porous tile that is generally quite thick. The surface is usually smooth and is sealed during installation to protect the tile.
Terazzo	Manufactured from chips of aggregate set into cement or resin. This is then ground down and polished to show a mix of aggregate. Often manufactured to bespoke designs.
Tile backer boards	A specially-designed substrate for tile installation. They are generally very rigid and have a similar thermal/moisture expansion to tiles, making them ideal background material. They are suitable for heavier tiles than can't be used on plasterboard.
Transverse deformation	Deflection recorded at the centre when a beam of hardened adhesive is subjected to three-point loading. It is used to evaluate the deformability of the adhesive.
Travertine	A form of limestone that is often chosen due to it aesthetic qualities. It is often veined or pitted with bands caused by organic impurities.
Uncoupling membrane	A membrane used to reduce stress between a finishing layer and the substrate when there are likely to be different rates of expansion/contraction.
Under-floor heating/under tile Warming	Either heated water pipes or warming electrical matting under the tiles. They heat the entire floor to a comfortable temperature of around 26°. Water pipes are generally classed as under – tile warming as it warms the tiles.
Water absorption	The amount of water absorbed by capillary action when the surface of a grout prism is in contact with water any additional pressure.
WBP plywood	Thin layers of wood bonded at 90° to each other to form a rigid board that resists warping. WBP (Water and boil –proof) grade is recommended for tiling.
Wetting capability	The ability of a combined adhesive layer to wet the tile.
≤	Less than or equal to.
≥	more than or equal to.

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 responsibilitie**s 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:	The aim of this unit is to provide the learner with the knowledge of building methods and construction technology in relation to: • 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
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. **Symbols** WC, sink, bath, door, window **Hatchings** 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 (AC2.2)** Efficient sanitary ware, water harvesting. **Methods (AC2.3)** 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
Factors (AC3.1) Ground conditions (subsoil), strength, types of building . **Foundations** Strip, raft, pile, pad.

Materials
Course aggregate, fine aggregate, cement, water, steel reinforcement, sulphate-resisting cement, ordinary portland cement, frost proofing, accelerators, retardants.

Set out
3:4:5 method, diagonals, profiles, builder's square.

Factors (AC3.4)
Underground services, proximity to neighbouring buildings, tree roots, ground conditions.

Methods:
Optical/laser level, straight edge and spirit level

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

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 Hard core, 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 (AC7.4)** Letters, emails, telephone, memos, verbal, posters, signs, meetings, radio, text messages. **Methods of communication (AC7.5)** 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 231 Preparing backgrounds for tiling

UAN:	**L/504/8474**
Level:	2
Credit value:	12
GLH:	120
Aim:	To provide the learner with the skills and knowledge required to prepare backgrounds for tiling

Learning outcome
The learner will: 1. know how to interpret information.
Assessment criteria
The learner can: 1.1 state **information** obtained from drawings 1.2 state information obtained from specifications.

Range
Information Abbreviation, symbols, scaling, location, references.

Learning outcome
The learner will: 2. be able to interpret information.
Assessment criteria
The learner can: 2.1 interpret **information** from drawings to prepare for setting out 2.2 interpret information from specifications to select **products and treatments** for fixing area.

Range
Information Location and elevation drawings, specification. **Products and treatments** Tiles, adhesives, accessories, grout, admixes, primers, sealers.

Learning outcome
The learner will: 3. know how to select quality and quantity of resources.
Assessment criteria
The learner can: 3.1 state **hand tools** for applying bonding agents and keying of renders 3.2 state **power tools** for mixing materials and forming keys on services 3.3 state **ancillary equipment** for applying and straightening backgrounds 3.4 state **materials** used for treating background prior to applying wall and floor tiles 3.5 state **protective materials** used for protecting surrounding areas.

Range
Hand tools Roller, sponge, scotch hammer, carborundum stone, scratch comb, scrapers, hammers, chisels, brush. **Power tools** 110 volts - cement mixer, mixing drills, paddle, scabblers, grinder. **Ancillary equipment** float, hawk, feather edge, straight edge, levels and rules for setting out-screed runners, working platform, plumb bob. **Materials** Styrene Butadiene Rubber (SBR) mixed with pure cement, spatter dash coat, stabilisers, primers. **Protective materials** Sheet material, tapes to secure, dust sheets/protective coverings.

Learning outcome
The learner will: 4. be able to select quality and quantity of resources.
Assessment criteria
The learner can: 4.1 select **hand tools** for applying sealants and bonding agents and keying of renders 4.2 select **power tools** for mixing materials and forming keys on services 4.3 select **ancillary equipment** for mixing and straightening backgrounds 4.4 select **materials** used for treating background prior to applying wall and floor tiles 4.5 select protective materials used for applying surrounding areas 4.6 use **programmes of work** to complete work without disrupting other trade areas.

Range
Hand tools Roller, sponge, scotch hammer, carborundum stone, scratch comb, scrapers, hammers, chisels, brushes, gauging/bucket trowel, floating trowel. **Power tools** 110 volts - cement mixer, mixing drills, paddle, scabblers, grinder. **Ancillary equipment** Wood/plastic float, hawk, feather edge, straight edge, levels and rules for setting out, tape measure, chalk line, string line, plimb line, battens,- screed runners, working platform, dust sheets. **Materials** Styrene Butadiene Rubber (SBR) mixed with pure cement, slatterdash coat, stabilisers, primers, sand lime. **Programmes of work** Relevant industries programmes - bar chart, Gantt chart.

Learning outcome
The learner will: 5. know how to minimise the risk of damage.
Assessment criteria
The learner can: 5.1 state **materials** used for protecting surrounding areas 5.2 state methods used for fixing materials for protection.

Range
Materials Sheet material, tapes to secure, dust sheets/protective coverings.

Learning outcome
The learner will: 6. be able to minimise the risk of damage.
Assessment criteria
The learner can: 6.1 apply protective materials to protect surrounding areas from preparation activities.

Learning outcome
The learner will: 7. know preparation methods for new and existing surfaces.
Assessment criteria
The learner can: 7.1 describe preparation processes of **backgrounds** for tiling 7.2 define the term 'key' in relation to wall and floor tiling 7.3 describe uses of acrylic primers 7.4 describe **power and hand tools** used to create a key on solid backgrounds 7.5 state **mesh and trims** used for preparing backgrounds 7.6 describe **installation methods** when preparing backgrounds.

Range
Backgrounds Plaster, sheet materials, render/screeding. **Power and hand tools** Power tools: scabblers, grinder. Hand tools: chisels, scratch comb**,** scrapers, hammers, chisels, brush. **Mesh and trims** Expanding Metal Lathes (EML) nylon reinforcing mesh, external beads, stop beads. **Installation methods** Expansion/movement joints, mesh and trims.

Learning outcome
The learner will: 8. be able to prepare backgrounds for tiling.
Assessment criteria
The learner can: 8.1 prepare new and existing **backgrounds** for applying render and/or bonding agents 8.2 prepare new and existing **backgrounds** for applying surface treatment.

Range
Backgrounds Brickwork, blockwork, concrete work, plasterwork, manufactured board (timber, chipboard floors),scratch coat/bonding coat.

Unit 232 Forming sand and cement screeds

UAN:	**T/504/8470**
Level:	2
Credit value:	5
GLH:	45
Aim:	The aim of this unit is to provide the learner with the skills and knowledge required to: • interpret information • select materials, components, and equipment • prepare materials and lay sand and cement screeds to levels and falls.

Learning outcome
The learner will: 1. know how to interpret information relating to the formation of flat and level surfaces and falls.
Assessment criteria
The learner can: 1.1 state reasons for using specifications and technical data in relation to screed and datum positions **flat, level and falls** 1.2 calculate areas, volumes and ratios of **flooring materials** 1.3 identify **methods** of floor screeds 1.4 identify mix ratios as per manufacturer's technical information.

Range
Flat, level and falls Relevant British Standards in relation to levels and falls **Flooring materials** Sand/cement, levelling/smoothing compounds and anhydrite area, volumes (ratio) **Methods** Monolithic, bonded and unbonded, separated and floating floors.

Learning outcome
The learner will: 2. be able to interpret information relating to formation of flat and level surfaces and falls.
Assessment criteria
The learner can: 2.1 interpret **information** relating to **floor materials** 2.2 use a programme of work to prepare work area for **floor materials** 2.3 mix ratios as per manufacturer's technical information.

Range
Information Specifications, manufacturers' technical information, , programme of work. **Floor materials** Sand/cement, levelling/smoothing compounds and anhydrite.

Learning outcome
The learner will: 3. understand how to select materials, accessories and equipment.
Assessment criteria
The learner can: 3.1 describe **accessories and equipment** for floor surfaces 3.2 describe **materials** used for floor screeding 3.3 explain reasons for using ready-mixed screeds 3.4 explain reasons for using screed rails 3.5 explain reasons for using Damp-Proof Membranes (DPM), acoustic, thermal insulation and **expansion materials**.

Range
Accessories and equipment Expansion/movement joint, underfloor heating, foam barriers, Damp-Proof Membranes (DPM),installation/acoustic, thermal insulation, equipment: straight edge, spirit level, water level, laser level, shovel, buckets, mixer, trowel, float, mesh, cement mixers- pan/bell **Materials** Sand/cement, levelling/smoothing compounds and anhydrite. **Expansion materials** Beads and trims, foam barrier.

Learning outcome
The learner will: 4. be able to select materials, accessories and equipment.
Assessment criteria
The learner can: 4.1 select **materials** for floor surface 4.2 select **accessories** and equipment for task 4.3 select **levelling equipment** for **floor surface** 4.4 select appropriate **mixer** for selected materials.

Range
Materials Sand/cement, levelling/smoothing compounds and anhydrite, grit/sharp sand. **Accessories and equipment** Expansion/movement joint, gully form, dots/screed rails, underfloor heating, foam barriers, Damp-Proof Membranes (DPM),installation/acoustic, thermal insulation Equipment: straight edge, spirit level, water level, laser level, shovel, buckets, mixer, floating trowel, gauging trowel, wood/plastic trowel, float, mesh, cement mixers- pan/bell, buckets, lump hammer, chisels, retractable knife, carborundum stone, brushes, sponges, chalk line, string line, rubber mallet, roller and tray, battens, calculator, moving and handling aids, dust sheets, timber for use as gauge rod, tape measure/rule, protective sheet materials and tape **Levelling equipment** Laser, water, spirit, dumpy, theodolite and staffs, straight edge. **Mixer** Paddle, pump, barrel, shovel, gauging boxes.

Learning outcome
The learner will: 5. understand how to prepare and lay screeds to levels and falls.
Assessment criteria
The learner can: 5.1 describe **methods** for laying **screeds** to levels and falls to given **tolerances** 5.2 explain reasons for **levelling and smoothing compounds** to given **tolerances** 5.3 state correct **accessories** and **equipment** used for preparing and laying screeds 5.4 describe reasons for **gauging** and mixing materials to required consistency 5.5 state effects of incorrect **gauging** of **screeds** 5.6 explain the purpose of compacting and finishing **screeds** 5.7 explain the importance of curing **screeds** 5.8 explain the importance of setting up drainage channels and outlets in **screeds** to correct **tolerances** 5.9 explain Personal Protective Equipment (PPE) required for tasks.

Range
Methods Screed rails, dots, battens, screed runner. **Screeds** Sand/cement, levelling/smoothing compounds and anhydrite. **Tolerances** Relevant British Standards for tolerances. **Levelling and smoothing compounds** Gypsum based compounds: Timber or membranes Flexible compounds Fibre reinforced Polymer modified. **Accessories and equipment** Expansion joint, underfloor heating, foam barriers, Damp-Proof Membranes (DPM), installation/acoustic, thermal insulation, spirit level, water level, laser level, shovel, buckets, trowel, float, mesh. **Gauging** Refer to manufacturer's technical information and/or specification. **Personal Protective Equipment (PPE)** Hard hat, dust masks/respirators, eye protection, ear protection, high visibility vests gloves, barrier cream, knee pads, safety footwear, , appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing.

Learning outcome
The learner will: 6. be able to prepare and lay screeds to levels and falls.
Assessment criteria
The learner can: 6.1 prepare and set up **substrates** (subfloors) to receive screeds 6.2 set up for **levels** and falls 6.3 correctly **gauge** and mix **screeds** to required consistency 6.4 select specified **accessories and equipment** 6.5 lay and finish **screeds** to levels and falls to given **tolerances** 6.6 maintain tools and equipment throughout the task 6.7 use **Personal Protective Equipment (PPE)** required for task 6.8 organise own work area 6.9 follow current **environmental and health and safety regulations**.

Range
Substrates New and existing. **Screeds** Sand/cement, levelling/smoothing compounds and anhydrite. **Levels** Laser, water, spirit, dumpy, theodolite and staffs, straight edge. **Gauge** Refer to manufacturer's technical information and /or specification. **Accessories and equipment** Expansion/movement joint, gully form, dots/screed rails, underfloor heating, foam barriers, Damp-Proof Membranes (DPM), installation/ acoustic, thermal insulation. Equipment: straight edge, spirit level, water level, laser level, shovel, buckets, mixer, floating trowel, gauging trowel, wood/plastic trowel, float, mesh, cement mixers- pan/bell, buckets, lump hammer, chisels, retractable knife, carborundum stone, brushes, sponges, chalk line, string line, rubber mallet, roller and tray, battens, calculator, moving and handling aids, dust sheets, timber for use as gauge rod, tape measure/rule, protective sheet materials and tape. **Tolerances** Relevant British Standards. **Personal Protective Equipment (PPE)** Hard hat, dust masks/respirators, eye protection, ear protection, high visibility vests gloves, barrier cream, knee pads, safety footwear, appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing. **Environmental and health and safety regulations** Disposing and recycle of materials and waste in designated storage areas, containers/skips, ensuring the work area is left tidy on completion of work.

Unit 233 Tile wall surfaces

UAN:	**J/504/8473**
Level:	2
Credit value:	5
GLH:	45
Aim:	To provide the learner with the skills and knowledge required to tile a variety of wall surfaces.

Learning outcome
The learner will: 1. understand how to interpret drawings, schedules and specifications.
Assessment criteria
The learner can: 1.1 state the relevance of **specifications** when working on site 1.2 explain procedure for setting out areas for wall tiling using **specifications**.

Range
Specifications Manufacturer's technical information and specific instructions, classifications of adhesives for tiles BS EN12004.

Learning outcome
The learner will: 2. be able to interpret drawings and specifications.
Assessment criteria
The learner can: 2.1 **set out** areas using given information relevant to tasks 2.2 identify **materials** used for tiling wall surfaces from specifications.

Range
Set out Working drawings, measuring and levelling equipment. **Materials** Admixes, primers, bonding agents, importance of compatibility between substrates, tile adhesive, grout and tiles, trims, expansion/movement joints, sealants, impregnators.

Learning outcome
The learner will: 3. know how to select materials for tiling wall surfaces.
Assessment criteria
The learner can: 3.1 state **materials** used when tiling walls 3.2 state **tools** used during the tiling process.

Range
Materials Admixes, primers, bonding agents, importance of compatibility between substrates, tile adhesive, grout and tiles, trims, expansion/movement joints, sealants, impregnators, plain, patterned, vitrified tiles. **Tools** Hand operated tile cutter, light and heavy duty tile cutters, tiling trowels (serrating trowel, gauging/bucket trowel) tile nippers/nibblers/mosaic cutters, scribers, mitre block, spirit level. Builder's square, chisels, files, trimming tools, hacksaws, dividers, carborundum stone, hammer, rubber mallet, plastic spacers/wedges scrapers, NB use retractable knives for unpacking tiles, diamond hole borers, abrasive wheels, battens and baton stands, wash boy, sponge, buckets, battery-operated drills, paddle mixer

Learning outcome
The learner will: 4. be able to select materials for tiling walls.
Assessment criteria
The learner can: 4.1 select **materials** used when tiling walls 4.2 select **tools** used for applying **adhesives** 4.3 select **ancillary equipment** used for mixing and establishing levels.

Range
Materials Admixes, primers, bonding agents, importance of compatibility between substrates, tile adhesive, grout and tiles, trims, expansion/movement joints, sealants, impregnators, plain, patterned , vitrified tiles, nails/screws, timber for use as gauge rod, spacer pegs, sand lime, protective sheet materials and tape. **Tools** Hand operated tile cutter, light and heavy duty tile cutters, wet saw, panel saw, tiling trowels (serrating trowel, gauging/bucket trowel) tile nippers/nibblers/mosaic cutters, scribers, mitre block, water/laser spirit levels, builder's square, chalk line, chisels, files, trimming tools, hacksaws, dividers, carborundum stone, hammers,lock boy and hammer, rubber mallet, plastic spacers/wedges, scrapers, sealant gun, squeegee/grout float, NB use retractable knives for unpacking tiles, diamond hole borers, abrasive wheels, battens and batten stands, wash boy, sponges, buckets, battery-operated drills, paddle mixer, screwdrivers, roller and tray, brushes, dust sheets, cleaning cloths/polishing rags, calculator, moving and handling aids, mixing paddle and drill.

Adhesives
Ready mixed, non flexible adhesive, normal or rapid set.

Ancillary equipment
Feather edge, straight edge, levels and rules for setting out, working platform.

Learning outcome
The learner will: 5. understand how to apply tiles to wall surfaces.
Assessment criteria
The learner can: 5.1 explain the importance of risk assessment and method statements 5.2 describe **methods** for setting out wall surfaces 5.3 explain the purpose of installing **trims** and **movement joints** to wall surfaces 5.4 describe procedures for installing **trims** and **movement joints** to wall surfaces 5.5 describe **procedures** for applying tiles to wall surfaces 5.6 describe **methods** for applying and finishing tiles to soffits, reveals and sills 5.7 describe **methods** for forming internal and external angles 5.8 describe procedures for grouting and finishing tiles to wall surfaces 5.9 explain **Personal Protective Equipment (PPE)** required for tasks.

Range

Methods (AC5.2)
Setting out by builder's square, 3:4:5 method, gauge/staff/pinch rod, levelling by spirit level and straight edge, laser level, chalk lines, centring method, plumbing methods using plumb bob/level, identification of datum points, checking dimension using tape measure/rule and drawing calculations, working out method, water level.

Setting out
Openings and columns, door and window openings, columns hatches.

Trims
To protect external corners from damage.

Movement joints
To allow for expansion and contraction of different substrates.

Procedures
Suitability of substrate, application of adhesive, installation of tiles.

Methods (AC5.6)
Fixing, finishing.

Methods (AC5.7)
Internal trims, external trims, movement joints.

Personal Protective Equipment (PPE)

Hard hat, dust masks/respirators, eye protection, ear protection, high visibility vests, gloves, barrier cream, knee pads, safety footwear, lumbar support, appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing.

Learning outcome
The learner will: 6. be able to apply tiles to wall surfaces.
Assessment criteria
The learner can: 6.1 carry out a risk assessment and method statement 6.2 **set out** tiling to wall surfaces 6.3 apply tiles to wall surfaces 6.4 install trims and movement joints to wall surfaces 6.5 grout and finish tiles to wall surfaces 6.6 use **Personal Protective Equipment (PPE)** required for task 6.7 follow current **environmental and health and safety regulations**.

Range
Set out Wall surfaces openings and columns: door and window openings, columns, hatches, internal and external angles. **Personal Protective Equipment (PPE)** Hard hat, dust masks/respirators, eye protection, ear protection, lumbar support, high visibility vests, gloves, barrier cream, knee pads, safety footwear, appropriate clothing - nothing loose fitting, jewellery, overalls/protective clothing. **Environmental and health and safety regulations** Disposing and recycle of materials and waste in designated storage areas, containers/ skips, ensuring the work area is left tidy on completion of work.

Unit 234 Tile floor surfaces

UAN:	**R/504/8475**
Level:	2
Credit value:	10
GLH:	100
Aim:	To provide the learner with the skills and knowledge required to tile floor surfaces

Learning outcome
The learner will: 1. understand how to interpret drawings, schedules and specifications.
Assessment criteria
The learner can: 1.1 state the relevance of **specifications** when working on site 1.2 explain procedures for setting out areas for floor tiling using **specifications**.

Range
Specifications Manufacturer's technical information and specific instructions - relevant British Standards for tolerance and tile size and dimension.

Learning outcome
The learner will: 2. be able to interpret drawings, schedules and specifications.
Assessment criteria
The learner can: 2.1 set out **areas** using given **information** relevant to task.

Range
Areas Floor, stairway and landings. **Information** Working drawings.

Learning outcome
The learner will: 3. know how to select materials and tools required to tile floors.
Assessment criteria
The learner can: 3.1 state **materials** used when tiling to **floor substrates** 3.2 state **tools** used during the tiling process.

Range
Materials Admixes, primers, bonding agents, importance of compatibility between substrates, tile adhesive , grout and tiles, self levelling/smoothing compounds, trims, expansion/movement joints, sealants, impregnators, decupling/anti fracture/crack isolation membranes, acoustic matting. **Floor substrates** Wood/timber, screed; sand, cement, anhydrite. **Tools** Hand operated tile cutter, light and heavy duty tile cutters, floor tiling trowels (serrating trowel, gauging/bucket trowel) tile nippers/nibblers/mosaic cutters, scribers, mitre block, spirit level., builder's square, chisels, files, trimming tools, hacksaws, dividers, carborundum stone, hammer, rubber mallet, plastic spacers/wedges scrapers, NB use retractable knives for unpacking tiles, spiked roller, chalk line, string line.

Learning outcome
The learner will: 4. be able to select materials and tools required to tile floors.
Assessment criteria
The learner can: 4.1 select **materials** used when tiling to **floor substrates** 4.2 select **tools** used for applying **adhesives** 4.3 select **ancillary equipment** used for mixing and establishing levels.

Range
Materials Admixes, primers, bonding agents, importance of compatibility between substrates, tile adhesive, grout and tiles, trims, expansion/movement joints, sealants, impregnators, nails/screws, tread trims, tread tiles, channel tiles. **Floor substrates** Wood, timber, concrete decoupling membranes.

Tools

Retractable knives, scrapers, rubber mallet, lock boy and hammer, hammers, punches, scribers, tiling and standard pincers, chisels, files, diamond files, diamond hole cutters, trimming tools, mitre block, squeegee/grout float, carborundum stone, wash boy and sponge float, hacksaws, cleaning sponges, scouring pads, chalk line, laser line, manual hand cutter, electric water fed cutter bucket, wet saw, panel saw, spirit level, shovels, brushes, cleaning brushes, buckets, cloths, tapes, rules, straight edges, squares, radius cutters, dividers, gauging trowels, serrated trowels, mixing paddle and drill, cordless drill driver, screwdrivers, calculator,sealant gun,moving and handling aids, dust sheets, protective sheet materials and tape, timer for use as gauge rod.

Adhesives

Ready mixed, non flexible adhesive, normal or rapid set.

Ancillary equipment

Float, hawk, feather edge, straight edge, levels and rules for setting out, working platform.

Learning outcome
The learner will: 5. understand how to install tiles to floor surfaces.
Assessment criteria
The learner can: 5.1 explain the importance of risk assessment and method statements 5.2 describe **methods** for setting out floor areas 5.3 explain purposes for installing membranes, installation, trims and joints to **floor areas** 5.4 describe procedures for installing tiles to floor areas 5.5 describe procedures for grouting and finishing tiles to floor areas 5.6 describe installation **methods** for under-tile **heating systems** 5.7 describe **procedures** for setting out falls 5.8 describe **procedures** for setting out stairways and landings 5.9 explain **Personal Protective Equipment (PPE)** required for tasks.

Range

Methods (AC5.2)

Setting out by builders square, 3:4:5 method, gauge/staff/pinch rod, levelling by spirit level and straight edge, laser level, chalk lines, centring method plumbing methods using plumb bob/level, identification of datum points, checking dimensions using tape measure/rule and drawing calculations.

Floor areas

Relevant British Standards for floor size, joints, membranes, installations, trims, joints- movement, expansion.

Methods (AC5.6)

Refer to manufacturer's installation guidance, heating systems: under tile electrical systems.

Procedures (AC5.7)
Falls - refer to relevant British Standards.

Procedure (AC58)
Stairs and landings - refer to relevant British Standards.

Personal Protective Equipment
Hard hat, dust masks/respirators, eye protection, ear protection, high visibility vests gloves, barrier cream, knee pads, safety footwear, lumbar support, appropriate clothing- nothing loose fitting, jewellery, overalls/protective clothing.

Learning outcome
The learner will: 6. be able to install tiles to floor surfaces.
Assessment criteria
The learner can: 6.1 carry out a risk assessment and method statement 6.2 install tiles to **floor areas** 6.3 install **trims and movement joints** to floor areas 6.4 install tiles to outlets and inlets 6.5 install tiles to **stairways and landings** 6.6 grout and finish tiles to floor areas 6.7 follow current **environmental and health and safety regulations**.

Range
Floor areas membranes, tanking systems, installations. **Trims and movement joints** Manufacturer's information guidance. **Stairways and landings** Stairs and landings - refer to relevant British Standards. **Environmental and health and safety regulations** Disposing and recycle of materials and waste in designated storage areas, containers/skips ensuring the work area is left tidy on completion of work. Use of PPE.

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)

  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.

Useful contacts

UK learners General qualification information	T: +44 (0)844 543 0033 **E: learnersupport@cityandguilds.com**
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Centres Exam 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 qualifications Exam 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**
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Walled Garden Re-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**
Employer Employer solutions, Mapping, Accreditation, Development Skills, Consultancy	T: +44 (0)121 503 8993 E: **business@cityandguilds.com**
Publications Logbooks, Centre documents, Forms, Free literature	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413

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Published by City & Guilds, a company registered in England and Wales (company number 16513878)

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HB-02-6710