



# **City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) (7255-72)**

**Version 1.4 (February 2026)**

**Qualification Handbook**

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## Qualification at a glance

<b>Subject area</b>	Construction
<b>City &amp; Guilds number</b>	7255
<b>Age group approved</b>	16–19, 19+
<b>Entry requirements</b>	N/A
<b>Assessment</b>	Multiple choice online tests Practical assignment
<b>Grading</b>	Pass/Fail
<b>Approvals</b>	Full approval required
<b>Support materials</b>	Sample assessments
<b>Registration and certification</b>	Consult Walled Garden/Online Catalogue for last dates
<b>Occupational Standard(s)</b>	ST0295 Painter and Decorator

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	7255-72	610/4542/1	375	426

Version and date	Change detail	Section
V1.0 January 2025	Initial version	All
V1.1 July 2025	Information added on sustainability and net zero	6
	Registration details added	6
	RPA/RPL update	7
	Assessment specifications – clarification of table for practical assessment component 263	7
	Updated content in Unit 202, 6.1.2 c) vii relating to sustainability practices	8
V1.2 October 2025	Assignment material availability information updated	7
	Resubmission of evidence process added	7
V1.3 January 2026	Results release information	7
V1.4 February 2026	Addition of ITEE (In-Service Inspection and Testing of Electrical Equipment) to content referring to Portable Appliance Testing (PAT) <b>Please note that this also may be referred to as EET (Electrical Equipment Testing)</b>	Physical resources guidance and Unit 201
	Error correction – Unit 222 4.2.2 aiii – skuttle spelt incorrectly	Unit 222
	Addition of terminology in content for Unit 202, 4.2.1a (step 1 – shell added) referring to first fix elements	Unit 202

# Contents

<b>Qualification at a glance</b>	<b>2</b>
<b>Contents</b>	<b>4</b>
<b>1 Introduction</b>	<b>6</b>
<b>What is this qualification about?</b>	<b>6</b>
<b>2 Content coverage and mapping</b>	<b>8</b>
<b>Occupational standards</b>	<b>8</b>
<b>3 Employer engagement</b>	<b>9</b>
<b>4 Qualification structure</b>	<b>10</b>
<b>Structure</b>	<b>10</b>
<b>Total Qualification Time (TQT)</b>	<b>11</b>
<b>5 Centre requirements</b>	<b>12</b>
<b>Approval</b>	<b>12</b>
<b>Resource requirements</b>	<b>13</b>
<b>Physical resources</b>	<b>13</b>
<b>Quality assurance</b>	<b>14</b>
<b>Learner entry requirements</b>	<b>15</b>
<b>Initial assessment and induction</b>	<b>15</b>
<b>Age restrictions</b>	<b>15</b>
<b>Access to assessment and special consideration</b>	<b>16</b>
<b>6 Delivering the qualification</b>	<b>17</b>
<b>Inclusion and diversity</b>	<b>17</b>
<b>Sustainability</b>	<b>17</b>
<b>Support materials</b>	<b>18</b>
<b>Registration</b>	<b>18</b>
<b>7 Assessment</b>	<b>19</b>
<b>Summary of assessment methods</b>	<b>19</b>
<b>Scheme of assessment overview</b>	<b>23</b>
<b>Assessment specifications</b>	<b>24</b>
<b>Assessment objectives</b>	<b>30</b>
<b>Availability of assessments</b>	<b>32</b>
<b>Retakes/resits</b>	<b>32</b>
<b>Recognition of prior learning (RPL)</b>	<b>33</b>
<b>Recognition of prior achievement (RPA)</b>	<b>33</b>

<b>8</b>	<b>Units</b>	<b>34</b>
	<b>Structure of the units</b>	<b>34</b>
	<b>Unit guidance for delivery</b>	<b>34</b>
	<b>Transferable employability skills</b>	<b>35</b>
	<b>Unit 101 Health and safety in a construction environment</b>	<b>36</b>
	<b>Unit 201 Principles of welfare, health and safety in construction environments</b>	<b>45</b>
	<b>Unit 202 Principles of working in the construction industry</b>	<b>70</b>
	<b>Unit 220 Access equipment</b>	<b>103</b>
	<b>Unit 221 Preparation of surfaces for decoration</b>	<b>112</b>
	<b>Unit 222 Application of surface coatings</b>	<b>135</b>
	<b>Unit 223 Application of wallcoverings to walls and ceilings</b>	<b>151</b>
<b>Appendix 1</b>	<b>Qualification content mapping to Occupational Standard</b>	<b>165</b>
<b>Appendix 2</b>	<b>Sources of general information</b>	<b>166</b>

# 1 Introduction

## What is this qualification about?

Area	Description
Who is the qualification for?	<p>This qualification is for those individuals who wish to carry out a qualification at college with the view to seeking employment within the painting and decorating sector when completed. The qualification is aimed at all age ranges and will be available to full-time and part-time learners.</p> <p>Learners will gain the skills and knowledge that are important when working as a painter and decorator or progressing to further learning and training in this area.</p> <p>This qualification is suitable for those aged 16 years old or over.</p>
What does the qualification cover?	<p>This qualification aligns to the knowledge skills and behaviours in the ST0295 Painter and Decorator Occupational Standard.</p> <p>A range of content is mapped to the Knowledge, Skills and Behaviours (KSBs) within the ST0295 Painter and Decorator Occupational Standard and covers health, safety and welfare in the construction environment, the principles of working in construction, the preparation of different surfaces for decoration and the application of coatings and wallcoverings to walls and ceilings.</p>
What opportunities for progression are there?	<p>16– 18-year-old learners will have the opportunity to progress onto the OS T Level or, if they are able to find an employer, the Level 2 Painter and Decorator Occupational Standard ST0295.</p> <p>Adult learners will be able to progress onto the City &amp; Guilds 6572 Level 2 NVQ in Decorative Finishing and Industrial Painting Occupations (Construction) if they are working in industry.</p>

Area	Description
Why choose this qualification?	The City & Guilds Level 2 Extended Technical Occupational Entry into Painting and Decorating (Diploma) 7255-72 is a high-quality qualification that supports entry into an occupation at Level 2 by providing as close to full occupational competence as is possible in a classroom-based setting. The qualification aligns to an employer-led Occupational Standard at Level 2.

## 2 Content coverage and mapping

### Occupational standards

This qualification has been developed to cover as many of the Knowledge, Skills and Behaviours (KSBs) in the relevant Occupational Standard as it may be reasonable to attain by undertaking a course of education or training. Where KSBs in a relevant Occupational Standard cannot be reasonably obtained within a course of education or training in an educational setting, City & Guilds seeks the validation from credible employers to ensure that the qualification is fit for purpose.

The knowledge and skills content within this qualification has been amplified to reflect the KSBs. High level mapping to the KSBs in the Occupational Standard can be found in the Qualification Structure section. Detailed mapping at unit level can be found in Appendix 1 within this qualification handbook.

The table below shows the Occupational Standard the qualification aligns to:

Qualification	Occupational Standard title/Reference
Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	ST0295 Painter and Decorator

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### **3 Employer engagement**

City & Guilds would like to take this opportunity to thank all the employers, trade associations, professional bodies, providers, subject matter experts and consultants who have dedicated time to review and validate this qualification. These stakeholders have been used throughout the development and validation of this qualification to ensure the qualification meets the requirements of the Occupational Standard and the needs of the industry. Employer validation recognises the demand or likely demand for learners who have completed the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma). This collaborative work is to ensure that a learner studying the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) has the best opportunities available to them as they progress through their career with a solid base as a starting point.

## 4 Qualification structure

### Structure

To achieve the City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma), learners must achieve all units.

City & Guilds unit number	Unit title	GLH
Learners must achieve all <b>seven</b> mandatory units.		
101	Health and safety in a construction environment	21
201	Principles of welfare, health and safety in construction environments	30
202	Principles of working in the construction industry	50
220	Access equipment	31
221	Preparation of surfaces for decoration	70
222	Application of surface coatings	83
223	Application of wallcoverings to walls and ceilings	90

Unit 101 Health and safety in a construction environment is an imported unit that covers the health and safety knowledge that is required to gain a CSCS 'Green Card' for access to construction sites in the UK.

The unit was developed in conjunction with CITB and CSCS UK Ltd and also exists as a standalone, single unit qualification, City & Guilds Level 1 Award in Health and Safety in a Construction Environment (6072-51).

## Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike GLH, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	375	426

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## 5 Centre requirements

### Approval

#### Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval Process: Quality Assurance Standards** for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

## Resource requirements

### Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the area(s) for which they are delivering training and/or have experience of providing training (this knowledge must be to the same level as the training being delivered)
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

### Continuing professional development (CPD)

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and quality assurance, and that it takes account of any national or legislative developments.

## Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessment.

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/ITEE certified. Centres will have special designated areas within their painting and decorating workshop (cubicles or project areas) allowing candidates to practice the requirements of the units and to carry out the practical assessment.

### Personal protective equipment (PPE)

Centres must ensure there is sufficient eye, hand and general respiratory PPE, available for all learners.

#### Hand tools:

filling knife	scraper
putty knife	spatula
paper hanger's brush/sweep	seam roller
paste brush	sponge
range of brushes for water and solvent paints	roller frame
roller sleeves with a range of pile types	roller pole
roller skuttle	paint kettles (plastic and metal)
tape measure	spirit level
laser level	chalk line
pencil	plumb bob
straight edge	shears
knife	palette knife
hammer	shave hook
dust brush	flat brush
skeleton gun	rubbing block
knotting brush	nail punch

buckets  
pasting table

strainer

**Power tools:**

orbital sander  
transformer  
rotary wire brush  
hot-air gun  
LPG gun

**Access equipment:**

stepladders  
hop-ups

**Materials:**

a range of fillers (powder, fine surface, stopper, caulk)  
cleaning agents and thinners (white spirit, turpentine)  
tack rag  
a range of abrasives  
sugar soap  
a range of protective sheeting (polythene, cotton twill, lightweight plastic)  
various width masking tapes  
wallcovering adhesive (ready mixed, powder)  
a range of wallcoverings with different matches  
lining paper

**Paints:**

a range of vinyl matt emulsion colours  
a range of coloured acrylic eggshells  
a range of water-based undercoats and glosses  
a range of solvent and water-based primers  
knotting solution  
a range solvent gloss and matching undercoats

## Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance (EQA). All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions of Recognition. For more information on both CASS and City & Guilds Quality Assurance processes visit: the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, internal quality assurers must:

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

External quality assurance for the qualification will be provided by the City & Guilds EQA process. EQAs are appointed by City & Guilds to approve centres and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

## **Learner entry requirements**

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

## **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
- any 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.

## **Age restrictions**

This qualification is approved for learners aged 16 or above.

## **Access to assessment and special consideration**

City & Guilds has considered the design of this qualification and its assessments in order to best support accessibility and inclusion for all learners. We understand however that individuals have diverse learning needs and may require reasonable adjustments to fully participate. Reasonable adjustments, such as additional time or alternative formats, may be provided to accommodate learners with disabilities and support fair access to assessment.

Access arrangements are adjustments that allow candidates with disabilities, special educational needs and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the [City & Guilds website](#)

## 6 Delivering the qualification

### Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

[Inclusion and diversity | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

### Sustainability

City & Guilds is committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and to develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

[Our Pathway to Net Zero | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)
- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)
- minimising water use and considering options for reuse/salvage as part of building activities wherever possible.

## Support materials

The following resources are available for this qualification:

Description	How to access
Sample assessments	<a href="http://www.cityandguilds.com">www.cityandguilds.com</a>
Qualification handbook	<a href="http://www.cityandguilds.com">www.cityandguilds.com</a>

## Registration

Registering learners on the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma):

Centres must register learners on the Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) package 7255-70:

Package Title and Level	City & Guilds number
Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) (Package)	7255-70 (Registration only)

Learners registered on this 'package' will automatically be registered on:

Qualification Title and Level	City & Guilds number
Level 1 Award in Health and Safety in a Construction Environment	7255-01 (bookings only)
Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma)	7255-72 (bookings and results entry only)

## 7 Assessment

### Summary of assessment methods

For City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) candidates must successfully complete:

Assessment component	Assessment method	Description and conditions
101	Externally marked MCQ exam	<p>This assessment covers unit 101.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details:  <a href="http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations">http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</a></p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City &amp; Guilds website. Live assessment will be delivered by the City &amp; Guilds online platform e-volve.</p>
201	Externally marked MCQ exam	<p>This assessment covers unit 201.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details:  <a href="http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations">http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</a></p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City &amp; Guilds website. Live assessment will be delivered by the City &amp; Guilds online platform e-volve.</p>

202	Externally marked MCQ exam	<p>This assessment covers unit 202.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in the unit using one-mark multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details:  <a href="http://www.icq.org.uk/exams-office/ice---instructions-for-conducting-examinations">http://www.icq.org.uk/exams-office/ice---instructions-for-conducting-examinations</a></p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City &amp; Guilds website. Live assessment will be delivered by the City &amp; Guilds online platform e-volve.</p>
253	Externally marked MCQ exam	<p>This assessment covers units 220, 221, 222 and 223.</p> <p>The multiple choice assessment is externally set and externally marked and will be delivered online via e-volve.</p> <p>The exam is designed to assess the candidate's depth and breadth of understanding across content in units 220, 221, 222 and 223 (and should only be attempted following learner completion of these units), using multiple choice questions and will be sat under invigilated examination conditions.</p> <p>See JCQ requirements for details:  <a href="http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations">http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations</a></p> <p>The test specification shows the coverage of the assessment across the unit content. Sample assessment materials can be downloaded from the City &amp; Guilds website. Live assessment will be delivered by the City &amp; Guilds online platform e-volve.</p>

263

Practical  
assignment

This assessment covers units 220, 221, 222 and 223.

The practical assignment is externally set and internally marked with external verification.

The assignment is designed to assess the candidate's depth and breadth of knowledge, skills and understanding from across content in the qualification, at the end of their period of learning, and will be completed under supervised conditions.

See JCQ requirements for details:

<http://www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations>

The test specification shows the coverage of the assessment across the qualification content.

## Scheme of assessment overview

For City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) candidates must successfully complete:

<b>Candidates must complete all assessment components</b>					
<b>Assessment component</b>	<b>Method</b>	<b>Duration</b>	<b>Marks</b>	<b>Marking approach</b>	<b>Grading</b>
101*	On-demand E-volve online MCQ	1 hour 10 minutes	45	Externally set and externally marked	Pass/Fail
201	On-demand E-volve online MCQ	45 minutes	30	Externally set and externally marked	Pass/Fail
202	On-demand E-volve online MCQ	1 hour	40	Externally set and externally marked	Pass/Fail
253	On-demand E-volve online MCQ	1 hour	40	Externally set and externally marked	Pass/Fail
263	On-demand practical assignment	15 hours	N/A	Externally set, internally marked and externally verified	Pass/Fail

Candidates must pass all assessment components to achieve the qualification.

\*101 – Where candidates have met requirements for an exemption through Recognised prior achievement (RPA), proxy unit 801 can be claimed on the Walled Garden under 7255-72. See RPL/A section for requirements.

## Assessment specifications

The assessment specifications outlined in the tables below highlight at high level the way that the qualification content will be assessed within the different assessment components.

Test: 101		Duration: 1 hour 10 minutes	
Unit	Outcome	Number of marks	Approx Percentage %
101	LO1: Know the principles of risk assessment for maintaining and improving health and safety at work	11	24
	LO2: Know the importance of safe manual handling in the workplace	8	18
	LO3: Know the importance of working safely at height in the workplace	9	20
	LO4: Know risks to health within a construction environment	12	27
	LO5: Know the importance of working around plant and equipment safely	5	11
Total		45	100%

**Permitted materials:** None

**Graded:** Pass/Fail

**Pass mark:** the pass mark for this examination is set at 80% (36 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

<b>Test: 201</b>		<b>Duration: 45 minutes</b>	
<b>Unit</b>	<b>Outcome</b>	<b>Number of marks</b>	<b>Approx Percentage %</b>
201	LO1: Know health and safety regulations, roles and responsibilities	4	13
	LO2: Understand accident and emergency reporting procedures and documentation	2	7
	LO3: Understand the management of workplace hazards and risks	5	17
	LO4: Know safe storage requirements for materials and equipment	1	3
	LO5: Understand access requirements and equipment when working at height	2	7
	LO6: Understand safety considerations when working with electrical equipment	4	13
	LO7: Know Personal Protective Equipment (PPE) responsibilities	1	3
	LO8: Understand fire emergency procedures	3	10
	LO9: Understand factors that impact on physical and mental welfare maintenance and management	8	27
<b>Total</b>		<b>30</b>	<b>100%</b>

**Permitted materials:** None

**Graded:** Pass/Fail

**Pass mark:** the pass mark for this examination is set at approx. 66% (20 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

<b>Test: 202</b>		<b>Duration: 1 hour</b>	
<b>Unit</b>	<b>Outcome</b>	<b>Number of marks</b>	<b>Approx Percentage %</b>
202	LO1: Understand working practices in the construction industry	15	38
	LO2: Understand construction information	6	15
	LO3: Understand how to set up and secure construction work areas	2	5
	LO4: Know building substructure and superstructure components	8	20
	LO5: Understand personal development and working with others in the construction industry	6	15
	LO6: Know sustainability and emerging technology considerations affecting the construction industry	3	8
	<b>Total</b>	40	100% <sup>1</sup>

**Permitted materials:** None

**Graded:** Pass/Fail

**Pass mark:** the pass mark for this examination is set at approx. 70% (28 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

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<sup>1</sup> Percentages in table rounded to whole numbers (presents as 101% in total due to roundings)

Test: 253	Duration: 1 hour		
Unit	Outcome	Number of marks	Approx Percentage %
220	LO1 Understand selection and inspection of access equipment	2	5
	LO2 Use access equipment	1	3
221	LO1 Understand safety in surface preparation	1	3
	LO2 Prepare timber and timber sheet products	2	5
	LO3 Understand metal preparation processes	2	5
	LO4 Prepare plasterboard and trowel finishes	5	12
	LO5 Remove defective coatings and wallcoverings	2	5
	LO6 Prepare previously painted surfaces	1	3
222	LO1 Understand creating colour	1	3
	LO2 Protect work area	3	7
	LO3 Understand coatings and new technologies	2	5
	LO4 Prepare and apply coatings by brush and roller	6	15
223	LO1 Understand paper production for wallcoverings	3	7
	LO2 Understand adhesives for wallcovering application	3	7
	LO3 Apply standard papers to walls and ceilings	6	15
<b>Total</b>		40	100%

**Permitted materials:** Non-programmable calculator

**Graded:** Pass/Fail

**Pass mark:** the pass mark for this examination is set at approx. 60% (24 marks)

This boundary may be subject to slight variation to ensure fairness should any variations in the difficulty of the individual assessment versions be identified.

### **Results processing of external assessments**

City and Guilds will always strive to process and issue results as soon as possible. However, when a new version of the assessment is launched, candidate results will be held until we have received a representative number of completed exam scripts and completed an analysis of the live results to ensure that the test is producing valid and reliable outcomes and that the grade boundary is set correctly.

This is an important step to ensure that the pass mark set is a fair and accurate reflection of the pass standard.

As a result of this, please be aware that results may take up **27** working days. Once the pass mark has been confirmed, it will go back to instant results (ie on the Walled Garden within 48 hours).

If you have any specific queries please contact [centresupport@cityandguilds.com](mailto:centresupport@cityandguilds.com) for further information

The table below shows at a high level how the tasks in the **practical assessment component 263** are mapped to the units.

Unit	Task
220, 221, 222, 223	1 - Planning
221, 222	2 - Preparing samples
220, 221, 223	3 - Preparation of surfaces
220, 222	4 - Application of paint
220, 223	5 - Application of wallcovering

**Permitted materials:** Permitted materials will be given to candidates by centres.

**Graded: Pass/Fail**

Candidates must gain a Pass in all tasks within the assignment to achieve a pass overall.

## Assessment objectives

The following assessment objectives are used within the **101 assessment**. The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 101
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	45 marks - 100%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	0 marks - 0%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **201 assessment**. The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 201
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	16 marks - 53%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	14 marks - 47%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **202 assessment**.  
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 202
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	22 marks - 55%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	18 marks - 45%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	0 marks - 0%

The following assessment objectives are used within the **253 assessment**.  
The weightings for how the assessment objectives are applied in the assessment are shown in the table below.

Assessment objective	Description	Weighting in Assessment 253
AO1a Demonstrate knowledge of the content	The ability to demonstrate basic recall of relevant knowledge in response to straightforward questioning.	17 marks - 43%
AO1b Demonstrate understanding of the content	The ability to demonstrate understanding of principles and concepts beyond recall of definitions.	19 marks - 47%
AO2 Apply knowledge and understanding of the content to different situations and contexts	Applying knowledge and understanding taking the understanding of generalities and applying them to specific situations.	4 marks - 10%

## Availability of assessments

Assignment material will be made available from the City & Guilds website qualification pages.

All assessments that are on e-volve are on demand and can be booked by the centre when the candidate is ready to be entered for the assessment.

## Retakes/resits

### Multiple choice test(s)

Candidates who have failed an online multiple choice test assessment are permitted up to **four** resits of the assessments before re-registration is required.

### Assignment(s)

Candidates who have failed one or more tasks in the practical assignment, but have **not** met the conditions for the resubmission of evidence (detailed below and within the grading section of the Assessor Pack), will be advised to complete a further period of learning before then re-sitting fully, all tasks within a different version of the assignment. Candidates can resit a different version of the assignment up to a maximum of **three** times (total **four** attempts) before re-registration is required.

## Resubmission of evidence

At the approval of the centre a candidate can resubmit evidence for an assessment if they have not met specific criteria required for a pass. This is intended to provide candidates who have broadly met the standard set with only minor gaps in their performance an opportunity to achieve the pass standard without a full resit. This must only be granted if the following conditions are met.

### When can the resubmission of evidence process be used:

- There is evidence the candidate has not met the pass standard on specific assessment criteria
- The candidate has demonstrated competency/capability to the required standard during a programme of study through formative assessments that can be evidenced
- The candidate has met agreed deadlines and conditions for the assessment
- The candidate and assessor have authenticated the evidence submitted
- The resubmission of evidence has been agreed by the IQA
- The resubmission of evidence process does not take place until a task has been completed, assessed and recorded
- All evidence submitted as part of the resubmission process has been generated within the same assessment conditions as the first submission
- All evidence submitted as part of the initial submission and resubmission is made available for external quality assurance as required.

### When the resubmission of evidence process cannot be used:

- The candidate has not met agreed deadlines and not met the conditions for the assessment
- The candidate has only part completed a task or not attempted the assessment
- The candidate and assessor have not authenticated the evidence submitted
- The IQA does not agree that the candidate has met the conditions set out in the assessment to allow for a resubmission of evidence
- Evidence is not available for external quality assurance as required.

If the resubmitted evidence does **not** meet the required standard for a pass, then the candidate will need to take a different assignment. Candidates can only resubmit evidence **once per version** of the assessment.

In cases where a candidate has attempted and resubmitted on **three** separate versions but has still not met the pass standard, they must undergo a period of additional study before being offered the opportunity to re-register and retake the qualification.

***Please note that further information and guidance for centre assessors on the resubmission of evidence process will be found within the assessment materials of this qualification.***

## Recognition of prior learning (RPL)

Recognition of prior learning means using a person's previous experience or qualifications which have already been achieved to contribute to a new qualification. RPL can be used to exempt learners from areas of learning previously achieved, but does not exempt them from assessment.

RPL is allowed and is also sector-specific.

## Recognition of prior achievement (RPA)

Recognition of prior achievement is allowed for the online assessment of Unit 101 Health and safety in a construction environment, where a learner can provide certificated evidence of achieving the City & Guilds Level 1 Award in Health and Safety in a Construction Environment (6072-51) or an equivalent qualification with another awarding organisation. This can be claimed using proxy 801 on the Walled Garden. Certificated evidence must have been achieved within 2 years prior to application for the use of proxy 801. Where RPA is allowed in a qualification, centres will need to apply to City & Guilds and provide the appropriate supporting evidence eg certificate of achievement. For further information please contact your Business Manager.

## 8 Units

### Structure of the units

All units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- relationship to Occupational Standards including reference.

Unit 101 also has the following:

- learning outcomes, which are comprised of a number of assessment criteria
- evidence requirements.

Units 201, 202, 220, 221, 222 and 223 also each have the following:

- learning outcomes, which are comprised of a number of topics
- content elements
- supporting information.

### Unit guidance for delivery

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each unit is divided into **learning outcomes** which describe in further detail the knowledge and skills that a candidate should possess.

For Unit 101 each learning outcome has a set of **assessment criteria** (knowledge) that are simple and concise statements that indicate to a learner something specific they will be learning in relation to the learning outcome. It should provide clarity to a learner at a high level on what they should be expecting to learn or be able to do about a specific area of the learning outcome.

For Units 201, 202, 220, 221, 222 and 223 each learning outcome has a set of **topics** (knowledge or skills) that are simple and concise statements that indicate to a learner something specific they will be learning in relation to the learning outcome. It should provide clarity to a learner at a high level on what they should be expecting to learn or be able to do about a specific area of the learning outcome.

For Units 201, 202, 220, 221, 222 and 223 each topic has a **content element** (what needs to be covered). The content sections define the depth and breadth to which the teaching / learning must be delivered.

It is important for all units that these sections define all the essential content that must be covered for learners to achieve the learning outcome. It is the information in this section that learners will be assessed on.

## **Transferable employability skills**

The Institute for Apprenticeships has developed a transferable skills mapping framework which provides elaboration of generic, transferable employability skills that can be applied across all relevant occupational areas. This framework can be found [here](#).

City & Guilds has considered which transferable employability skills within this framework are relevant to this qualification, and then mapped these skills to the relevant practical outcomes within the qualification content. A mapping grid that outlines how the skills are best reflected in the content is found in each relevant practical unit within this qualification.

## Unit 101 Health and safety in a construction environment

<b>Unit level:</b>	Level 1
<b>Guided Learning Hours (GLH):</b>	21
<b>Unit aim:</b>	<p>This is a <b>theory only</b> unit.</p> <p>The purpose and aim of this unit is to provide the learner with the skills and knowledge required in health and safety in a construction environment.</p>
<b>Assessment method:</b>	Multiple choice question (MCQ) assessment
<b>Endorsed by:</b>	CITB
<b>Links to Occupational Standards:</b>	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

### Learning outcomes

1. Know the principles of risk assessment for maintaining and improving health and safety at work
2. Know the importance of safe manual handling in the workplace
3. Know the importance of working safely at height in the workplace
4. Know risks to health within a construction environment
5. Know the importance of working around plant and equipment safely

## Learning outcome 1

The learner will:

- 1 Know the principles of risk assessment for maintaining and improving health and safety at work

### Assessment criteria

The learner can:

- 1.1 State the purpose of risk assessments and method statements
- 1.2 State the legal requirements of risk assessments and method statements
- 1.3 State common causes of work-related:
  - fatalities
  - injuries
- 1.4 State the implications of not preventing accidents and ill health at work
- 1.5 State the meaning of the following in relation to health and safety at work:
  - accident
  - near miss
  - hazard
  - risk
  - competence
- 1.6 List typical hazards and potential risks associated with the following:
  - resources
  - equipment
  - obstructions
  - storage
  - services
  - wastes
  - work activities
- 1.7 State the importance of reporting accidents and near misses
- 1.8 State typical accident reporting procedures
- 1.9 State who is responsible for making accident reports
- 1.10 State the purpose of dynamic risk assessments

## Learning outcome 2

The learner will:

- 2 Know the importance of safe manual handling in the workplace

### Assessment criteria

The learner can:

- 2.1 State the reasons for ensuring safe manual handling in the workplace

- 2.2 State the potential injuries and ill health that may occur from incorrect manual handling.
- 2.3 State the employee's responsibilities under current legislation and official guidance for:
  - moving and storing materials
  - manual handling
  - mechanical lifting
- 2.4 State the procedures for safe lifting in accordance with official guidance
- 2.5 State the importance of using site safety equipment when handling materials and equipment
- 2.6 List aids available to assist manual handling in the workplace:
  - pallet truck
  - forklift truck
  - lifting sling
  - roust-about
  - wheelbarrow
  - sack barrow
  - kerb/vacuum lifters
- 2.7 State how to apply safe work practices, follow procedures and report problems when carrying out safe manual handling in the workplace

### **Learning outcome 3**

The learner will:

- 3 Know the importance of working safely at height in the workplace

#### **Assessment criteria**

The learner can:

- 3.1 Define the term 'working at height'
- 3.2 State the employee's responsibilities under current legislation and official guidance whilst working at height
- 3.3 List hazards and potential risks associated with the following:
  - dropping tools and debris
  - stability of ladders
  - overhead cables
  - fragile roofs
  - scaffolds
  - internal voids
  - equipment
  - the working area
  - other people
- 3.4 State how hazards and potential risks associated with working at height can be controlled

3.5 State the regulation that controls the use of suitable equipment for working at height

## **Learning outcome 4**

The learner will:

4 Know risks to health within a construction environment

### **Assessment criteria**

The learner can:

- 4.1 List the main groups of substances hazardous to health under current regulations
- 4.2 List common risks to health within a construction environment:
  - hand Arm Vibration
  - noise
  - respiratory illness
  - dermatitis
  - musculoskeletal problems
  - falling from height
  - struck by moving plant machinery
- 4.3 State the types of hazards and potential risks that may occur in the workplace linked with the use of drugs and alcohol
- 4.4 State the importance of the correct storage of combustibles and chemicals on site
- 4.5 State the importance of personal hygiene within a construction environment
- 4.6 State the potential risks to the health of workers exposed to asbestos
- 4.7 State the types of asbestos waste
- 4.8 State the types of personal protective equipment (PPE) that may be used when dealing with hazardous materials

## **Learning outcome 5**

The learner will:

5 Know the importance of working around plant and equipment safely

### **Assessment criteria**

The learner can:

- 5.1 List ways in which moving plant, machinery or equipment can cause injuries
- 5.2 State the hazards/risks relating to the use of plant and equipment
  - struck by moving machinery
  - striking cables and buried services
  - trapped by moving machinery
  - damage from flying debris

- electric shocks
  - burns
  - noise
  - tripping
  - injury during use and changing tooling
  - dust
- 5.3 State the importance of safeguards located near where plant, machinery and equipment are being used
- 5.4 State the importance of keeping a safe distance away from plant, machinery or equipment until clear contact is made with the operator
- 5.5 Outline how method statements can assist in ensuring the safety of workers where moving plant, machinery or equipment is in use
- 5.6 State the ways to eliminate or control risks relating to working around plant, machinery or equipment
- 5.7 Identify hazard warning signs and symbols used when operating, working with, around or in close proximity to plant, machinery or equipment.

# Unit 101 Health and safety in a construction environment

## Supporting information

### Evidence requirements

Assessment requirements:

Assessment criteria 1.6:

**One** hazard and potential risk must be listed for **each** of the following:

- resources
- equipment
- obstructions
- storage
- services
- wastes
- work activities

Assessment criteria 2.6:

**Four** aids must be listed

Assessment criteria 3.3:

**One** hazard and potential risk must be listed for **each** of the following:

- dropping tools and debris
- stability of ladders
- the working area
- overhead cables
- fragile roofs
- scaffolds
- internal voids
- equipment
- other people

Assessment criteria 4.1

List **five** substance groups

Assessment criteria 4.2:

**Five** risks to health must be listed

Assessment criteria 4.7:

**Two** types of asbestos waste must be stated

Assessment criteria 4.8:

**Three** types of personal protective equipment (PPE) must be stated

Assessment criteria 5.2:

**Five** hazards and **five** potential risks must be stated

## Unit guidance for delivery

<p><b>Opportunities for efficiencies in delivery across/between units:</b></p>	<p>Deliver alongside the level 2 'Health, safety, and welfare in construction environments' as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p> <p>There may be some efficiencies with health and safety practice content before/in line with associated practical activities from the trade specific content areas.</p>
<p><b>Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:</b></p>	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session(s) to prepare for assessment.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Site visits linked to specific trade area.</p> <p>Guest lectures/speakers from local employers explaining elements of health and safety and how addressed on site.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Blended learning approach – online learning opportunities.</p> <p>Learners research and investigation of local/national health and safety incidents that have made recent news, related to their chosen/specific trade area and explore their impacts (eg changes in legislation/practice, implications for employees, fines etc).</p>
<p><b>Ways of ensuring content is delivered in line with current, up to date industry practice:</b></p>	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
<p><b>EDI or accessibility considerations:</b></p>	<p>Teaching for some specific areas may need adaptation eg PPE considerations based on religious grounds (eg headwear).</p>
<p><b>Digital initiative considerations:</b></p>	<p>Online VR tools to explore risks and hazards in workshop.</p>
<p><b>Sustainability considerations:</b></p>	<p>Encouraging paperless working practices – printing materials only where necessary.</p>
<p><b>Books:</b></p>	<p>HSE pamphlets available from HSE website.</p>

**Websites:**

<https://www.hse.gov.uk/>

<https://www.nebosh.org.uk/home/>

<https://www.ioshmagazine.com/>

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## Unit 201 Principles of welfare, health and safety in construction environments

<b>Unit level:</b>	Level 2
<b>Guided Learning Hours (GLH):</b>	30
<b>Unit aim:</b>	<p>This is a <b>theory only</b> unit.</p> <p>The purpose of this unit is to provide learners with the knowledge required to enable them to carry out safe working practices in construction environments, including sourcing relevant safety information and using relevant safety procedures at work.</p> <p>This unit covers core cross-construction sector knowledge including awareness of key health and safety legislation and regulations and through completion of the unit learners will understand the roles and responsibilities of employers and employees in maintaining safe sites.</p> <p>The unit covers processes for hazard identification, risk assessments, accident reporting, emergency response and welfare provision. Learners will gain knowledge on safe working practices relating to working at height, electrical safety, manual handling, PPE and fire prevention.</p> <p>This unit provides foundational health and safety knowledge to operate safely in the sector.</p>
<b>Assessment method:</b>	Multiple choice question (MCQ) assessment
<b>Links to Occupational Standards:</b>	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

### Learning outcomes

1. Know health and safety regulations, roles and responsibilities
2. Understand accident and emergency reporting procedures and documentation
3. Understand the management of workplace hazards and risks
4. Know safe storage requirements for materials and equipment
5. Understand access requirements and equipment when working at height
6. Understand safety considerations when working with electrical equipment
7. Know Personal Protective Equipment (PPE) responsibilities
8. Understand fire emergency procedures

9. Understand factors that impact on physical and mental welfare maintenance and management

## Learning outcome 1

Know health and safety regulations, roles and responsibilities

Topics	Content elements
1.1 Legislation and the roles of employers and employees	<p>1.1.1 Where information on health and safety legislation relevant to, and used in, the construction environment can be found and key employee considerations for each legislation</p> <p>a) Legislation:</p> <ol style="list-style-type: none"> <li>i. Health and Safety at Work Act (HASWA) <ul style="list-style-type: none"> <li>• follow workplace procedures and systems</li> <li>• follow slip, trip and fall prevention methods</li> <li>• use equipment and PPE properly</li> <li>• report any issues or risks</li> </ul> </li> <li>ii. Reporting Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) <ul style="list-style-type: none"> <li>• report any work-related incidents</li> <li>• provide details for reporting purposes</li> <li>• comply with reporting procedures</li> </ul> </li> <li>iii. Control of Substances Hazardous to Health (COSHH) <ul style="list-style-type: none"> <li>• follow instructions for safe use</li> <li>• use control measures properly</li> <li>• report exposure incidents</li> </ul> </li> <li>iv. Construction, Design and Management (CDM) regulations <ul style="list-style-type: none"> <li>• take care of own health and safety</li> <li>• be aware of safety of others who may be affected by own actions</li> <li>• report potential safety issues to the employer</li> </ul> </li> <li>v. Provision and Use of Work Equipment Regulations (PUWER) <ul style="list-style-type: none"> <li>• use equipment only if trained</li> <li>• report any faulty equipment</li> <li>• follow safety instructions provided</li> </ul> </li> <li>vi. Manual Handling Operations Regulations (MHR) <ul style="list-style-type: none"> <li>• follow safe lifting techniques</li> <li>• use aids where provided</li> <li>• report unsafe loads or practices</li> </ul> </li> <li>vii. Personal Protective Equipment (PPE) at Work Regulations <ul style="list-style-type: none"> <li>• use PPE correctly as instructed</li> </ul> </li> </ol>

**Topics**

**Content elements**

- help maintain PPE properly
- report any defects or issues
- viii. Work at Height Regulations (WAHR)
  - use safety equipment provided
  - follow training and procedures
  - do not undertake unsafe practices
- ix. Control of Noise at Work Regulations (CNWR)
  - wear hearing protection when required
  - follow noise control procedures
  - report potential issues or over-exposure
- x. Control of Vibration at Work Regulations (CVWR)
  - take regular rest breaks from use of vibrating tools
  - report potential symptoms of vibration exposure
  - follow control measures implemented
- xi. Electricity at Work Regulations (EAWR)
  - visually check equipment before use
  - report any defects immediately
  - follow safe systems of work
- xii. Lifting Operations and Lifting Equipment Regulations (LOLER)
  - do not use equipment unless trained
  - follow safe lifting practices
  - report any defective equipment
- xiii. Confined Spaces Regulations
  - avoid entry into confined spaces whenever possible
  - if entry is unavoidable, follow a safe system of work
  - put in place adequate emergency arrangements before starting work in confined spaces
- xiv. Building Safety Act
  - comply with building regulations and fire safety orders
  - escalate/report significant fire and structural safety concerns
- xv. The Control of Lead at Work Regulations
  - use appropriate PPE
  - follow safe working practices.
- b) Where information can be found:
  - i. government website – HSE website
  - ii. company handbook/induction materials
  - iii. local authority websites.

1.1.2 Employer and employee responsibilities under the Health and Safety at Work Act (HASWA)

Topics	Content elements
	<p>a) Employer responsibilities:</p> <ol style="list-style-type: none"> <li>i. provision of safe working environment</li> <li>ii. provision of access to adequate staff training <ul style="list-style-type: none"> <li>• CSCS card</li> <li>• induction</li> <li>• toolbox talks</li> </ul> </li> <li>iii. provision of health and safety information</li> <li>iv. completion of risk assessments</li> <li>v. supervision</li> <li>vi. provision of PPE for employees</li> <li>vii. reporting of hazards, accidents and near misses</li> <li>viii. CDM regulations, construction phase plans</li> <li>ix. protecting/providing provision for employee welfare</li> <li>x. display of public liability insurance and health and safety law posters/information.</li> </ol> <p>b) Employee responsibilities:</p> <ol style="list-style-type: none"> <li>i. exercise a duty of care to themselves and to others</li> <li>ii. work in a safe manner</li> <li>iii. comply with employer instructions</li> <li>iv. work safely with other trades</li> <li>v. report hazards, accidents and near misses</li> <li>vi. follow organisational procedures.</li> </ol>
1.2 Organisations involved in health and safety advice and guidance	<p>1.2.1 The key role/purpose of organisations and bodies involved in providing relevant health and safety information and guidance</p> <p>a) Key role/purpose of organisations and bodies:</p> <ol style="list-style-type: none"> <li>i. Health and Safety Executive (HSE) <ul style="list-style-type: none"> <li>• government body responsible for health and safety regulation and enforcement</li> </ul> </li> <li>ii. Institute of Occupational Health and Safety <ul style="list-style-type: none"> <li>• professional body for occupational safety and health professionals</li> </ul> </li> <li>iii. British Safety Council <ul style="list-style-type: none"> <li>• charity providing health, safety and environmental advice</li> </ul> </li> <li>iv. Royal Society for the Prevention of Accidents (RoSPA) <ul style="list-style-type: none"> <li>• charity promoting safety in the workplace and in public spaces</li> </ul> </li> <li>v. local authorities <ul style="list-style-type: none"> <li>• enforce regulations locally and provide health and safety services</li> </ul> </li> <li>vi. Construction Industry Training Board (CITB)</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• training, skills and standards body for the construction industry</li> </ul> <p>vii. manufacturers (equipment and materials)</p> <ul style="list-style-type: none"> <li>• provide expert advice on safe use of their specific products.</li> </ul> <p>1.2.2 Roles and responsibilities of the Health and Safety Executive (HSE) and their inspectors</p> <p>a) HSE roles and responsibilities:</p> <ol style="list-style-type: none"> <li>i. reduce accidents through education and advice</li> <li>ii. inspection</li> <li>iii. investigation eg site investigations</li> <li>iv. advice and enforcement.</li> </ol>
1.3 Communicating health and safety information in construction environments	<p>1.3.1 Reasons for/purpose of holding on-site safety inductions and toolbox talks</p> <p>a) Reasons for/purpose of on-site safety inductions:</p> <ol style="list-style-type: none"> <li>i. ensure employees understand site health and safety requirements in relation to <ul style="list-style-type: none"> <li>• methods of accident reporting</li> <li>• methods of fire reporting</li> <li>• location of assembly points</li> <li>• location of risk assessments</li> <li>• evacuation procedures</li> <li>• first aid procedures</li> </ul> </li> <li>ii. identify specific hazards associated with the site</li> <li>iii. ensure employees understand company policies and procedures and their roles in relation to them</li> <li>iv. ensure employees understand site layout</li> <li>v. maintain safe site access.</li> </ol> <p>b) Reasons for/purpose of toolbox talks:</p> <ol style="list-style-type: none"> <li>i. update on incidents and accidents</li> <li>ii. update on access routes and site layout</li> <li>iii. update on changes to company policies and procedures</li> <li>iv. update on manufacturers/suppliers' materials and plant movement.</li> </ol>

## Learning outcome 2

Understand accident and emergency reporting procedures and documentation

Topics	Content elements
2.1 Emergencies and major occurrences	<p>2.1.1 Major occurrences defined as emergencies that may occur in the construction workplaces and potential causes of emergencies that may occur in construction workplaces</p> <p>a) Emergencies:</p> <ol style="list-style-type: none"><li>i. fire</li><li>ii. security incident<ul style="list-style-type: none"><li>• unauthorised persons on site</li><li>• terrorism</li><li>• vandalism</li></ul></li><li>iii. gas leak</li><li>iv. explosion</li><li>v. collapse of scaffolding</li><li>vi. collapse of excavations</li><li>vii. vehicle strikes (moving plant and machinery)</li><li>viii. physical injury to personnel.</li></ol> <p>b) Potential causes:</p> <ol style="list-style-type: none"><li>i. fire<ul style="list-style-type: none"><li>• fuel spillage</li><li>• smoking on site</li><li>• burning of waste</li><li>• hot work</li></ul></li><li>ii. security incident<ul style="list-style-type: none"><li>• inefficient security measures in place</li></ul></li><li>iii. gas leak<ul style="list-style-type: none"><li>• poor storage of gas cylinders</li><li>• unprofessional practice</li><li>• unknown services/existing services in place</li></ul></li><li>iv. explosion<ul style="list-style-type: none"><li>• gas leak</li><li>• fuel spillage</li><li>• mixing of chemicals</li><li>• poor storage of hazardous materials</li></ul></li><li>v. collapse of scaffolding<ul style="list-style-type: none"><li>• adverse weather</li><li>• missing components</li><li>• unauthorised modifications</li><li>• overload of weight</li><li>• insufficient safety checks</li><li>• poor erection/quality of work</li></ul></li></ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>vi. collapse of excavations               <ul style="list-style-type: none"> <li>• adverse weather</li> <li>• poor shoring</li> <li>• lack of barriers</li> <li>• plant operation proximity.</li> </ul> </li> </ul>
<p>2.2 Dealing with accidents and emergencies</p>	<p>2.2.1 Authorised personnel involved in dealing with accident and emergency situations and their duties</p> <ul style="list-style-type: none"> <li>a) Authorised personnel:           <ul style="list-style-type: none"> <li>i. fire warden</li> <li>ii. first aider</li> <li>iii. supervisors/managers</li> <li>iv. safety officer</li> <li>v. emergency services</li> <li>vi. Health and Safety Executive (HSE).</li> </ul> </li> <li>b) Duties of authorised personnel:           <ul style="list-style-type: none"> <li>i. fire warden               <ul style="list-style-type: none"> <li>• ensure safe evacuation of personnel</li> <li>• fight fires if safe to do so</li> </ul> </li> <li>ii. first aider               <ul style="list-style-type: none"> <li>• attend personal injury incidents</li> <li>• treat minor injuries</li> <li>• liaise with emergency service professionals</li> </ul> </li> <li>iii. supervisors/managers               <ul style="list-style-type: none"> <li>• oversee safety procedures are taking place</li> <li>• complete documentation to comply with legislation</li> </ul> </li> <li>iv. safety officer               <ul style="list-style-type: none"> <li>• initial responder</li> <li>• point of call/investigation</li> </ul> </li> <li>v. emergency services               <ul style="list-style-type: none"> <li>• provide professional medical/rescue assistance</li> </ul> </li> <li>vi. Health and Safety Executive (HSE)               <ul style="list-style-type: none"> <li>• carry out investigations into accident/emergency incidents.</li> </ul> </li> </ul> </li> </ul> <p>2.2.2 Actions that must be taken upon discovery of an accident in a construction workplace environment and their logical sequence</p> <ul style="list-style-type: none"> <li>a) Accident not involving injury to persons:           <ul style="list-style-type: none"> <li>i. step 1 – assess seriousness of incident</li> <li>ii. step 2 – ensure the area is made safe</li> <li>iii. step 3 – alert other relevant persons – supervisors, employees</li> </ul> </li> </ul>

**Topics****Content elements**

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- iv. step 4 – assess whether emergency services are required
  - v. step 5 – alert the emergency services in line with workplace protocols.
  - b) Accident involving injury to persons:
    - i. step 1 – call for help/first aider
    - ii. step 2 – ensure the area is made safe
    - iii. step 3 – treat casualty (within limits of training and competency)
    - iv. step 4 – alert the emergency services if required in line with workplace procedures.
  - c) Follow up actions:
    - i. completion of records
    - ii. contact HSE
    - iii. review workplace safety control measures and procedures.
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### Learning outcome 3

Understand the management of workplace hazards and risks

Topics	Content elements
3.1 Control measures related to risk assessments	3.1.2 Control measures related to risk assessments and method statements <ul style="list-style-type: none"><li>a) Control measures:<ul style="list-style-type: none"><li>i. good housekeeping in the workplace</li><li>ii. training of employees</li><li>iii. signage and safety procedures.</li></ul></li><li>b) Potential outcome of hazards affecting individuals:<ul style="list-style-type: none"><li>i. injury</li><li>ii. long-term illness/disability</li><li>iii. loss of days worked due to injury/illness/prohibition notice</li><li>iv. death.</li></ul></li></ul>

Topics	Content elements
3.2 Housekeeping in construction environments	<p>3.2.1 Definition of good housekeeping and its importance and purpose in relation to health and safety in construction environments</p> <ol style="list-style-type: none"> <li>a) <b>Definition</b> ‘Good Housekeeping’ – the practice of maintaining a clean, organised and hazard-free work environment.</li> <li>b) Importance and purpose of good housekeeping in relation to health and safety: <ol style="list-style-type: none"> <li>i. maintain safety</li> <li>ii. reduce buildup of waste</li> <li>iii. keep access routes clear</li> <li>iv. safe storage of materials, tools and equipment</li> <li>v. reduce workplace/site congestion</li> <li>vi. enhances good working relationships and reduces stress.</li> </ol> </li> </ol> <p>3.2.2 Steps that can be taken to maintain good housekeeping in construction environments</p> <ol style="list-style-type: none"> <li>a) Steps/factors that contribute to good housekeeping: <ol style="list-style-type: none"> <li>i. cleanliness of working area</li> <li>ii. tidiness/robust storage systems, designated storage</li> <li>iii. use of skips and chutes</li> <li>iv. segregation of materials</li> <li>v. segregation of stored materials to avoid congestion of work area and access</li> <li>vi. clear access to fire escapes and fire extinguishers</li> <li>vii. waste and debris management</li> <li>viii. storage and maintenance of tools and equipment.</li> </ol> </li> </ol>
3.3 Signage and notices found in construction environments	<p>3.3.1 Categories of signs and safety notices used in construction workplaces and their key visual characteristics</p> <ol style="list-style-type: none"> <li>a) Categories of signs and safety notices: <ol style="list-style-type: none"> <li>i. prohibition <ul style="list-style-type: none"> <li>• something must not be done</li> </ul> </li> <li>ii. mandatory <ul style="list-style-type: none"> <li>• something must be done</li> </ul> </li> <li>iii. warning <ul style="list-style-type: none"> <li>• alerting to danger/hazard awareness</li> </ul> </li> <li>iv. safe condition <ul style="list-style-type: none"> <li>• indicating equipment is safe to use, or not</li> </ul> </li> <li>v. emergency <ul style="list-style-type: none"> <li>• indicating what to do in event of an emergency.</li> </ul> </li> </ol> </li> <li>b) Shape and colour of categories of safety sign and notice:</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>i. prohibition <ul style="list-style-type: none"> <li>• circular</li> <li>• red band, white background</li> <li>• imagery of item in black</li> <li>• red diagonal cross</li> </ul> </li> <li>ii. mandatory <ul style="list-style-type: none"> <li>• circular</li> <li>• blue and white</li> </ul> </li> <li>iii. warning <ul style="list-style-type: none"> <li>• triangle</li> <li>• yellow and black</li> </ul> </li> <li>iv. safe condition <ul style="list-style-type: none"> <li>• rectangular</li> <li>• green and white</li> </ul> </li> <li>v. emergency <ul style="list-style-type: none"> <li>• rectangular</li> <li>• red and white.</li> </ul> </li> </ul> <p>3.3.2 Responsibilities of employers and employees relating to signs and safety notices in construction workplaces</p> <ul style="list-style-type: none"> <li>a) Responsibilities of employers: <ul style="list-style-type: none"> <li>i. ensuring signage is present, correct and up to date</li> <li>ii. checking and maintaining signage is visible</li> <li>iii. compliance with legislation and codes of conduct.</li> </ul> </li> <li>b) Responsibilities of employees: <ul style="list-style-type: none"> <li>i. read signage</li> <li>ii. adhere to signage</li> <li>iii. escalate issues to a supervisor.</li> </ul> </li> </ul>

### Learning outcome 4

Know safe storage requirements for materials and equipment

Topics	Content elements
4.1 Safe storage of materials and equipment	<p>4.1.1 Considerations for the correct storage of materials and equipment</p> <ul style="list-style-type: none"> <li>a) Safe storage considerations: <ul style="list-style-type: none"> <li>i. stored securely and safely</li> <li>ii. following workplace systems/protocols</li> <li>iii. ease of access and availability</li> <li>iv. kept clean and dry where relevant and possible</li> <li>v. location and designated area of storage.</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>b) Importance of safe storage:               <ul style="list-style-type: none"> <li>i. prevent damage</li> <li>ii. maintain working order</li> <li>iii. prevent loss/theft</li> <li>iv. restrict/limit access where appropriate.</li> </ul> </li> </ul>

## Learning outcome 5

Understand access requirements and equipment when working at height

Topics	Content elements
5.1 Health and safety consideration when working at height	<p>5.1.1 Responsibilities of employers and employees under current working at height regulations</p> <ul style="list-style-type: none"> <li>a) Responsibilities of employers:           <ul style="list-style-type: none"> <li>i. undertake risk assessments</li> <li>ii. employ competent people for working at height</li> <li>iii. provide appropriate equipment</li> <li>iv. ensure sufficient inspection and recording of condition of access equipment as appropriate.</li> </ul> </li> <li>b) Responsibilities of employees:           <ul style="list-style-type: none"> <li>i. carry out visual inspection before using any ladders scaffolding etc</li> <li>ii. do not alter or remove any parts of scaffold provided</li> <li>iii. use identified access to working height</li> <li>iv. report any safety issues to employer</li> <li>v. use equipment and PPE provided properly.</li> </ul> </li> </ul> <p>5.1.2 Types of access equipment used in construction workplace environments and safety considerations for their use</p> <ul style="list-style-type: none"> <li>a) Access equipment:           <ul style="list-style-type: none"> <li>i. stepladders</li> <li>ii. ladders (pole, extension)</li> <li>iii. trestles</li> <li>iv. hop-ups</li> <li>v. scaffolding – mobile/static</li> <li>vi. podiums</li> <li>vii. stilts</li> </ul> </li> </ul>

**Topics****Content elements**

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- viii. MEWPs (Mobile Elevating Working Platforms).
  - b) Safety considerations for their use:
    - i. erection by competent persons (where applicable)
    - ii. inspect equipment before use
    - iii. use equipment only if properly trained
    - iv. follow manufacturer's instructions
    - v. maintain three points of contact (where applicable)
    - vi. do not overreach (sideways)
    - vii. check ground condition before setting up – level, firm, stable
    - viii. do not work in adverse weather conditions if unsafe
    - ix. wear appropriate PPE
    - x. use of equipment for intended purpose
    - xi. comply with method statement.
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## Learning outcome 6

Understand safety considerations when working with electrical equipment

Topics	Content elements
6.1 Dangers of working with electrical equipment	<p>6.1.1 Potential hazards and risks when using electrical equipment in construction workplace environments</p> <ol style="list-style-type: none"><li>a) Potential hazards:<ol style="list-style-type: none"><li>i. faulty equipment</li><li>ii. incorrect voltage</li><li>iii. weather and environment</li><li>iv. lack of training/incorrect use</li><li>v. hidden services</li><li>vi. overheard power lines</li><li>vii. dust inhalation.</li></ol></li><li>b) Potential risks:<ol style="list-style-type: none"><li>i. burns</li><li>ii. electrocution</li><li>iii. death</li><li>iv. fire.</li></ol></li></ol> <p>6.1.2 Precautions that should be taken to avoid risks to self and others when working with electrical equipment and why this is important</p> <ol style="list-style-type: none"><li>a) Precautions:<ol style="list-style-type: none"><li>i. checking tools and equipment before use<ul style="list-style-type: none"><li>• checking leads for signs of wear or damage</li><li>• checking plugs for labelling and signs of wear or damage</li></ul></li><li>ii. using cable hangers where possible</li><li>iii. ensuring there is a current PAT/ITEE (EET) certificate</li><li>iv. escalating issues or concerns to a supervisor</li><li>v. ensuring training has been given before use</li><li>vi. use of dust suppression measures and use of PPE – electrical safety Respiratory Protective Equipment (RPE)</li><li>vii. use of safety control equipment and PPE.</li></ol></li><li>b) Importance of taking precautions:<ol style="list-style-type: none"><li>i. keep self and other safe</li><li>ii. reduce risk of injury or death</li><li>iii. comply with legislation and workplace conduct.</li></ol></li></ol>

Topics	Content elements
6.2 Power sources and voltages for electrical equipment	<p>6.2.1 Power sources, voltages and voltage colour coding that are used for electrical equipment in construction workplace environments</p> <ol style="list-style-type: none"> <li>a) Power sources: <ol style="list-style-type: none"> <li>i. battery powered</li> <li>ii. mains powered</li> <li>iii. portable generator</li> <li>iv. renewable energy sources – solar/wind.</li> </ol> </li> <li>b) Voltages and associated colours: <ol style="list-style-type: none"> <li>i. no standard colour – 18/24/36 volts <ul style="list-style-type: none"> <li>• battery power for cordless tools</li> </ul> </li> <li>ii. yellow – 110/115 volts <ul style="list-style-type: none"> <li>• common workplace voltage for power tools and equipment</li> </ul> </li> <li>iii. blue – 230/240 volts <ul style="list-style-type: none"> <li>• standard domestic voltage for power tools and equipment</li> </ul> </li> <li>iv. red – 415 volts <ul style="list-style-type: none"> <li>• commercial/industrial machinery.</li> </ul> </li> </ol> </li> </ol>
6.3 Storage of electrical equipment	<p>6.3.1 Methods of safely storing and maintaining electrical equipment and the importance of this</p> <ol style="list-style-type: none"> <li>a) Methods of safe storage and maintenance: <ol style="list-style-type: none"> <li>i. components present including any safety guards</li> <li>ii. equipment cleaned</li> <li>iii. check for damage regularly/before and after use and report where relevant</li> <li>iv. stored in a clean, dry and secure location</li> <li>v. PAT/ITEE (EET) tested.</li> </ol> </li> <li>b) Importance of safe storage/maintenance: <ol style="list-style-type: none"> <li>i. maintain safety of self and others</li> <li>ii. promote efficiency and safe working.</li> </ol> </li> </ol>

## Learning outcome 7

Know Personal Protective Equipment (PPE) responsibilities

Topics	Content elements
7.1 Responsibilities in relation to PPE	<p>7.1.1 Responsibilities of employers and employees relating to PPE under current regulations</p> <p>a) Responsibilities of employers:</p> <ol style="list-style-type: none"><li>i. ensure suitable PPE is provided free of charge to employees who may be exposed to a risk to their health or safety while at work</li><li>ii. the maintenance, storage and replacement of any PPE they provide</li><li>iii. provide training and instruction on safe and correct use of PPE for relevant tasks.</li></ol> <p>b) Responsibilities of employees:</p> <ol style="list-style-type: none"><li>i. use PPE correctly following training and instruction from employer</li><li>ii. if PPE is lost or becomes damaged/defective, report to employer and do not use</li><li>iii. check and ensure PPE to be used is within date before use, and report to employer and do not use where out of date.</li></ol>

## Learning outcome 8

Understand fire emergency procedures

Topics	Content elements
8.1 How fires start	<p>8.1.1 How fire is created/caused – Elements essential to the creation of fire and how they interact/depend on each other</p> <p>a) Elements:</p> <ol style="list-style-type: none"><li>i. oxygen</li><li>ii. fuel</li><li>iii. heat.</li></ol> <p>b) Their inter-dependence/situational requirements:</p> <ol style="list-style-type: none"><li>i. they must all be present</li><li>ii. they are interdependent – removal of one of the three elements will extinguish the fire</li><li>iii. may be referred to as the ‘fire triangle’.</li></ol>

Topics	Content elements
8.2 Fire prevention methods	<p>8.2.1 Methods of fire prevention, roles responsible for carrying them out and why this is important</p> <p>a) Methods of prevention:</p> <ol style="list-style-type: none"> <li>i. up-to-date risk assessment</li> <li>ii. keep sources of ignition and flammable substances apart</li> <li>iii. ensure good housekeeping at all times – regular emptying of rubbish bins/skips</li> <li>iv. train workforce on their responsibilities in relation to fire prevention.</li> </ol> <p>b) Roles responsible:</p> <ol style="list-style-type: none"> <li>i. all personnel on site/in the workplace</li> <li>ii. appointed fire wardens</li> <li>iii. site manager.</li> </ol> <p>c) Importance of fire prevention:</p> <ol style="list-style-type: none"> <li>i. protection of lives/personal safety</li> <li>ii. preservation of property and equipment</li> <li>iii. reduce site downtime, keep job on track</li> <li>iv. compliance with regulation</li> <li>v. avoid legal implications</li> <li>vi. protect reputation/image</li> <li>vii. reduce environmental impacts.</li> </ol>
8.3 Extinguishing fires	<p>8.3.1 Actions that must be taken on discovery of a fire and the sequence</p> <p>a) Actions:</p> <ol style="list-style-type: none"> <li>i. step 1 – sound alarm</li> <li>ii. step 2 – assess risk and tackle fire if competent</li> <li>iii. step 3 – evacuate to fire assembly point</li> <li>iv. step 4 – call emergency services.</li> </ol> <p>8.3.2 Types of fire extinguisher, their colours and uses</p> <p>a) Types and colours:</p> <ol style="list-style-type: none"> <li>i. water <ul style="list-style-type: none"> <li>• red</li> </ul> </li> <li>ii. foam <ul style="list-style-type: none"> <li>• cream/off white</li> </ul> </li> <li>iii. CO<sub>2</sub> <ul style="list-style-type: none"> <li>• black</li> </ul> </li> <li>iv. dry powder <ul style="list-style-type: none"> <li>• blue.</li> </ul> </li> </ol> <p>b) Uses:</p> <ol style="list-style-type: none"> <li>i. water</li> </ol>

## Topics

## Content elements

- Class A fires
  - wood
  - paper
  - cloth
  - some plastics
  - never electrical, flammable liquid or gas
- ii. foam
  - Class A and B fires
    - wood
    - paper
    - cloth
    - some plastics
    - flammable liquids
- iii. CO<sub>2</sub>
  - Class B and C fires
    - flammable liquids
    - energised electrical equipment
- iv. dry powder
  - Class A, B and C fires
    - applicable for use on all types of fire.

### 8.3.3 Circumstances under which fire extinguishers can/should be used

- a) Circumstances:
- i. use in cases where it will aid means of escape/preserve life
  - ii. in other circumstances use only when trained and authorised to do so in case of emergency.

## Learning outcome 9

Understand factors that impact on physical and mental welfare maintenance and management

Topics	Content elements
9.1 Considerations in relation to construction workplace welfare	<p>9.1.1 Duty of care considerations in the workplace and why they are important</p> <ol style="list-style-type: none"><li>a) <b>Definition</b> 'Duty of care' – all employers are under a statutory duty to ensure the health, safety and welfare of their staff.</li><li>b) Duty of care considerations:<ol style="list-style-type: none"><li>i. physical well-being</li><li>ii. psychological well-being.</li></ol></li><li>c) Duty of care importance:<ol style="list-style-type: none"><li>i. safety of employees is maintained<ul style="list-style-type: none"><li>• protection from harm</li><li>• protection from abuse</li><li>• protection from injury</li></ul></li><li>ii. satisfaction and happiness of employees</li><li>iii. legal requirement – statutory requirement in law.</li></ol></li></ol> <p>9.1.2 Facilities for welfare that must be provided as part of workplace/site set up and their importance</p> <ol style="list-style-type: none"><li>a) Welfare facilities:<ol style="list-style-type: none"><li>i. toilets</li><li>ii. washing facilities – with hot and cold running water</li><li>iii. secure storage for personal items</li><li>iv. canteen</li><li>v. drinking water</li><li>vi. drying room.</li></ol></li><li>b) Importance/reasons for provision:<ol style="list-style-type: none"><li>i. legal requirement</li><li>ii. employee comfort and duty of care</li><li>iii. attraction and retention of employees</li><li>iv. company reputation.</li></ol></li></ol> <p>9.1.3 Potential causes and effects of excessive noise and employer/employee responsibilities in relation to minimising the impact</p> <ol style="list-style-type: none"><li>a) <b>Definition</b> 'Excessive noise' – can be gradual from exposure to loud noise over time or that caused by sudden, extreme loud noise.</li><li>b) Potential causes of excessive noise:<ol style="list-style-type: none"><li>i. machinery and equipment<ul style="list-style-type: none"><li>• excavators</li></ul></li></ol></li></ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• mixers</li> <li>• cranes</li> <li>ii. power tools <ul style="list-style-type: none"> <li>• drills</li> <li>• saws</li> <li>• grinders</li> </ul> </li> <li>iii. demolition activity</li> <li>iv. construction activity</li> <li>v. deliveries and transport of materials with machines</li> <li>vi. communication and radio systems.</li> <li>c) Potential effects of exposure to excessive noise: <ul style="list-style-type: none"> <li>i. deafness/hearing loss</li> <li>ii. tinnitus/ringing in the ears</li> <li>iii. disturbed sleep</li> <li>iv. stress</li> <li>v. communication issues on site/within workplace</li> <li>vi. loss or reduction of working hours.</li> </ul> </li> <li>d) Employee precautions: <ul style="list-style-type: none"> <li>i. wearing hearing protection (PPE) – ear defenders</li> <li>ii. adhering to workplace/site rules/training</li> <li>iii. being aware of own safety and that of others on site/in the workplace.</li> </ul> </li> <li>e) Employer requirements: <ul style="list-style-type: none"> <li>i. providing PPE and ensuring employees know how/when to use it</li> <li>ii. adherence with legislation</li> <li>iii. regular monitoring of sound levels</li> <li>iv. taking action when excess levels are evident</li> <li>v. ensuring risk assessments are in place and followed.</li> </ul> </li> </ul>
9.2 Personal physical welfare considerations in construction	<p>9.2.1 Practices and support available to stay physically well and healthy at work</p> <ul style="list-style-type: none"> <li>a) Personal practices that can support staying well/healthy while at work: <ul style="list-style-type: none"> <li>i. taking breaks regularly</li> <li>ii. staying hydrated</li> <li>iii. making smart snack/food choices</li> <li>iv. keeping workplace/station clean</li> <li>v. using good hygiene practices</li> <li>vi. minimising caffeine intake.</li> </ul> </li> <li>b) Factors that may support employees to stay well/healthy at work: <ul style="list-style-type: none"> <li>i. a productive working environment eg well lit</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>ii. provision of an Employee Assistance Programme (EAP)</li> <li>iii. scheduling of regular rest/breaks away from point of work</li> <li>iv. encouragement of positive work/life balance</li> <li>v. frequent recognition of achievement/success</li> <li>vi. provision of social events/interactivity.</li> </ul> <p>9.2.2 The importance of maintaining own physical well-being and how to do this in everyday life</p> <ul style="list-style-type: none"> <li>a) Physical well-being importance: <ul style="list-style-type: none"> <li>i. stay healthy/physically well</li> <li>ii. remain fit for task/work and day to day life.</li> </ul> </li> <li>b) General physical well-being maintenance: <ul style="list-style-type: none"> <li>i. regular exercise</li> <li>ii. get enough sleep</li> <li>iii. eat healthy regular meals and stay hydrated</li> <li>iv. knowing own physical capabilities and limits to avoid injury.</li> </ul> </li> </ul> <p>9.2.3 Unacceptable/inappropriate behaviours at work and their likely negative impacts for employees and employers</p> <ul style="list-style-type: none"> <li>a) Unacceptable/inappropriate behaviours at work: <ul style="list-style-type: none"> <li>i. bullying/harassment</li> <li>ii. consumption of alcohol</li> <li>iii. use of illegal drugs</li> <li>iv. not declaring to employer use of prescription medications that can impair judgement</li> <li>v. discrimination of others based on perceived differences</li> <li>vi. initiation ceremonies</li> <li>vii. smoking/vaping outside of designated areas</li> <li>viii. physical or verbal aggression towards others</li> <li>ix. self-harm</li> <li>x. isolation/deliberate exclusion and/or non-cooperation at work</li> <li>xi. coercion, such as pressure to subscribe to a particular political or religious belief</li> <li>xii. circulating or displaying offensive material.</li> </ul> </li> <li>b) Potential negative impacts: <ul style="list-style-type: none"> <li>i. for an employee <ul style="list-style-type: none"> <li>• isolation/loneliness</li> <li>• loss of employment</li> <li>• impact on mental health and social relationships</li> <li>• detrimental to personal reputation</li> </ul> </li> <li>ii. for an employer</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• loss in production</li> <li>• loss of experienced staff</li> <li>• loss of revenue</li> <li>• loss of future orders</li> <li>• creation of negative environment that can impact positive mental health and well-being of employees</li> <li>• legal action/implications</li> <li>• reputational damage.</li> </ul> <p>9.2.4 Sources/where to access support in cases of encountering/experiencing negative behavioural issues at work</p> <p>a) Sources of support:</p> <ol style="list-style-type: none"> <li>i. colleagues</li> <li>ii. management</li> <li>iii. human resources</li> <li>iv. trade union representative</li> <li>v. trade organisations</li> <li>vi. police.</li> </ol>
<p>9.3 Personal mental welfare considerations in construction</p>	<p>9.3.1 The importance of maintaining own mental well-being and how to do this</p> <p>a) Mental well-being importance:</p> <ol style="list-style-type: none"> <li>i. can perform at optimal level</li> <li>ii. promotes safety – reduces risks and mistakes</li> <li>iii. reduces absence</li> <li>iv. maintain good work and personal relationships</li> </ol> <p>b) Mental well-being maintenance:</p> <ol style="list-style-type: none"> <li>i. spending time with others/avoid isolation</li> <li>ii. remote communication with others</li> <li>iii. engaging in open, safe discourse about mental health in the workplace.</li> </ol> <p>9.3.2 Ways in which mental ill health can present and where individuals affected directly or indirectly can seek help</p> <p>a) Ways in which mental ill health can present:</p> <ol style="list-style-type: none"> <li>i. stress</li> <li>ii. anxiety</li> <li>iii. depression</li> <li>iv. suicidal feelings/tendencies</li> <li>v. other complex mental health issues</li> <li>vi. absence from work</li> <li>vii. changes in behaviour eg increased aggression</li> <li>viii. self-harm.</li> </ol>

**Topics**

**Content elements**

- b) Where to seek help:
  - i. mental health first aider
  - ii. employer – raise awareness of issues and have the conversation
  - iii. peers and colleagues – raise awareness of issues and have the conversation
  - iv. medical professional/doctor – to get medical support as needed
  - v. specific mental health organisations/charities
  - vi. online support networks.

9.3.3 Working methods that can promote good mental health as part of a duty of care and their importance

- a) **Definition** 'Mental health' – an individual's emotional, psychological and social well-being.
- b) Methods that promote good mental health:
  - i. 'buddy' system – not working alone
  - ii. access to support/information
  - iii. recognising its importance and openly talking about issues
  - iv. robust induction and onboarding processes
  - v. avoiding alcohol and illegal substances
  - vi. taking regular breaks.
- c) Importance of mental health awareness:
  - i. employee well-being and duty of care
  - ii. reduce employee stress and isolation
  - iii. attraction and retention of employees
  - iv. company/industry reputation.

## Unit guidance for delivery

<p><b>Opportunities for efficiencies in delivery across/between units:</b></p>	<p>Deliver alongside the Level 1 'Health and safety in a construction environment' and Level 2 'Principles of working in the construction industry' unit as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p> <p>There may be some efficiencies with health and safety practice content before/in line with associated practical activities from the trade specific content areas.</p>
<p><b>Suggestions for formative assessment opportunities:</b></p>	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session to prepare for assessment.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Employer engagement opportunities for this unit should be incorporated in order to allow the learner to understand application of knowledge learnt in context. This could include site visits linked to specific trade area or having guest lectures/speakers from local employers explaining elements of health and safety and how addressed on site.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Providers should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions and self-study. A blended learning approach, with online learning opportunities, could be adopted for content delivery.</p> <p>Learners research and investigation of local/national health and safety incidents that have made recent news, related to their chosen/specific trade area and explore their impacts (eg changes in legislation/practice, implications for employees, fines etc).</p>
<p><b>Ways of ensuring content is delivered in line with current, up-to-date industry practice:</b></p>	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
<p><b>EDI or accessibility considerations:</b></p>	<p>Teaching for some specific areas may need adaptation eg electrical power colour cords, fire extinguisher colours, PPE considerations based on religious grounds (eg headwear).</p>
<p><b>Digital initiative considerations:</b></p>	<p>Online VR tools to explore risks and hazards in workshop.</p>
<p><b>Sustainability considerations:</b></p>	<p>Encouraging paperless working practices – printing materials only where necessary.</p>
<p><b>Books:</b></p>	<p>HSE pamphlets available from HSE website.</p>

**Websites:**

<https://www.hse.gov.uk/>

<https://www.nebosh.org.uk/home/>

<https://www.ioshmagazine.com/>

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## Unit 202 Principles of working in the construction industry

<b>Unit level:</b>	Level 2
<b>Guided Learning Hours (GLH):</b>	50
<b>Unit aim:</b>	<p>This is a <b>theory only</b> unit.</p> <p>The purpose of this unit is to introduce learners to the construction industry and to give a wider context to the trade area they are studying, as construction is a vital part of the economy and plays an important role in all our lives. Learners will discover that this sector can be very rewarding and that there are opportunities for career progression. This unit provides learners with an understanding of the principles of construction, building technology and terminology used. This unit also covers various pieces of legislation, including health and safety, planning and building control.</p> <p>This unit covers core cross-construction sector knowledge which will support learners to understand how their future role fits within the context of the construction industry. The unit covers a range of knowledge areas including consideration job roles, related sector areas/industries and how they work together and impact each other, as well as developing learner understanding of key shared concepts such as the importance of sustainability, personal development and equality, diversity and inclusion.</p>
<b>Assessment method:</b>	Multiple choice question (MCQ) assessment
<b>Links to Occupational Standards:</b>	ST0095 (Bricklayer), ST0171 (Property Maintenance Operative), ST0295 (Painter and Decorator), ST0096 (Plasterer), ST0264 (Site Carpenter, Architectural Joiner)

### Learning outcomes

1. Understand working practices in the construction industry
2. Understand construction information
3. Understand how to set up and secure construction work areas
4. Know building substructure and superstructure components
5. Understand personal development and working with others in the construction industry
6. Know sustainability and emerging technology considerations affecting the construction industry

## Learning outcome 1

Understand working practices in the construction industry

Topics	Content elements
1.1 Areas of work and personnel involved in construction work	<p>1.1.1 Types of building construction work that may be encountered when working in the industry and their key features</p> <p>a) Types of work:</p> <ol style="list-style-type: none"><li>i. new build</li><li>ii. renovation</li><li>iii. maintenance</li><li>iv. restoration/retrofit</li><li>v. domestic</li><li>vi. commercial</li><li>vii. industrial</li><li>viii. demolition.</li></ol> <p>b) Key features of different types of work:</p> <ol style="list-style-type: none"><li>i. relative cost implications</li><li>ii. regional variations</li><li>iii. relative controls and regulations in place</li><li>iv. speculative new build.</li></ol> <p>1.1.2 Organisations and bodies that contribute to, and are involved in the construction process and their main responsibilities</p> <p>a) Organisations and bodies:</p> <ol style="list-style-type: none"><li>i. building contractors</li><li>ii. manufacturers/suppliers</li><li>iii. local authorities</li><li>iv. legislative bodies</li><li>v. training organisations</li><li>vi. professional bodies.</li></ol> <p>b) Responsibilities of organisations and bodies:</p> <ol style="list-style-type: none"><li>i. building contractors<ul style="list-style-type: none"><li>• plan, manage, monitor and coordinate the entire construction phase conforming to Construction Design Management (CDM)</li><li>• taking account of the health and safety risks to everyone affected by the work including members of the public in planning and managing the measures needed to control them</li></ul></li><li>ii. manufacturers/suppliers<ul style="list-style-type: none"><li>• must comply with all relevant requirements under the Construction Products Regulation as retained in UK law</li></ul></li><li>iii. local authorities<ul style="list-style-type: none"><li>• prepare town and city plans and their associated basic development programmes to promote the improvement of various urban facilities, as well as area development and construction issue building consents</li></ul></li></ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• inspect building work for which it has granted a building consent</li> <li>iv. legislative bodies <ul style="list-style-type: none"> <li>• inspect and confirm that all activities and standard of work carried out meet the requirements of all regulatory bodies</li> </ul> </li> <li>v. training organisations <ul style="list-style-type: none"> <li>• meet industry requirements for training and development</li> <li>• recommending standards</li> </ul> </li> <li>vi. professional bodies <ul style="list-style-type: none"> <li>• Continuing Professional Development (CPD)</li> <li>• provide recommendations for future legislation.</li> </ul> </li> </ul>
<p>1.2 Roles of construction colleagues, team members and career progression pathways</p>	<p>1.2.1 Professional, craft and operative roles in the building team and their key responsibilities</p> <p>a) Professional role responsibilities:</p> <ul style="list-style-type: none"> <li>i. architect <ul style="list-style-type: none"> <li>• liaise with client and other relevant parties to design building, and ensure it is completed to standard</li> <li>• the client's representative on site/in the workplace</li> <li>• specify materials used for the project</li> <li>• on smaller projects advising on legal matters, including risks and disputes, monitor sub-contractors and stages of construction</li> </ul> </li> <li>ii. quantity surveyor <ul style="list-style-type: none"> <li>• work out quantities and costs of materials, time and labour for tender</li> <li>• negotiate contracts and work schedules</li> <li>• advise on legal matters, including risks and disputes</li> <li>• monitor sub-contractors and stages of construction</li> </ul> </li> <li>iii. building surveyor <ul style="list-style-type: none"> <li>• guide construction and development projects</li> <li>• provide professional advice on matters such as the structural integrity of a property or, its value, accessibility specifications and health and safety requirements</li> <li>• advise on energy efficiency and environmental impact of a property</li> </ul> </li> <li>iv. structural engineer <ul style="list-style-type: none"> <li>• ensure structures can withstand the stresses and pressures imposed through use and from the environment</li> <li>• calculate stability, strength and rigidity</li> <li>• advise on size scale and suitability of materials used</li> </ul> </li> <li>v. mechanical engineer <ul style="list-style-type: none"> <li>• create solutions and solve problems, playing a central role in the design and implementation of moving parts in a range of industries</li> </ul> </li> <li>vi. estimator</li> </ul>

## Topics

## Content elements

- calculate how much construction projects will cost, taking into account labour, materials and equipment requirements
- negotiate with suppliers and gain quotes from sub-contractors
- use this information to compile detailed cost proposals for a client
- works closely with the quantity surveyor
- usually responsible for completing tenders
- vii. site manager
  - coordinate the total build of the project from start to finish including organising schedule of work, costings and budgets
  - plan the work and oversee the buying/hiring of plant and equipment
- viii. architectural technologist
  - work with architects to develop technical drawings, building models, material specifications
  - ensure designs meet regulations
- ix. BIM manager
  - oversee the building information modelling process
  - manage digital 3d model data, design collaboration and file sharing
- x. project manager
  - plan and oversee entire project lifecycle
  - manage budget, schedule, quality, safety, staffing, materials, subcontractors
- xi. site engineer/planner
  - develops site plans, logistics, access
  - order materials, plant, equipment
  - manage/inspect site operations and contractors
- xii. building services engineer
  - design and oversee installation of systems such as electrical, ventilation, plumbing, heating/cooling
  - confirm functionality and compliance.
- b) Craft role responsibilities:
  - i. carpenter/joiner
    - complete all first and second fix operations in buildings including roof trusses, floors, skirtings, doors staircases, partition walls, and door and window furniture
  - ii. bricklayer
    - lay bricks
    - pre-cut stone and concrete blocks in mortar
    - construct, extend and repair buildings, and other structures such as foundations, walls, chimneys or decorative masonry features
  - iii. plumber
    - install water, drainage and heating systems
    - cut, shape and join pipes and fittings

**Topics****Content elements**

- find and fix faults
- service plumbing systems
- iv. gas/heating engineer
  - carry out installation, servicing and maintenance of gas appliances and pipework systems
- v. electrician
  - install indoor and outdoor electrical control, wiring, and lighting systems
  - inspect and test electrical systems, including fuses, transformers and circuit breakers
- vi. plasterer/dry liner
  - apply wet finishes to walls and ceilings and external finish to walls
  - create ornamental features like ceiling roses, cornices and architraves
- vii. painter and decorator
  - apply paint, varnish, wallpaper and other finishes and special coatings to the walls, ceilings and other surfaces of buildings and structures
  - protect surfaces from weather damage, erosion mould and rust
  - make surfaces look attractive
- viii. wall and floor tiler
  - cut and place wall and floor tiles
- ix. roofer
  - covers roof with slates, tiles, sheets or cladding
  - apply waterproof membranes to flat roofs
  - fit plastic or lead flashing around chimneys seal roof joints
- x. renewable energy installer
  - install and maintain renewable energy systems like solar panels, heat pumps, wind turbines
  - follow plans to assemble, connect, test systems
- xi. floor layer
  - prepare and lay flooring materials including wood, laminate, vinyl and carpet
  - measure areas, lay underlay and adhesive, cuts materials, fit trims and edges.
- c) Operative role responsibilities:
  - i. general building operative/labourer
    - unload materials
    - prepares site/workplace areas
    - provides craft teams with materials
  - ii. ground worker
    - excavate trenches
    - prepare and lay drainage pipes
    - prepares and lay floors and sub strata for roads
  - iii. highways operative
    - work on roads and highways on paving, repair to surfaces, cleaning and traffic management

**Topics**

**Content elements**

- iv. plant operative
  - drive and operate construction plant (including excavators and dumpers)
- v. scaffolder
  - erect and dismantle temporary static metal scaffoldings on structures in construction areas to enable others to work at height and carry out their roles safely
  - may set up a scaffolding inside or outside a building.

**1.2.2 Key stages involved in a construction project, their logical sequence, and factors that may impact the sequencing**

- a) Key stage and their logical sequence:
  - i. stage 1 – site investigation
  - ii. stage 2 – design and planning
  - iii. stage 3 – setting up site
  - iv. stage 4 – groundwork
  - v. stage 5 – substructure
  - vi. stage 6 – superstructure
  - vii. stage 7 – external works
  - viii. stage 8 – internal services and finishes
  - ix. stage 9 – testing, commissioning and handover.
- b) Factors that impact sequencing:
  - i. planning permission
  - ii. site conditions
  - iii. lack of/shortage of materials and or labour
  - iv. adverse weather
  - v. disputes
  - vi. regulatory changes
  - vii. accidents
  - viii. investigations.

**1.2.3 Career opportunities and progression routes that exist in the construction industry and where to get information on them**

- a) Career opportunities in hierarchy order:
  - i. craft
  - ii. supervisory
  - iii. managerial
  - iv. professional.
- b) Progression routes in sequence:
  - i. apprenticeship to level 2/3
  - ii. craft level 2/3 progress to supervisor
  - iii. further study to site manager or similar role
  - iv. higher education into a professional role.
- c) Where to access information:
  - i. employer
  - ii. college/university open days – progression within education
  - iii. local company websites
  - iv. trade organisation websites
  - v. CGLI website

Topics	Content elements
	<ul style="list-style-type: none"> <li>vi. careers advisor.</li> </ul> <p>1.2.4 The importance/benefits of maintaining Continuous Professional Development (CPD) and lifelong learning</p> <ul style="list-style-type: none"> <li>a) <b>Definition</b> 'CPD' – ongoing process of acquiring and enhancing knowledge, skills and competencies throughout own professional career. Involves engaging in activities and learning opportunities that help individuals stay up to date with industry trends, advancements and best practices.</li> <li>b) Benefits of maintaining CPD: <ul style="list-style-type: none"> <li>i. keeping knowledge and skills up to date</li> <li>ii. professional standard of qualifications and registrations are maintained</li> <li>iii. credibility and confidence are built and enhanced</li> <li>iv. employment opportunities increased with possible increased remuneration.</li> </ul> </li> </ul>
<p>1.3 Communication within construction team and wider (those outside the team)</p>	<p>1.3.1 Key personnel involved in day-to-day communications in construction workplace environments and the chain of reporting</p> <ul style="list-style-type: none"> <li>a) <b>Definition</b> 'Chain of reporting' – the line of authority and sequence of personnel that information or issues get communicated to within a workplace.</li> <li>b) Personnel and basic chain of reporting: <ul style="list-style-type: none"> <li>i. operatives and craft personnel report to</li> <li>ii. supervisors report to</li> <li>iii. site managers report to</li> <li>iv. project manager reports to</li> <li>v. clients/end user/occupier</li> <li>vi. suppliers – may report to a combination of i – v depending on project.</li> </ul> </li> </ul> <p>1.3.2 Additional parties' roles involved in wider communication on construction projects and activities</p> <ul style="list-style-type: none"> <li>a) Additional parties: <ul style="list-style-type: none"> <li>i. architects</li> <li>ii. Quantity Surveyor (QS)</li> <li>iii. safety officer</li> <li>iv. local authority planning</li> <li>v. local residents/neighbours to site/workplace area</li> <li>vi. building inspector (LABC or appointed)</li> <li>vii. environmental bodies</li> <li>viii. conservation officer</li> <li>ix. National House Building Council (NHBC).</li> </ul> </li> <li>b) Additional parties' roles in communication: <ul style="list-style-type: none"> <li>i. architects <ul style="list-style-type: none"> <li>• communicates details of type and size of building/s to be completed</li> </ul> </li> <li>ii. quantity surveyor</li> </ul> </li> </ul>

**Topics**

**Content elements**

- notifies client when payments are due
- iii. safety officer
  - communicates workplace safety issues to all personnel
- iv. local authorities planning
  - communicates breaches of planning permission to project manager and client
- v. local residents/neighbours to site/workplace area
  - voice and report consensus of opinion of residents over planned development
- vi. building inspector (LABC or appointed)
  - communicates to contractor and reporting to LA or relevant parties
- vii. environmental bodies
  - requests access and communicates findings of investigations and monitoring to planning team
- viii. conservation officer
  - requests access and communicates findings of investigations and monitoring to planning team
- ix. National House Building Council (NHBC)
  - communicates with architect, project manager and Site Manager on day-to-day site/workplace affairs in respect of new builds.

1.3.3 Forms of communication/ways in which communication may be used in construction workplace environments and their suitability related to information type

- a) Communication methods for types of information being communicated:
  - i. written
    - text/wording
    - formal, detailed or complex information
    - should be clear, concise, accurate and well-structured
    - should follow the appropriate tone, style and format for intended audience
  - ii. verbal
    - voice/words
    - ideas, opinions, emotions or instructions in a direct and personal way
    - should be confident, engaging, respectful and persuasive
    - should use appropriate language, tone of voice, consider appropriate use of specialist terminology
  - iii. visual
    - graphical or pictorial information
    - capture attention and enhance understanding
    - should be simple, attractive, relevant and consistent
    - should use appropriate colours, shapes and symbols effectively.

**Topics**

**Content elements**

- b) Types of written communications:
  - i. agenda items and minutes of meetings
  - ii. e-mails
  - iii. texts
  - iv. written notices – signs and posters
  - v. variation orders/architect’s instructions
  - vi. orders to suppliers/delivery notes
  - vii. manufacturer’s instructions
  - viii. specifications
  - ix. leaflets.
- c) Types of verbal communications:
  - i. face-to-face
  - ii. radio
  - iii. mobile phone.
- d) Types of visual communications:
  - i. hand signals
  - ii. video calls/online meetings
  - iii. signage and notices
  - iv. drawings/plans.

**1.3.4 Considerations for maintaining positive communication with colleagues and other parties when working in construction environments and the importance/benefits of doing so**

- a) Positive written communication considerations:
  - i. creates a permanent record of evidence
  - ii. can be used as a legal document
  - iii. can be sent to many people at once/one time
  - iv. suitable for long and distant communication and repetitive standing orders
  - v. information presented as stated fact – no question as to the content/variation of message via delivery.
- b) Positive verbal communication considerations:
  - i. can aid in building rapport and trust
  - ii. establishes empathy with audience/others
  - iii. allows for quick/instant feedback once delivered
  - iv. reduces possible misunderstandings through opportunity for clarification ‘in the moment’.
- c) Importance/benefits of maintaining positive communications:
  - i. ensure everyone is clear on tasks to be performed
  - ii. avoid misunderstanding
  - iii. maintain/promote safety
  - iv. build trust.

## 1.4 The importance of good customer service

### 1.4.1 Key elements and considerations that make up good customer service in construction activities:

- a) Key elements of good customer service:
  - i. good communication
    - updated on project details
      - timelines
      - costs
      - changes
    - using their preferred communication method
    - listening to and addressing their concerns
  - ii. reliability/honesty
    - completing high quality work
    - working to schedule as promised
    - taking accountability if issues arise
  - iii. responsiveness
    - reaching out to customers promptly
    - having systems to respond to inquiries, requests, complaints quickly
  - iv. expertise
    - having qualified, knowledgeable staff
    - providing solutions tailored to their needs
  - v. courtesy
    - treating customers with respect and professionalism
    - being patient and helpful even when under pressure
    - making them feel valued
    - positive customer reviews and feedback.

### 1.4.2 Importance of good customer service in construction from the perspective of employees, employers and customers

- a) Employee perspective:
  - i. builds trust and rapport with customers
  - ii. creates positive work environment
  - iii. gives sense of pride in own work
  - iv. opportunity to showcase expertise
  - v. gain recognition and rewards.
- b) Employer perspective:
  - i. attracts new customers and business – potential expansion and growth
  - ii. improves customer satisfaction and loyalty – and/or provide recommendations to others
  - iii. reduces complaints and improves reputation
  - iv. competitive advantage over other companies
  - v. increased productivity and profitability.
- c) Customer perspective:
  - i. creates a positive experience
  - ii. makes them feel valued and respected
  - iii. issues are handled quickly and effectively
  - iv. needs and expectations are met
  - v. time saved through having trusted source of service.

Topics	Content elements
1.5 Quality assurance and quality control of construction work	<p>1.5.1 The purpose of quality assurance activities to construction activities and the impact they aim to have on quality of work, efficiencies of activity</p> <ul style="list-style-type: none"> <li>a) <b>Definition</b> 'Quality Assurance (QA)' – checking work systematically to make sure it meets standards and requirements.</li> <li>b) <b>Definition</b> 'Quality Control (QC)' – the process of checking outcomes from quality assurance are being achieved eg Building Control.</li> <li>c) QC methods used in construction: <ul style="list-style-type: none"> <li>i. inspections by others/supervisors</li> <li>ii. regular testing – including random sampling</li> <li>iii. documented processes/checklists</li> <li>iv. official audits.</li> </ul> </li> <li>d) Purpose and impact of QA and QC activities: <ul style="list-style-type: none"> <li>i. meet agreed quality standards of work</li> <li>ii. maintain consistency across activities/instances</li> <li>iii. check and ensure safety of procedures</li> <li>iv. help find problems in early stages before they cause bigger issues</li> <li>v. increase efficiency through monitoring and correcting issues along the way rather than at the end</li> <li>vi. making sure collective end result of job meets external requirements and factors.</li> </ul> </li> </ul>
1.6 Roles of construction trade/professional bodies and unions	<p>1.6.1 The role and purpose of trade and professional bodies within the construction sector and the services/benefits they can provide</p> <ul style="list-style-type: none"> <li>a) Role of trade and professional bodies: <ul style="list-style-type: none"> <li>i. provide support and help to tradespeople</li> <li>ii. represent and advocate in cases of issue</li> <li>iii. educate and provide training and CPD</li> <li>iv. source of information and guidance</li> <li>v. support networking within/across trade areas</li> <li>vi. act in advisory role to government</li> <li>vii. promote the industry and careers within it.</li> </ul> </li> </ul> <p>1.6.2 The role of unions within the construction sector and the services/benefits they can provide</p> <ul style="list-style-type: none"> <li>a) Role of unions: <ul style="list-style-type: none"> <li>i. negotiate agreements with employers on pay and conditions</li> <li>ii. discuss major changes to the workplace eg large scale redundancy</li> <li>iii. discuss members' concerns with employers</li> <li>iv. accompany members in disciplinary and grievance meetings</li> <li>v. provide members with legal and financial advice</li> <li>vi. provide training and opportunities for CPD.</li> </ul> </li> </ul>

Topics	Content elements
1.7 Competent person schemes and their importance	<p>1.7.1 The role and purpose of competent person schemes in place for construction trades</p> <ul style="list-style-type: none"> <li>a) Role of competent person schemes: <ul style="list-style-type: none"> <li>i. provide evidence of training</li> <li>ii. provide evidence of assessment</li> <li>iii. provide evidence of competence/verification of skills</li> <li>iv. provide proof of identity of individual.</li> </ul> </li> <li>b) Purpose of competent person schemes: <ul style="list-style-type: none"> <li>i. upholds industry standards and best practice</li> <li>ii. reduces risks to workers and the public</li> <li>iii. provides assurance to clients/employers.</li> </ul> </li> </ul>
1.8 Requirements for professional registration when working in the construction industry	<p>1.8.1 Potential benefits of registration with relevant professional construction institutions</p> <ul style="list-style-type: none"> <li>a) Potential benefits of registration: <ul style="list-style-type: none"> <li>i. higher earning potential</li> <li>ii. improved career prospects and employability</li> <li>iii. enhanced status leading to higher self-esteem</li> <li>iv. international recognition of competence and commitment</li> <li>v. evidence of expertise</li> <li>vi. greater influence within own organisation and industry</li> <li>vii. continuous professional development (CPD)</li> <li>viii. legal indemnity cover</li> <li>ix. networking opportunities.</li> </ul> </li> </ul> <p>1.8.2 The role and purpose of professional institutions related to the construction industry</p> <ul style="list-style-type: none"> <li>a) Role and purpose: <ul style="list-style-type: none"> <li>i. work in the public interest and advance the public good in their respective fields</li> <li>ii. uphold standards of competence, conduct and ethics among members</li> <li>iii. award chartered status to qualified professionals who meet their criteria of knowledge and behaviour</li> <li>iv. provide learning programmes, research, resources, services and events for their members and stakeholders.</li> </ul> </li> </ul>

## Learning outcome 2

Understand construction information

Topics	Content elements
2.1 The purpose of controls on the construction process	<p>2.1.1 Controls and regulations that support the construction process, who they impact and where they can be accessed</p> <ul style="list-style-type: none"><li>a) Controls and regulation types:<ul style="list-style-type: none"><li>i. pre-planning permission</li><li>ii. planning permission/permitted development/national park authority</li><li>iii. building regulations</li><li>iv. health and safety law</li><li>v. quality and standards (British standards)</li><li>vi. environmental law/regulations</li><li>vii. listed buildings</li><li>viii. tree preservation orders</li><li>ix. English heritage.</li></ul></li><li>b) Who is impacted by the controls and regulations:<ul style="list-style-type: none"><li>i. client/homeowner/end user</li><li>ii. design team<ul style="list-style-type: none"><li>• architect</li><li>• surveyor</li></ul></li><li>iii. managerial team<ul style="list-style-type: none"><li>• site manager</li><li>• site supervisor</li></ul></li><li>iv. tradespeople</li><li>v. manufactures/suppliers of equipment and materials</li><li>vi. the general public.</li></ul></li><li>c) Where details of the controls can be accessed:<ul style="list-style-type: none"><li>i. onsite/in workplace</li><li>ii. online eg on government/local authority websites</li><li>iii. local libraries</li><li>iv. in the code of conduct</li><li>v. in induction materials</li><li>vi. professional bodies</li><li>vii. building material suppliers.</li></ul></li></ul>
2.2 Types of information and technical drawings used in the construction industry	<p>2.2.1 Construction information used to manage, support and organise projects and roles responsible for their production and use</p> <ul style="list-style-type: none"><li>a) Key construction information used to manage, support and organise:<ul style="list-style-type: none"><li>i. site/workplace rules/code of conduct</li><li>ii. bill of quantities<ul style="list-style-type: none"><li>• to control list material quantities and costs</li></ul></li><li>iii. construction phase plan</li><li>iv. programme of works/Gantt charts</li><li>v. specifications</li><li>vi. drawings</li><li>vii. schedules</li></ul></li></ul>

## Topics

## Content elements

- material/labour
- viii. Building Information Modelling (BIM)
- ix. Risk Assessment and Method Statement (RAMS).

### 2.2.2 Methods of drawing used for construction plans and blueprints and their advantages and disadvantages

- a) Methods and their advantages/disadvantages:
- i. rough sketch
    - quick
    - cheap
    - low detail
  - ii. hand
    - level of detail may vary
    - time consuming to produce if highly detailed
    - can be more expressive
    - more detailed than a rough sketch
  - iii. line drawing
    - precise
    - accurate
    - easily edited
    - scaled
    - usually more detailed and accurate than a hand drawing
  - iv. Computer Aided Design (CAD)
    - precise
    - adaptable
    - detailed
    - easily sharable electronically
    - may be complex and expensive to produce
    - usually the most detailed and complex form method.

### 2.2.3 Types and styles of construction drawings

- a) Types of drawing:
- i. location
    - block
    - site
    - layout
  - ii. component detail
  - iii. assembly/detail drawings
  - iv. elevations and plans
    - floorplans
    - reflective plans.
- b) Styles of drawing
- i. orthographic
  - ii. isometric
  - iii. sectional
  - iv. perspective.

## Topics

## Content elements

### 2.2.4 Technical information included on construction plans, diagrams

#### a) Technical information:

- i. scale
- ii. hatchings
- iii. measurements
- iv. dimensions
  - length
  - width
  - height
  - area
- v. symbols
- vi. services
  - water
  - gas
  - electricity
  - drainage
  - internet/phone
- vii. architectural
- viii. version control/date
- ix. orientation.

#### b) What information on plans is used for:

- i. calculation of materials costs/quantities
- ii. setting out building in correct position
- iii. identifying materials to be used and their location
- iv. positioning and fixing of components
- v. communicating hazards
- vi. indicating specific common locations
- vii. identifying services
- viii. orientation of site when in real world
- ix. communicating common shared set of information across trades/roles
- x. ensuring currency and visibility of alterations/changes
- xi. ownership and version details
- xii. completed vision for project/building.

Topics	Content elements
2.3 Data protection	<p>2.3.1 Importance of data protection legislation and security of information in construction environments and methods workplaces may use to ensure data is kept secure</p> <ul style="list-style-type: none"> <li>a) Legislation: <ul style="list-style-type: none"> <li>i. Data Protection Act</li> <li>ii. General Data Protection Regulation (GDPR).</li> </ul> </li> <li>b) Importance: <ul style="list-style-type: none"> <li>i. ensures confidential information kept secure</li> <li>ii. uphold industry regulations</li> <li>iii. secures sensitive documents from theft and misuse <ul style="list-style-type: none"> <li>• staff information</li> <li>• client information</li> </ul> </li> <li>iv. prevents data breaches</li> <li>v. allows controlled record access.</li> </ul> </li> <li>c) Methods: <ul style="list-style-type: none"> <li>i. user permissions and authentication eg passwords</li> <li>ii. using secure file sharing procedures for transferring documents</li> <li>iii. safe and secure storage of documents</li> <li>iv. regularly backing up data offline</li> <li>v. following company policies.</li> </ul> </li> </ul>

## Learning outcome 3

Understand how to set up and secure construction work areas

Topics	Content elements
3.1 Construction workplace planning requirements	<p>3.1.1 Different areas of construction workplaces that must be included on logistics plans and their importance</p> <p>a) Areas:</p> <ul style="list-style-type: none"><li>i. environmental areas (ponds, plants, trees and wildlife)</li><li>ii. neighbouring properties</li><li>iii. site/workplace security</li><li>iv. service connections</li><li>v. access/egress and parking</li><li>vi. site office</li><li>vii. health, safety and welfare</li><li>viii. emergency assembly</li><li>ix. pedestrian routes/access</li><li>x. materials – delivery and storage<ul style="list-style-type: none"><li>• dry</li><li>• open</li><li>• hazardous</li></ul></li><li>xi. waste management/recycling</li><li>xii. plant</li><li>xiii. crane tower location.</li></ul> <p>b) Importance of having the areas marked on plans:</p> <ul style="list-style-type: none"><li>i. for efficient site/workplace movement and access (eg deliveries)</li><li>ii. to ensure boundary lines are maintained and reduce breaches</li><li>iii. to maintain and improve safety and security</li><li>iv. to clearly inform of location of facilities for all</li><li>v. to comply with legislation.</li></ul>

Topics	Content elements
3.2 Considerations in relation to construction workplace security	<p>3.2.1 The importance of site/workplace security and the employee/employer responsibilities for ensuring it</p> <p>a) Importance:</p> <ol style="list-style-type: none"> <li>i. to maintain safety</li> <li>ii. to identify and control access</li> <li>iii. to minimise financial loss eg loss/theft of plant, machinery and/or materials</li> <li>iv. to prevent unauthorised entry</li> <li>v. to identify and maintain safe access routes</li> <li>vi. to control access to plant and machinery and controlled substances.</li> </ol> <p>b) Responsibilities of employee:</p> <ol style="list-style-type: none"> <li>i. return all materials and equipment after use</li> <li>ii. sign in/out as required</li> <li>iii. report any issues to employer/supervisor</li> <li>iv. follow company guidelines and safety signage.</li> </ol> <p>c) Responsibilities of employer:</p> <ol style="list-style-type: none"> <li>i. provide security measures as required eg booking in sign in/out, security fencing, security guards/personnel</li> <li>ii. ensure security reporting procedures and guidance are in place.</li> </ol>

## Learning outcome 4

Know building substructure and superstructure components

Topics	Content elements
4.1 Types and purposes of substructures	<p>4.1.1 Types of foundations and their descriptions/features</p> <p>a) Types and their descriptions:</p> <ol style="list-style-type: none"> <li>i. pad <ul style="list-style-type: none"> <li>• rectangular or circular pads</li> <li>• usually of concrete</li> <li>• used to support single point loads such as columns</li> </ul> </li> <li>ii. pile <ul style="list-style-type: none"> <li>• deep cylindrical foundation</li> <li>• bored below ground</li> <li>• transferring the building load to load bearing ground made up of concrete and steel reinforcement</li> </ul> </li> <li>iii. raft <ul style="list-style-type: none"> <li>• reinforced concrete slabs that cover an over site area</li> <li>• often the full footprint of the building</li> </ul> </li> <li>iv. strip <ul style="list-style-type: none"> <li>• shallow foundation</li> <li>• used to provide a continuous, level or sometimes stepped strip of support around the perimeter of a building</li> <li>• may also be positioned where there are internal load bearing walls.</li> </ul> </li> </ol>

Topics	Content elements
	<p>4.1.2 Materials used in substructures</p> <p>a) Materials:</p> <ol style="list-style-type: none"> <li>i. brick</li> <li>ii. block</li> <li>iii. steel</li> <li>iv. concrete</li> <li>v. damp proof course (DPC)/damp proof membrane (DPM) and membranes</li> <li>vi. insulation</li> <li>vii. aggregate.</li> </ol>
<p>4.2 Sequence of first and second fix building</p>	<p>4.2.1 First and second building elements and logical sequence considerations relating to their installation</p> <p>a) First fix:</p> <ol style="list-style-type: none"> <li>i. step 1 – external envelope/shell</li> <li>ii. step 2 – roof structure</li> <li>iii. step 3 – roof coverings</li> <li>iv. step 4 – floors</li> <li>v. step 5 – stairs</li> <li>vi. step 6 – partitions</li> <li>vii. step 7 – external door and window frames</li> <li>viii. step 8 – internal door lining</li> <li>ix. step 9 – services</li> <li>x. step 10 – plaster.</li> </ol> <p>b) Second fix (order may vary as activities may occur concurrently):</p> <ol style="list-style-type: none"> <li>i. internal doors and door furniture</li> <li>ii. architraves and skirting boards</li> <li>iii. kitchen units</li> <li>iv. electrical fittings</li> <li>v. sanitary ware</li> <li>vi. finishes</li> <li>vii. wall</li> <li>viii. floor</li> <li>ix. landscape.</li> </ol>

Topics	Content elements
4.3 Floor types and their associated materials	<p>4.3.1 Types of floors and factors impacting on when they are used</p> <p>a) Types of floors:</p> <ol style="list-style-type: none"> <li>i. solid <ul style="list-style-type: none"> <li>• concrete</li> <li>• sometimes reinforced and insulated</li> </ul> </li> <li>ii. suspended <ul style="list-style-type: none"> <li>• timber</li> <li>• can be concrete beam with block infill.</li> </ul> </li> </ol> <p>b) Factors impacting floor type:</p> <ol style="list-style-type: none"> <li>i. loading <ul style="list-style-type: none"> <li>• strength</li> <li>• reinforcement</li> </ul> </li> <li>ii. moisture <ul style="list-style-type: none"> <li>• sub floor/ground underneath</li> </ul> </li> <li>iii. subsequent finish <ul style="list-style-type: none"> <li>• underfloor heating</li> <li>• liquid floor screed</li> <li>• tiles.</li> </ul> </li> </ol> <p>4.3.2 Types of materials used for flooring</p> <p>a) Flooring materials:</p> <ol style="list-style-type: none"> <li>i. block/beam</li> <li>ii. concrete</li> <li>iii. timber</li> <li>iv. steel and concrete deck</li> <li>v. steel reinforcement</li> <li>vi. insulation</li> <li>vii. DPM.</li> </ol>

Topics	Content elements
4.4 Wall types and their associated materials	<p>4.4.1 Types of walls and factors impacting on when they are used</p> <p>a) Types of walls:</p> <ol style="list-style-type: none"> <li>i. external <ul style="list-style-type: none"> <li>• cavity</li> <li>• solid</li> <li>• steel frame</li> <li>• curtain</li> <li>• timber frame</li> <li>• concrete frame</li> </ul> </li> <li>ii. internal <ul style="list-style-type: none"> <li>• traditional (brick or block)</li> <li>• timber stud</li> <li>• metal stud and metal lining.</li> </ul> </li> </ol> <p>b) Factors impacting wall type:</p> <ol style="list-style-type: none"> <li>i. loading</li> <li>ii. climate <ul style="list-style-type: none"> <li>• location</li> </ul> </li> <li>iii. finish <ul style="list-style-type: none"> <li>• client/architect specification</li> <li>• conservation requirements.</li> </ul> </li> </ol> <p>4.4.2 Types of materials used for walls</p> <p>a) Wall materials:</p> <ol style="list-style-type: none"> <li>i. brick</li> <li>ii. block</li> <li>iii. render</li> <li>iv. timber</li> <li>v. concrete</li> <li>vi. steel</li> <li>vii. cladding</li> <li>viii. insulation</li> <li>ix. DPC/Structurally Insulated Panels (SIPs)</li> <li>x. ties and clips.</li> </ol>

**Topics****Content elements**

4.5 Roof types and their associated materials

4.5.1 Types of roofs and their common materials and factors affecting their appropriateness/use

- a) Pitched roof types:
  - i. timber
    - traditional hand cut
    - trussed
  - ii. metal
    - framed
    - trussed.
- b) Flat roof types:
  - i. timber
  - ii. metal
  - iii. green.
- c) Roofing materials:
  - i. timber
  - ii. lead
  - iii. slate
  - iv. tile
    - concrete
    - clay
    - composite
  - v. bitumen felt
  - vi. sheet metal or timber
  - vii. synthetic systems
    - fiberglass
    - EDPM
  - viii. liquid resin
  - ix. shingle
    - clay
    - timber
    - bitumen felt.

Topics	Content elements
4.6 Types of finishes	<p>4.6.1 Types of internal finishes and factors affecting their appropriateness for use</p> <ol style="list-style-type: none"> <li>a) Types of internal finishes:           <ol style="list-style-type: none"> <li>i. paint systems</li> <li>ii. paper coverings</li> <li>iii. plaster</li> <li>iv. dry lined with tape and joint system</li> <li>v. tiling</li> <li>vi. cladding               <ul style="list-style-type: none"> <li>• timber</li> <li>• plastic</li> <li>• composite.</li> </ul> </li> </ol> </li> <li>b) Factors affecting use:           <ol style="list-style-type: none"> <li>i. base structure</li> <li>ii. customer requirements</li> <li>iii. cost</li> <li>iv. conservation restrictions.</li> </ol> </li> </ol> <p>4.6.2 Types of external finishes and factors affecting their appropriateness for use</p> <ol style="list-style-type: none"> <li>a) External finishes:           <ol style="list-style-type: none"> <li>i. paint systems</li> <li>ii. rendering systems</li> <li>iii. coatings</li> <li>iv. External Wall Insulation (EWI)</li> <li>v. cladding               <ul style="list-style-type: none"> <li>• timber</li> <li>• plastic</li> <li>• composite</li> <li>• slate</li> <li>• tile.</li> </ul> </li> </ol> </li> <li>b) Factors affecting use:           <ol style="list-style-type: none"> <li>i. conservation requirements</li> <li>ii. building control</li> <li>iii. customer requirements</li> <li>iv. cost.</li> </ol> </li> </ol>

Topics	Content elements
4.7 Building services related to construction activities	<p>4.7.1 Types of services that are used to supply buildings, roles responsible for their servicing and maintenance and construction activities that rely on them</p> <p>a) Services:</p> <ol style="list-style-type: none"> <li>i. electricity</li> <li>ii. gas</li> <li>iii. water</li> <li>iv. drainage <ul style="list-style-type: none"> <li>• surface</li> <li>• foul</li> </ul> </li> <li>v. communication networks <ul style="list-style-type: none"> <li>• television</li> <li>• internet</li> <li>• phone</li> <li>• 'smart' home services.</li> </ul> </li> </ol> <p>b) Roles responsible for installation:</p> <ol style="list-style-type: none"> <li>i. electricity <ul style="list-style-type: none"> <li>• electrician and/or national utility company</li> </ul> </li> <li>ii. gas <ul style="list-style-type: none"> <li>• gas engineer or plumber if additionally qualified in gas safety national utility company</li> </ul> </li> <li>iii. water <ul style="list-style-type: none"> <li>• plumber and/or national utility company (for connection to mains)</li> </ul> </li> <li>iv. drainage (surface, foul) <ul style="list-style-type: none"> <li>• local authority</li> <li>• ground worker/plumber</li> </ul> </li> <li>v. communication networks <ul style="list-style-type: none"> <li>• internet/telephone engineer.</li> </ul> </li> </ol>

Topics	Content elements
4.8 Considerations for building materials used in construction activities	<p>4.8.1 Factors affecting materials used in building structure and substructure elements</p> <ul style="list-style-type: none"> <li>a) Elements: <ul style="list-style-type: none"> <li>i. foundations</li> <li>ii. floors</li> <li>iii. walls</li> <li>iv. roofs.</li> </ul> </li> <li>b) Factors affecting material use: <ul style="list-style-type: none"> <li>i. availability</li> <li>ii. bearing capacity</li> <li>iii. carbon footprint</li> <li>iv. client expectations/requirements</li> <li>v. conservation requirements (if relevant)</li> <li>vi. cost</li> <li>vii. design requirements</li> <li>viii. ground conditions</li> <li>ix. installation time</li> <li>x. longevity of material/performance over time</li> <li>xi. maintenance requirements</li> <li>xii. physical strength</li> <li>xiii. planning/regulation requirements</li> <li>xiv. purpose</li> <li>xv. sustainability</li> <li>xvi. transport, delivery and position</li> <li>xvii. handling weight.</li> </ul> </li> </ul>

## Learning outcome 5

Understand personal development and working with others in the construction industry

Topics	Content elements
5.1 Equality and protected characteristics	<p>5.1.1 The definition of equality and protected characteristics under current legislation and other potential additional barrier characteristics</p> <ul style="list-style-type: none"><li>a) <b>Definition</b> 'Equality' – a situation in which everyone is equal and has the same rights.</li><li>b) Protected characteristics:<ul style="list-style-type: none"><li>i. age</li><li>ii. disability</li><li>iii. gender reassignment/gender identity</li><li>iv. marriage and civil partnership</li><li>v. pregnancy and maternity</li><li>vi. race (including colour, nationality and ethnic or national origin)</li><li>vii. religion or belief</li><li>viii. sex</li><li>ix. sexual orientation.</li></ul></li><li>c) Additional barrier characteristics:<ul style="list-style-type: none"><li>i. employment history</li><li>ii. educational background/attainment</li><li>iii. socio-economic status</li><li>iv. criminal record</li><li>v. unconscious bias.</li></ul></li></ul>

Topics	Content elements
5.2 Considerations when valuing diversity and inclusion	<p>5.2.1 The principles of diversity and inclusion in the workplace</p> <ol style="list-style-type: none"> <li>a) <b>Definition</b> 'Diversity' – including or involving people with a range of different characteristics. Having a variety of individuals and points of view represented.</li> <li>b) <b>Definition</b> 'Inclusion' – providing equal access to opportunities and resources for those who might otherwise be excluded.</li> </ol> <p>5.2.2 Positive impacts of recognising and valuing diversity and inclusion in the workplace</p> <ol style="list-style-type: none"> <li>a) Positive impacts: <ol style="list-style-type: none"> <li>i. for the individual <ul style="list-style-type: none"> <li>• personal motivation/self-actualisation</li> <li>• feelings of value</li> <li>• well-being</li> <li>• job satisfaction and engagement</li> </ul> </li> <li>ii. for team dynamics <ul style="list-style-type: none"> <li>• effective interpersonal communication</li> <li>• positive teamwork</li> <li>• time saving</li> </ul> </li> <li>iii. for employers and businesses <ul style="list-style-type: none"> <li>• employee retention</li> <li>• meeting legislation requirements</li> <li>• staff progression</li> <li>• societal reputation</li> <li>• staff recruitment</li> <li>• increased productivity and performance</li> <li>• innovation, creativity and problem solving.</li> </ul> </li> </ol> </li> </ol>

Topics	Content elements
5.3 Regulations, support and guidance relating to equality, diversity and inclusion (EDI)	<p>5.3.1 Current regulations and legislation relating to EDI</p> <ol style="list-style-type: none"> <li>a) Regulations and legislation: <ol style="list-style-type: none"> <li>i. UK Equality Act</li> <li>ii. Human Rights Act.</li> </ol> </li> </ol> <p>5.3.2 The responsibility for awareness and action in relation to the UK Equality Act</p> <ol style="list-style-type: none"> <li>a) Responsibilities: <ol style="list-style-type: none"> <li>i. for the employee <ul style="list-style-type: none"> <li>• awareness of</li> <li>• adherence to</li> </ul> </li> <li>ii. for the employer: <ul style="list-style-type: none"> <li>• awareness of</li> <li>• adherence to</li> <li>• procedures in place to address identified issues</li> <li>• promoting awareness/training employees</li> <li>• point of contact (welfare officer).</li> </ul> </li> </ol> </li> </ol> <p>5.3.3 Sources of other information related to supporting and promoting EDI in the workplace</p> <ol style="list-style-type: none"> <li>a) Sources of information: <ol style="list-style-type: none"> <li>i. company charter/values</li> <li>ii. employee handbook</li> <li>iii. induction materials/programme</li> <li>iv. contractual documents/obligations</li> <li>v. external bodies and legislation</li> <li>vi. displays/signage and posters.</li> </ol> </li> </ol>
5.4 Characteristics of employment and self-development	<p>5.4.1 Key responsibilities of different employment types</p> <ol style="list-style-type: none"> <li>a) Employment types: <ol style="list-style-type: none"> <li>i. sole trader</li> <li>ii. sub-contractors</li> <li>iii. main developers</li> <li>iv. self-employed</li> </ol> </li> <li>b) Responsibilities: <ol style="list-style-type: none"> <li>i. tax</li> <li>ii. administration</li> <li>iii. planning</li> <li>iv. promotion</li> <li>v. insurance/liability</li> <li>vi. remuneration/wages</li> <li>vii. contracts</li> <li>viii. welfare.</li> </ol> </li> </ol> <p>5.4.2 Skills and characteristics which are beneficial to develop when working in construction roles and why these are important</p> <ol style="list-style-type: none"> <li>a) Skills: <ol style="list-style-type: none"> <li>i. organisational/planning</li> <li>ii. digital literacy</li> <li>iii. communication and collaboration</li> </ol> </li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iv. interpretation of information and directions</li> <li>v. practical trade skills (eg plastering, bricklaying etc).</li> <li>b) Personal traits/characteristics: <ul style="list-style-type: none"> <li>i. responsibility</li> <li>ii. autonomy</li> <li>iii. self-motivation</li> <li>iv. discipline</li> <li>v. resilience.</li> </ul> </li> <li>c) Importance: <ul style="list-style-type: none"> <li>i. productivity to meet deadlines/requirements</li> <li>ii. quality of work/finish</li> <li>iii. meeting goals and targets</li> <li>iv. business/career growth and development</li> <li>v. personal mental welfare</li> <li>vi. financial stability.</li> </ul> </li> </ul> <p>5.4.3 Patterns in employment and the potential impacts of rises and falls in demand</p> <ul style="list-style-type: none"> <li>a) Patterns: <ul style="list-style-type: none"> <li>i. peaks and troughs in construction work</li> <li>ii. recruitment shortfall</li> <li>iii. skills shortage forecasts</li> <li>iv. financial climate</li> <li>v. future trend predictions/forecasts</li> <li>vi. vacancies – use of local labour market intelligence and the opportunities that are available.</li> </ul> </li> <li>b) Impacts of fluctuations in demand: <ul style="list-style-type: none"> <li>i. cash flow</li> <li>ii. availability of labour</li> <li>iii. financial incentives and opportunities.</li> </ul> </li> </ul>

## Learning outcome 6

Know sustainability and emerging technology considerations affecting the construction industry

Topics	Content elements
6.1 Sustainability and emerging technologies	<p>6.1.1 Considerations and impacts of sustainability in relation to construction activities</p> <ul style="list-style-type: none"><li>a) <b>Definition</b> 'Sustainability' – constructing with renewable and recyclable resources while minimising waste and energy consumption to protect the natural environment materials.</li><li>b) Considerations:<ul style="list-style-type: none"><li>i. legislation</li><li>ii. technological advances</li><li>iii. education<ul style="list-style-type: none"><li>• eliminate bad practice</li><li>• encourage reporting</li></ul></li><li>iv. sourcing of local materials</li><li>v. using energy efficient plant and equipment<ul style="list-style-type: none"><li>• battery powered</li><li>• solar charging</li></ul></li><li>vi. changes to/or meeting historical practice</li><li>vii. availability of sustainable materials and equipment</li><li>viii. financial cost and available funding</li><li>ix. waste management practices<ul style="list-style-type: none"><li>• segregation of materials<ul style="list-style-type: none"><li>○ wood</li><li>○ plastic</li><li>○ cardboard</li><li>○ paper</li><li>○ plasterboard</li></ul></li><li>• limit environmental impact</li><li>• support recycling</li></ul></li><li>x. air flow in building design<ul style="list-style-type: none"><li>• acoustics</li><li>• airtightness</li><li>• ventilation.</li></ul></li></ul></li><li>c) Impacts/advantages of sustainability:<ul style="list-style-type: none"><li>i. benefits to the immediate locality<ul style="list-style-type: none"><li>• improved air quality</li><li>• noise reduction</li><li>• less waste</li></ul></li><li>ii. reduction in carbon footprint</li><li>iii. a cleaner healthier site/workplace</li><li>iv. personal fulfilment ('doing your bit')</li><li>v. company reputation.</li></ul></li><li>d) Potential drawbacks:<ul style="list-style-type: none"><li>i. increased costs</li></ul></li></ul>

**Topics**

**Content elements**

- ii. reduced/limited availability
  - including ranges/sizes available
- iii. lack of experience/expertise for installation
- iv. potential limitations based on site location/climate
- v. infrastructure for recycling waste
- vi. subject to changing legislation and incentives
- vii. resistance to changing traditional methods.

6.1.2 Emerging and green technologies, resources and materials and activities that may be employed to maintain, increase or enhance the sustainability of building projects and factors that may affect their use

- a) Technologies and resources:
  - i. electric vehicles/machinery
  - ii. solar/photovoltaic panels
  - iii. wind turbines
  - iv. air, water and ground-source heat pumps
  - v. use of drones/Unmanned Aerial Vehicles (UAVs) for area surveying
  - vi. 3D printing technologies
  - vii. Augmented Reality (AR)/Virtual Reality (VR)/simulated training environments
  - viii. Building Information Modelling (BIM).
- b) Materials:
  - i. self-healing concrete
  - ii. insulation types and position
  - iii. liquid floor screeds
  - iv. thin joint systems
  - v. transparent aluminium.
- c) Practices:
  - i. sustainable production – modular/prefab housing
  - ii. recycling/reuse demolition materials for hardcore/architectural salvage
  - iii. carbon neutral building design/'passive' buildings
  - iv. rainwater harvesting and reuse
  - v. installation of EV charging points on site/in buildings
  - vi. installation of green energies as standard
  - vii. refuse/reduce/reuse/repurpose/recycle
  - viii. increasing thermal performance of buildings.
- d) Factors affecting use of technologies and practices:
  - i. cost
  - ii. availability
  - iii. site/building location
  - iv. planning and design requirements
  - v. funding availability
  - vi. legislation
  - vii. local authority initiatives/restrictions.

## Unit guidance for delivery

<b>Opportunities for efficiencies in delivery across/between units:</b>	<p>Deliver alongside the Level 2 'Principles of welfare, health and safety in construction environments' unit as there may be efficiencies.</p> <p>Providers should consider candidate cohort and relevant chosen construction specialism(s) when preparing to deliver to see where contextualisation can be added to enhance relevance.</p>
<b>Suggestions for formative assessment opportunities:</b>	<p>Short formative assessments at the end of sessions/aligned to outcome.</p> <p>Sample test exam prep session to prepare for assessment.</p>
<b>Opportunities for visits/engagement with local industry and employers:</b>	<p>Employer engagement opportunities for this unit should be incorporated in order to allow the learner to understand application of knowledge learnt in context. This could include site visits linked to specific trade area or having guest lectures/speakers from local employers explaining elements of own role and working environments, career progression etc.</p>
<b>Considerations for innovative methods of delivery:</b>	<p>Providers should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions and self-study. A blended learning approach, with online learning opportunities, could be adopted for content delivery.</p> <p>1.6.1 learners could be encouraged to research a specific trade and professional bodies relevant to their chosen specialism/area of study eg CIBSE, trade organisation umbrella Build UK, FMB (Federation of Master Builders), NFB (National Federation of Builders) etc.</p> <p>1.8.2 learners could be encouraged to research a specific chartered institute relevant to their chosen specialism/area of study eg Chartered Institute of Building (CIOB), Royal Institute of British Architects (RIBA), The Royal Institution of Chartered Surveyors (RICS), Institution of Civil Engineers (ICE), Chartered Institution of Building Services Engineers (CIBSE) etc.</p>
<b>Ways of ensuring content is delivered in line with current, up-to-date industry practice:</b>	<p>Providers should check current legislation/guidance for amendments/changes prior to content delivery.</p> <p>Staff CPD in line with current practice (eg CSCS card).</p>
<b>EDI or accessibility considerations:</b>	None.
<b>Digital initiative considerations:</b>	None.
<b>Sustainability considerations:</b>	Encouraging paperless working practices – printing materials only where necessary.
<b>Books:</b>	N/A

**Websites:**

- <https://en.unesco.org/sustainabledevelopmentgoals>  
UNESCO and Sustainable Development Goals
  - <https://www.paintshow.co.uk/>  
National Painting and Decorating Show
-

## Unit 220 Access equipment

<b>Unit level:</b>	Level 2
<b>Guided Learning Hours (GLH):</b>	31
<b>Unit aim:</b>	The purpose of this unit is to provide the learner with the skills and knowledge required to select and use the appropriate working at height equipment. Working at height is the biggest cause of severe injury in the construction industry. Working safely with the most appropriate access equipment for the task must be the operative's prime consideration. Understanding and being able to use access equipment safely will provide the decorator with the capability to ensure not only their safety but also the safety of their fellow workers and members of the public.
<b>Assessment method:</b>	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
<b>Links to Occupational Standard:</b>	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

### Learning outcomes

- 1 Understand selection and inspection of access equipment
- 2 Use access equipment

## Learning outcome 1

Understand selection and inspection of access equipment

Topics	Content elements
1.1 Selection of access equipment	<p>1.1.1 Types of access equipment and factors to consider in selection</p> <p>a) Types:</p> <ol style="list-style-type: none"><li>i. extension ladders</li><li>ii. stepladders</li><li>iii. mobile towers</li><li>iv. trestle platforms</li><li>v. scaffold staging boards</li><li>vi. hop-ups</li><li>vii. podiums</li><li>viii. Mobile Elevated Working Platforms (MEWPs)</li></ol> <p>b) Factors to consider:</p> <ol style="list-style-type: none"><li>i. ground type and conditions</li><li>ii. height of work</li><li>iii. type of work – static or mobile</li><li>iv. duration of work</li><li>v. weight of materials and operatives</li><li>vi. number of operatives</li><li>vii. weather conditions</li><li>viii. internal/external locations</li><li>ix. access and egress</li><li>x. Work at Height Regulations (WAHR)</li><li>xi. manufacturer's instructions</li></ol>
1.2 Inspection of access equipment	<p>1.2.1 Reasons for inspecting access equipment, factors to consider and remedial actions</p> <p>a) Reasons:</p> <ol style="list-style-type: none"><li>i. prevention of accidents or incidents</li><li>ii. identification of faulty equipment:<ul style="list-style-type: none"><li>• damaged components</li><li>• incomplete assembly</li><li>• missing components</li><li>• manufacturing fault</li></ul></li></ol> <p>b) Factors to consider:</p> <ol style="list-style-type: none"><li>i. inspection time periods</li><li>ii. impact of adverse weather conditions</li><li>iii. inspection log ('scaff' tags) information</li></ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iv. accidents or incidents</li> <li>v. misuse or vandalism</li> </ul> <p>c) Remedial actions relating to faulty access equipment</p> <ul style="list-style-type: none"> <li>i. removal</li> <li>ii. reporting</li> </ul>

## Learning outcome 2

Use access equipment

Topics	Content elements
2.1 Factors affecting access equipment usage	<p>2.1.1 Factors to consider when erecting, carrying, moving, using and dismantling access equipment</p> <p>a) Factors to consider:</p> <ul style="list-style-type: none"> <li>i. public access</li> <li>ii. health and safety</li> <li>iii. overhead obstacles</li> <li>iv. ground conditions</li> <li>v. manufacturer's instructions</li> <li>vi. minimum number of operatives required</li> <li>vii. regulations: <ul style="list-style-type: none"> <li>• Manual Handling Operations Regulations (MHO)</li> <li>• Personal Protective Equipment (PPE) at Work Regulations</li> <li>• Work at Height Regulations (WAHR)</li> <li>• Health and Safety at Work Act (HASAWA)</li> <li>• Provision and Use of Work Equipment Regulations (PUWER)</li> </ul> </li> <li>viii. storage</li> </ul>
2.2 Use access equipment	<p>2.2.1 Plan for the use of access equipment</p> <p>a) Plan:</p> <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from drawings and specifications</li> </ul> <p>2.2.2 Select access equipment</p>

**Topics****Content elements**

2.2.3 Inspect access equipment

2.2.4 Erect access equipment

2.2.5 Use access equipment following manufacturer's instructions

2.2.6 Carry access equipment

2.2.7 Move access equipment

2.2.8 Dismantle access equipment

- a) Access equipment:
  - i. stepladders
  - ii. hop-ups

## Unit guidance for delivery

### Opportunities for efficiencies in delivery across/between units:

This unit can be delivered alongside Unit 201 and prior to Units 221–223 as working at height is relevant throughout this qualification.

Naturally occurring training activities involving the use of access equipment will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

### Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

**Safety quizzes:** Regular safety quizzes can gauge learner understanding of safety considerations and equipment usage. Include multiple-choice, true/false, and short-answer questions to cover a range of topics related to working at height safety.

**Scenario-based questions:** Present real-life scenarios involving different working at height situations. Ask learners to analyse the scenario, identify potential risks, and suggest appropriate safety measures and actions to take.

**Group discussions:** Divide the class into small groups and assign each group a specific topic related to working at height safety (eg equipment inspection, ladder safety). Have groups discuss the topic, prepare a short presentation, and share their findings with the class.

**Equipment inspection exercises:** Provide learners with images of various types of safety equipment used for working at height (eg ladders, scaffolds). Ask them to identify any issues or defects in the equipment based on what they've learned.

**Case studies:** Provide case studies of real accidents or incidents related to working at height. Ask learners to analyse the causes of the incidents, the potential safety violations, and what could have been done differently to prevent them.

**Role-play activities:** Assign roles to learners and have them act out different working at height scenarios, emphasising safety. This can help them to understand how effective teamwork contributes to safety.

**Peer assessment:** This not only reinforces their own understanding but also provides an opportunity for their peers to ask questions and learn from each other.

	<p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and considerations for working at height. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Visits to suppliers and employers: Arranging visits to outlets and sites where learners can explore the latest range of access equipment is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best equipment for specific projects.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self-study, City &amp; Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>
<p><b>Ways of ensuring content is delivered in line with current, up to date industry practice:</b></p>	<p>Using equipment at any height can be hazardous. Safety and the use of PPE must always be emphasised at every opportunity when delivering this unit. Staff delivering this unit must use up-to-date guidance, statistics and information.</p> <p>Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place.</p>
<p><b>EDI or accessibility considerations:</b></p>	<p>Tutors need to be proactive in developing practical and theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.</p>

**Digital initiative considerations:**

Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.

Virtual demonstrations: Conduct virtual access equipment demonstrations using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.

Simulation software: Use virtual or augmented reality simulations to create immersive scenarios where learners can practice making safe decisions while working at height. This allows them to experience potential hazards in a controlled environment.

Digital assessments: Implement online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

When incorporating digital initiatives, it's essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging unit.

**Sustainability considerations:**

Industry innovation for example more fibreglass and plastic and lightweight materials in manufacturing. Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.

**Books:**

Yarde B, Olsen S – The City & Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020)  
ISBN 9781398305779

**Websites:**

- <https://en.unesco.org/sustainabledevelopmentgoals>  
UNESCO and Sustainable Development Goals
- <https://www.paintshow.co.uk/>  
National Painting and Decorating Show

## Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate <b>(CSW1)</b>	LO2: 2.2
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience <b>(CSW2)</b>	LO2: 2.2
Uses available software appropriately to present written communication, including numerical information <b>(CSW4)</b>	LO2: 2.2
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication <b>(CSW5)</b>	LO2: 2.2
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role <b>(CW1)</b>	LO2: 2.2
Applies sufficient effort to enable them to complete tasks set to the standard required <b>(CW3)</b>	LO2: 2.2
Demonstrates initiative in carrying out own role <b>(CW4)</b>	LO2: 2.2
Problem solving	
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem <b>(PSW4)</b>	LO2: 2.2
Time management skills	
Plans work: <ul style="list-style-type: none"> <li>• according to priority</li> <li>• taking into account length of time needed to complete tasks</li> <li>• in order to meet deadlines <b>(TMS1)</b></li> </ul>	LO2: 2.2
Works at an appropriate pace to carry out tasks in accordance with plan <b>(TMS2)</b>	LO2: 2.2

## Unit 221 Preparation of surfaces for decoration

<b>Unit level:</b>	Level 2
<b>Guided Learning Hours (GLH):</b>	70
<b>Unit aim:</b>	Good preparation is a key and fundamental part of high-quality painting and decorating. The purpose of this unit is to provide the learner with the skills and knowledge required to identify, prepare and rectify various surfaces and surface finishes.
<b>Assessment method:</b>	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
<b>Links to Occupational Standard:</b>	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

### Learning outcomes

- 1 Understand safety in surface preparation
- 2 Prepare timber and timber sheet products
- 3 Understand metal preparation processes
- 4 Prepare plasterboard and trowel finishes
- 5 Remove defective coatings and wallcoverings
- 6 Prepare previously painted surfaces

## Learning outcome 1

Understand safety in surface preparation

Topics	Content elements
1.1 Safety considerations in surface preparation	<p>1.1.1 Safety considerations when preparing different surfaces and removing paint, paper and surface debris</p> <ul style="list-style-type: none"><li>a) When preparing different surfaces:<ul style="list-style-type: none"><li>i. manual handling</li><li>ii. Control of Substances Hazardous to Health (COSHH)</li><li>iii. Volatile Organic Compound (VOC)</li><li>iv. slips, trips and falls</li><li>v. electrical safety (equipment, hand soaking)</li><li>vi. working at height</li><li>vii. personal protective equipment (PPE) and respiratory protective equipment (RPE)</li><li>viii. ventilation</li><li>ix. lead paint</li><li>x. storage</li><li>xi. waste disposal</li><li>xii. pressure washing equipment (use of chemicals)</li></ul></li><li>b) Surfaces:<ul style="list-style-type: none"><li>i. timber and timber sheets</li><li>ii. metals</li><li>iii. plasterboard and trowel finishes (plaster and render)</li><li>iv. previously painted</li></ul></li><li>c) When removing paint and paper:<ul style="list-style-type: none"><li>i. manual handling</li><li>ii. COSHH</li><li>iii. VOC</li><li>iv. slips, trips and falls</li><li>v. electrical safety (equipment, hand soaking)</li><li>vi. working at height</li><li>vii. PPE and RPE</li><li>viii. ventilation</li><li>ix. lead paint</li><li>x. waste disposal<ul style="list-style-type: none"><li>• chemical</li><li>• hot</li><li>• bacterial</li></ul></li></ul></li></ul>

## Learning outcome 2

Prepare timber and timber sheet products

Topics	Content elements
2.1 Types of timber and timber sheets	<p>2.1.1 Common types of timber and timber sheets and their characteristics</p> <ul style="list-style-type: none"><li>a) Timber:<ul style="list-style-type: none"><li>i. softwood (pine, cedar, larch, redwood)</li><li>ii. hardwoods (oak, mahogany, teak, walnut)</li></ul></li><li>b) Timber sheets:<ul style="list-style-type: none"><li>i. Medium Density Fibreboard (MDF)</li><li>ii. plywood</li><li>iii. hardboard</li><li>iv. blockboard</li><li>v. Oriented Strand Board (OSB)</li></ul></li><li>c) Characteristics:<ul style="list-style-type: none"><li>i. porosity</li><li>ii. durability</li></ul></li></ul>
2.2 Timber and timber sheet defects and preparation processes	<p>2.2.1 Types of defects affecting timber and timber sheets, their causes and preparation processes for their rectification</p> <ul style="list-style-type: none"><li>a) Types of defects:<ul style="list-style-type: none"><li>i. resin bleed</li><li>ii. end grain</li><li>iii. cracks</li><li>iv. moisture content</li><li>v. open joints</li><li>vi. glue residue</li><li>vii. protruding nail heads</li><li>viii. nail holes</li><li>ix. delamination</li><li>x. knots</li></ul></li><li>b) Processes:<ul style="list-style-type: none"><li>i. solvent wiping</li><li>ii. dry abrading</li><li>iii. knotting</li><li>iv. priming</li></ul></li></ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>v. stopping</li> <li>vi. filling</li> </ul>
<p>2.3 Tools, equipment and materials used in timber and timber sheet preparation processes</p>	<p>2.3.1 Tools, equipment and materials and their suitability for use in timber and timber sheet preparation processes</p> <ul style="list-style-type: none"> <li>a) Tools and equipment: <ul style="list-style-type: none"> <li>i. filling knife</li> <li>ii. scraper</li> <li>iii. putty knife</li> <li>iv. orbital sander</li> <li>v. belt sander</li> <li>vi. rubbing block</li> <li>vii. transformer</li> <li>viii. power drill</li> <li>ix. dust brush</li> <li>x. skeleton gun</li> <li>xi. knotting brush</li> <li>xii. nail punch</li> <li>xiii. hammer</li> <li>xiv. filling tray</li> <li>xv. palette knife</li> <li>xvi. paint kettles (plastic or metal)</li> <li>xvii. roller frame</li> <li>xviii. roller pole</li> <li>xix. roller skuttle</li> <li>xx. roller sleeves</li> <li>xxi. paint brushes</li> </ul> </li> <li>b) Materials: <ul style="list-style-type: none"> <li>i. knotting solution</li> <li>ii. tack rag</li> <li>iii. abrasive papers <ul style="list-style-type: none"> <li>• types (silicon, carbide, aluminium oxide)</li> <li>• grades</li> </ul> </li> <li>iv. cloths</li> <li>v. caulk</li> <li>vi. powder filler</li> <li>vii. decontaminants</li> <li>viii. primers: <ul style="list-style-type: none"> <li>• solvent-based</li> <li>• white and pink wood primers</li> <li>• universal wood or metal</li> <li>• shellac knotting</li> </ul> </li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• aluminium wood</li> <li>• water-based</li> </ul> <p>For preparation processes see 2.2.1</p>
2.4 Prepare timber and timber sheet products	<p>2.4.1 Plan for the preparation of timber and timber sheet products</p> <p>a) Plan:</p> <ol style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from safety data sheets, drawings and specifications</li> </ol> <p>2.4.2 Check timber and timber sheets for defects</p> <p>2.4.3 Select and use tools, equipment and materials</p> <p>2.4.4 Select and use appropriate PPE and RPE</p> <p>2.4.5 Use materials to protect work and surrounding areas</p> <p>4) Materials:</p> <ol style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> </ul> </li> <li>ii. various width masking tapes</li> </ol> <p>2.4.6 Apply preparation processes</p> <p>2.4.7 Apply primers (solvent-based, white and pink wood primers, universal wood, shellac knotting, aluminium wood, water-based)</p> <p>2.4.8 Minimise and dispose of waste</p> <p>2.4.9 Clean and store tools and equipment</p> <p>2.4.10 Maintain a safe and clean working environment</p> <p>2.4.11 Review work and check for defects</p> <p>For tools and equipment in 2.4.3 and 2.4.9:</p> <ol style="list-style-type: none"> <li>i. filling knife</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>ii. scraper</li> <li>iii. putty knife</li> <li>iv. orbital sander</li> <li>v. rubbing block</li> <li>vi. transformer</li> <li>vii. belt sander</li> <li>viii. dust brush</li> <li>ix. skeleton gun</li> <li>x. knotting brush</li> <li>xi. nail punch</li> <li>xii. hammer</li> <li>xiii. filling tray</li> <li>xiv. palette knife</li> <li>xv. paint kettles (plastic or metal)</li> <li>xvi. roller frame</li> <li>xvii. roller pole</li> <li>xviii. roller skuttle</li> <li>xix. roller sleeves</li> <li>xx. paint brushes</li> </ul> <p>For materials in 2.4.3 see 2.3.1 b)</p>

### Learning outcome 3

Understand metal preparation processes

Topics	Content elements
3.1 Types of metals and metal corrosion	<p>3.1.1 Types of ferrous and non-ferrous metals</p> <ul style="list-style-type: none"> <li>a) Ferrous (metals that corrode or rust): <ul style="list-style-type: none"> <li>i. iron</li> <li>ii. steel</li> <li>iii. cast iron</li> <li>iv. wrought iron</li> </ul> </li> <li>b) Non-ferrous (metals that do not corrode or rust): <ul style="list-style-type: none"> <li>i. copper</li> <li>ii. brass</li> <li>iii. aluminium</li> <li>iv. lead</li> <li>v. zinc</li> <li>vi. galvanised steel</li> </ul> </li> </ul>

Topics	Content elements
	<p>3.1.2 Types of corrosion that can affect ferrous metals and their causes</p> <ul style="list-style-type: none"> <li>a) Types of corrosion: <ul style="list-style-type: none"> <li>i. pitting</li> <li>ii. oxidation</li> <li>iii. millscale</li> </ul> </li> <li>b) Causes: <ul style="list-style-type: none"> <li>i. oxygen</li> <li>ii. hydrogen</li> <li>iii. moisture</li> <li>iv. atmospheric pollution</li> </ul> </li> </ul>
<p>3.2 Metal preparation processes</p>	<p>3.2.1 Metal preparation processes and their purpose</p> <ul style="list-style-type: none"> <li>a) Processes: <ul style="list-style-type: none"> <li>i. descaling</li> <li>ii. degreasing (solvent washing)</li> <li>iii. pressure washing</li> </ul> </li> </ul> <p>3.2.2 Tools, equipment and materials and their suitability for use in metal preparation processes:</p> <ul style="list-style-type: none"> <li>a) Tools and equipment: <ul style="list-style-type: none"> <li>i. orbital sander</li> <li>ii. transformer</li> <li>iii. pressure washer</li> <li>iv. belt sander</li> <li>v. rotary disc</li> <li>vi. rotary brush</li> <li>vii. needle descaling gun</li> <li>viii. scrapers</li> <li>ix. wire brush</li> <li>x. rubbing block</li> <li>xi. phosphorous bronze brush</li> <li>xii. palette knife</li> <li>xiii. paint kettles (plastic or metal)</li> <li>xiv. roller frame</li> <li>xv. roller pole</li> <li>xvi. roller skuttle</li> <li>xvii. roller sleeves</li> <li>xviii. paint brushes</li> </ul> </li> <li>b) Materials:</li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>i. steel wool</li> <li>ii. emery paper</li> <li>iii. aluminium oxide</li> <li>iv. degreasing agents (white spirit, turpentine)</li> <li>v. rust removers</li> </ul>
3.3 Metal preparation primers	<p>3.3.1 Types of primers, application methods and their suitability for use on ferrous and non-ferrous metals:</p> <ul style="list-style-type: none"> <li>a) Primers: <ul style="list-style-type: none"> <li>i. mordant solutions</li> <li>ii. zinc phosphate</li> <li>iii. single and two-pack primer</li> <li>iv. etch primers</li> <li>v. water-based primer</li> <li>vi. universal primer</li> </ul> </li> <li>b) Application methods: <ul style="list-style-type: none"> <li>i. brush</li> <li>ii. roller</li> <li>iii. spray</li> </ul> </li> <li>c) Suitability for use: <ul style="list-style-type: none"> <li>i. adhesion</li> <li>ii. protection</li> <li>iii. surface finish</li> </ul> </li> </ul>

## Learning outcome 4

Prepare plasterboard and trowel finishes

Topics	Content elements
4.1 Surfaces for plasterboard and trowel finishes	<p>4.1.1 Types of surfaces, their physical and chemical properties and suitable types of primers and sealers</p> <ul style="list-style-type: none"> <li>a) Types: <ul style="list-style-type: none"> <li>i. gypsum plaster</li> <li>ii. cement render</li> <li>iii. plasterboard (square and feather edged)</li> <li>iv. blockwork</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>v. brickwork</li> <li>b) Physical properties:               <ul style="list-style-type: none"> <li>i. tactility</li> <li>ii. porosity</li> <li>iii. capillarity</li> <li>iv. adhesion</li> <li>v. density</li> </ul> </li> <li>c) Chemical properties:               <ul style="list-style-type: none"> <li>i. alkalinity</li> <li>ii. acidity</li> <li>iii. inertness</li> <li>iv. soluble</li> <li>v. salt content</li> <li>vi. water content</li> </ul> </li> <li>d) Primers and sealers:               <ul style="list-style-type: none"> <li>i. mist coat of emulsion</li> <li>ii. PVA</li> <li>iii. alkaline resistant primer</li> <li>iv. stabilising solution</li> </ul> </li> </ul>
4.2 Types of plasterboard and trowel finishes defects and preparation processes	<p>4.2.1 Types of plasterboard and trowel finishes defects and preparation processes for their rectification</p> <ul style="list-style-type: none"> <li>a) Trowel finishes (plaster and render)</li> <li>b) Defects:               <ul style="list-style-type: none"> <li>i. cracks</li> <li>ii. dry out</li> <li>iii. shrinkage cracks</li> <li>iv. nail heads</li> <li>v. open joints</li> <li>vi. defective pointing</li> <li>vii. efflorescence</li> <li>viii. saponification</li> <li>ix. moss and lichen</li> <li>x. moulds and fungi</li> <li>xi. contamination</li> <li>xii. friable</li> </ul> </li> <li>c) Preparation processes:               <ul style="list-style-type: none"> <li>i. wetting in</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>ii. raking out</li> <li>iii. making good</li> <li>iv. abrading</li> <li>v. scraping</li> <li>vi. caulking and taping</li> <li>vii. proud filling</li> <li>viii. flush filling</li> <li>ix. priming</li> </ul>
<p>4.3 Tools, equipment and materials used in plasterboard and trowel finishes preparation processes</p>	<p>4.3.1 Tools, equipment and materials and their suitability for use in plasterboard and trowel finishes preparation processes</p> <ul style="list-style-type: none"> <li>a) Tools and equipment: <ul style="list-style-type: none"> <li>i. filling knife</li> <li>ii. scraper</li> <li>iii. dust brush</li> <li>iv. skeleton gun</li> <li>v. nail punch</li> <li>vi. hammer</li> <li>vii. filling tray</li> <li>viii. paint brush</li> <li>ix. palette knife</li> <li>x. paint kettles (plastic or metal)</li> <li>xi. roller frame</li> <li>xii. roller pole</li> <li>xiii. roller skuttle</li> <li>xiv. roller sleeves</li> </ul> </li> <li>b) Materials: <ul style="list-style-type: none"> <li>i. plaster-based fillers</li> <li>ii. cement-based fillers</li> <li>iii. joint fillers</li> <li>iv. joint tapes</li> <li>v. reinforced corner tapes</li> <li>vi. abrasives</li> <li>vii. sizes</li> <li>viii. fungicidal washes</li> <li>ix. stainblock</li> <li>x. primers and sealers: <ul style="list-style-type: none"> <li>• mist coat of emulsion</li> <li>• PVA</li> <li>• alkaline resistant primer</li> <li>• stabilising solution</li> </ul> </li> </ul> </li> </ul>

Topics	Content elements
	<p>c) Trowel finishes (plaster and render)</p> <p>d) Use in plasterboard and trowel finishes preparation processes:</p> <ol style="list-style-type: none"> <li>i. wetting in</li> <li>ii. raking out</li> <li>iii. making good</li> <li>iv. abrading</li> <li>v. scraping</li> <li>vi. caulking and taping</li> <li>vii. proud filling</li> <li>viii. flush filling</li> <li>ix. priming</li> </ol>
<p>4.4 Prepare plasterboard and trowel finishes</p>	<p>4.4.1 Plan for the preparation of plasterboard and trowel finishes</p> <ol style="list-style-type: none"> <li>a) Plan: <ol style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from safety data sheets, drawings and specifications</li> </ol> </li> <li>b) Trowel finishes (plaster and render)</li> </ol> <p>4.4.2 Check plasterboard and trowel finishes for defects</p> <p>4.4.3 Select and use tools, equipment and materials</p> <p>4.4.4 Select and use appropriate PPE and RPE</p> <p>4.4.5 Use materials to protect work and surrounding areas</p> <ol style="list-style-type: none"> <li>a) Materials: <ol style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> </ul> </li> <li>ii. various width masking tapes</li> </ol> </li> </ol> <p>4.4.6 Apply preparation processes</p> <p>4.4.7 Apply water-based primer</p> <p>4.4.8 Minimise and dispose of waste</p>

Topics	Content elements
	<p>4.4.9 Clean and store tools and equipment</p> <p>4.4.10 Maintain a safe and clean working environment</p> <p>4.4.11 Review work and check for defects</p> <p>For tools, equipment and materials see 4.3.1</p>

## Learning outcome 5

Remove defective coatings and wallcoverings

Topics	Content elements
5.1 Removal processes for defective coatings	<p>5.1.1 Defects and their causes in coatings and processes of paint removal</p> <p>a) Defects:</p> <ol style="list-style-type: none"> <li>i. blistering</li> <li>ii. cracking or crazing</li> <li>iii. flaking</li> <li>iv. excessive film thickness</li> <li>v. runs and sags</li> <li>vi. peeling</li> </ol> <p>b) Causes:</p> <ol style="list-style-type: none"> <li>i. applying coatings over damp surfaces</li> <li>ii. resin bleed</li> <li>iii. undercoat not fully cured</li> <li>iv. incorrect temperature</li> <li>v. incorrect preparation method</li> <li>vi. excessive application</li> </ol> <p>c) Processes:</p> <ol style="list-style-type: none"> <li>i. liquid paint removing</li> <li>ii. electric hot air</li> <li>iii. liquid petroleum gas (LPG) burning off</li> <li>iv. infrared</li> </ol>
5.2 Removal processes for wallcoverings	<p>5.2.1 Defects in wallcoverings and processes of wallcovering removal</p> <p>a) Defects:</p> <ol style="list-style-type: none"> <li>i. poor adhesion</li> <li>ii. mould</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. redecoration</li> <li>b) Processes:               <ul style="list-style-type: none"> <li>i. hand soaking</li> <li>ii. steam stripping</li> <li>iii. dry stripping of peelable papers</li> </ul> </li> </ul>
5.3 Tools, equipment and materials used in stripping surfaces	<p>5.3.1 Tools, equipment and materials and their suitability for use in stripping surfaces</p> <ul style="list-style-type: none"> <li>a) Tools and equipment:           <ul style="list-style-type: none"> <li>i. shave hook</li> <li>ii. scraper</li> <li>iii. dust brush</li> <li>iv. flat brush</li> <li>v. steam stripper</li> <li>vi. sponge</li> <li>vii. bucket</li> <li>viii. spiked roller</li> <li>ix. transformer</li> <li>x. electric hot-air gun</li> <li>xi. LPG gun</li> <li>xii. infrared stripper</li> </ul> </li> <li>b) Materials:           <ul style="list-style-type: none"> <li>i. liquid paint remover</li> <li>ii. sugar soap</li> <li>iii. wallcovering stripping solution</li> </ul> </li> <li>c) Use in stripping surfaces:           <ul style="list-style-type: none"> <li>i. heat removal of coatings</li> <li>ii. solvent stripping</li> <li>iii. wallcovering removal</li> </ul> </li> </ul>
5.4 Remove defective paint coatings	<p>5.4.1 Plan for the removal of defective paint coatings</p> <ul style="list-style-type: none"> <li>a) Plan:           <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from safety data sheets, drawings and specifications</li> </ul> </li> </ul> <p>5.4.2 Select and use tools, equipment and materials</p>

Topics	Content elements
	<p>5.4.3 Select and use appropriate PPE and RPE</p> <p>5.4.4 Use materials to protect work and surrounding areas  a) Materials: <ul style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> </ul> </li> <li>ii. various width masking tapes</li> </ul> </p> <p>5.4.5 Carry out paint coating removal processes (liquid paint removing and electric hot air)</p> <p>5.4.6 Minimise and dispose of waste</p> <p>5.4.7 Clean and store tools and equipment</p> <p>5.4.8 Maintain a safe and clean working environment</p> <p>5.4.9 Review work and check for defects</p> <p>For tools and equipment in 5.4.2:</p> <ul style="list-style-type: none"> <li>i. shave hook</li> <li>ii. scraper</li> <li>iii. dust brush</li> <li>iv. sponge</li> <li>v. bucket</li> <li>vi. transformer</li> <li>vii. electric hot-air gun</li> <li>viii. liquid paint remover</li> <li>ix. sugar soap</li> <li>x. paint brush</li> <li>xi. metal paint kettle</li> <li>xii. palette knife</li> </ul> <p>For materials in 5.4.2:</p> <ul style="list-style-type: none"> <li>i. liquid paint remover</li> <li>ii. sugar soap</li> </ul>

## Learning outcome 6

Prepare previously painted surfaces

Topics	Content elements
6.1 Processes, tools, equipment and materials for preparation of previously painted surfaces	<p data-bbox="571 280 1458 353">6.1.1 Processes for preparation of previously painted surfaces and their purpose</p> <p data-bbox="619 398 820 432">a) Processes:</p> <ul style="list-style-type: none"> <li data-bbox="667 439 858 472">i. spot prime</li> <li data-bbox="667 479 995 589">ii. wet and dry abrading <ul style="list-style-type: none"> <li data-bbox="715 517 916 551">• mechanical</li> <li data-bbox="715 557 831 591">• hand</li> </ul> </li> <li data-bbox="667 598 831 631">iii. scraping</li> <li data-bbox="667 638 852 672">iv. raking out</li> <li data-bbox="667 678 884 712">v. undercutting</li> <li data-bbox="667 719 847 752">vi. wetting in</li> <li data-bbox="667 759 858 792">vii. back filling</li> <li data-bbox="667 799 869 833">viii. proud filling</li> <li data-bbox="667 840 858 873">ix. flush filling</li> <li data-bbox="667 880 858 913">x. dusting off</li> <li data-bbox="667 920 906 954">xi. washing down</li> <li data-bbox="667 960 868 994">xii. degreasing</li> <li data-bbox="667 1001 906 1034">xiii. solvent wiping</li> <li data-bbox="667 1041 954 1075">xiv. pressure washing</li> </ul> <p data-bbox="619 1099 791 1133">b) Purpose:</p> <ul style="list-style-type: none"> <li data-bbox="667 1140 1177 1173">i. cleaning – to remove contaminants</li> <li data-bbox="667 1180 1038 1214">ii. abrasion – to form a key</li> <li data-bbox="667 1220 1225 1254">iii. filling – to seal gaps, cracks and holes</li> <li data-bbox="667 1261 1214 1294">iv. priming – to even out surface porosity</li> </ul> <p data-bbox="571 1330 1445 1404">6.1.2 Tools, equipment and materials and their suitability for use in the preparation of previously painted surfaces</p> <p data-bbox="619 1449 959 1482">a) Tools and equipment:</p> <ul style="list-style-type: none"> <li data-bbox="667 1489 884 1523">i. shave hook</li> <li data-bbox="667 1529 831 1563">ii. scraper</li> <li data-bbox="667 1570 868 1603">iii. dust brush</li> <li data-bbox="667 1610 852 1644">iv. flat brush</li> <li data-bbox="667 1650 831 1684">v. sponge</li> <li data-bbox="667 1691 820 1724">vi. bucket</li> <li data-bbox="667 1731 884 1765">vii. transformer</li> <li data-bbox="667 1771 954 1805">viii. pressure washer</li> <li data-bbox="667 1812 975 1845">ix. electric hot-air gun</li> <li data-bbox="667 1852 847 1886">x. LPG gun</li> <li data-bbox="667 1892 938 1926">xi. infrared stripper</li> <li data-bbox="667 1933 879 1966">xii. paint brush</li> <li data-bbox="667 1973 1102 2007">xiii. paint kettle (plastic or metal)</li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>xiv. roller frame</li> <li>xv. roller pole</li> <li>xvi. roller skuttle</li> <li>xvii. roller sleeves</li> <li>xviii. palette knife</li> <li>xix. rubbing block</li> </ul> <p>b) Materials:</p> <ul style="list-style-type: none"> <li>i. liquid paint remover</li> <li>ii. sugar soap</li> <li>iii. abrasives: <ul style="list-style-type: none"> <li>• silicon carbide</li> <li>• aluminium oxide</li> <li>• wire wool</li> </ul> </li> <li>iv. stoppers: <ul style="list-style-type: none"> <li>• plastic woods</li> <li>• coloured stoppers</li> </ul> </li> <li>v. fillers: <ul style="list-style-type: none"> <li>• caulk</li> <li>• powdered (interior, exterior)</li> <li>• ready-mixed</li> <li>• fine surface</li> <li>• two-pack</li> <li>• sand and cement</li> <li>• finishing plaster</li> </ul> </li> </ul>
6.2 Prepare previously painted surfaces	<p>6.2.1 Plan for the preparation of previously painted surfaces</p> <p>a) Plan:</p> <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from safety data sheets, drawings and specifications</li> </ul> <p>6.2.2 Select and use tools, equipment and materials</p> <p>6.2.3 Select and use appropriate PPE and RPE</p> <p>6.2.4 Use materials to protect work and surrounding areas</p> <p>a) Materials:</p> <ul style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> </ul> </li> </ul>

## Topics

## Content elements

- lightweight plastic
- ii. various width masking tapes

6.2.5 Apply preparation processes to plasterboard, plaster, render, timber

6.2.6 Use stoppers and fillers

6.2.7 Minimise and dispose of waste

6.2.8 Clean and store tools and equipment

6.2.9 Maintain a safe and clean working environment

6.2.10 Review work and check for defects

For tools and equipment in 6.2.2 and 6.2.8:

- i. shave hook
- ii. scraper
- iii. dust brush
- iv. flat brush
- v. sponge
- vi. bucket
- vii. transformer
- viii. electric hot-air gun
- ix. LPG gun
- x. paint brush
- xi. paint kettle (plastic or metal)
- xii. roller frame
- xiii. roller pole
- xiv. roller skuttle
- xv. roller sleeves
- xvi. palette knife
- xvii. rubbing block

For materials in 6.2.2 and 6.2.8 see 6.1.2

## Unit guidance for delivery

### Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out the preparation of surfaces will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Real-life scenarios allow learners to practise in practical settings, building their confidence and competence in real-world situations.

Overall, this approach fosters a learner-centred learning environment, promotes learner success and contributes to a more comprehensive and effective painting and decorating qualification program. It also recognises and values learners' prior experiences and skills, creating a positive and supportive learning atmosphere.

### Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

**Quizzes:** Regular quizzes can gauge learner understanding of different surface types and processes to remedy defects. Include multiple-choice, true/false and short-answer questions to cover a range of topics related to the preparation of surfaces.

**Scenario-based questions:** Present real-life scenarios involving different processes required for different surfaces. Ask learners to analyse the scenario, identify potential risks and suggest appropriate safety measures and best practices for preparing surfaces.

**Group discussions:** Divide the class into small groups and assign each group a specific topic related to preparation processes. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

	<p>Peer assessment: This not only reinforces learners' own understanding but also provides an opportunity for their peers to ask questions and learn from each other.</p> <p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and best practices for preparing surfaces. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Masterclasses by employers: Inviting employers to deliver masterclasses on painting and decorating can offer learners a unique opportunity to learn from experienced professionals. Demonstrating good industrial practical skills directly from the employers can inspire and motivate learners to excel in their craft.</p> <p>Visits to suppliers: Arranging visits to outlets where learners can explore the latest range of tools and materials is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best materials for specific projects.</p> <p>National Painting and Decorating Show: Visiting trade shows like the National Painting and Decorating Show can be a fantastic way for learners to connect with industry experts, explore cutting-edge products and gather samples for their projects. Engaging with company representatives provides an opportunity to network and learn about different career paths in the industry.</p> <p>By incorporating these initiatives, tutors can create a well-rounded and immersive learning environment, nurturing learners' passion for painting and decorating and equipping them with practical knowledge to thrive in their future careers. It also fosters collaboration between educational institutions, employers, suppliers and industry events, creating a strong bridge between training and the real world.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self-study, City &amp; Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>
<p><b>Ways of ensuring content is delivered in</b></p>	<p>Learners must comply with applicable Building Regulations and choose materials that reduce waste.</p>

<b>line with current, up to date industry practice:</b>	<p>The removal of paint and paper can be hazardous if safety is not observed throughout. As well as working at height, there are a range of hazardous tools and materials used in this unit.</p> <p>Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.</p>
<b>EDI or accessibility considerations:</b>	<p>Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.</p>
<b>Digital initiative considerations:</b>	<p>Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.</p> <p>Virtual demonstrations: Conduct virtual demonstrations of preparation processes using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.</p> <p>Simulation software: Utilise painting and decorating simulation software that allows learners to practise virtually in a risk-free environment. This provides an opportunity to refine their skills before working with actual materials.</p> <p>Digital assessments: Implement formative online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.</p> <p>Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.</p> <p>Augmented Reality (AR): Explore the use of AR technology to overlay digital information on real-world preparation scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.</p> <p>Social media integration: Use social media platforms to share updates, industry news and success stories related to painting and</p>

	<p>decorating. This creates a dynamic learning environment and keeps learners connected to current trends.</p> <p>When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging preparation of surfaces unit.</p>
<p><b>Sustainability considerations:</b></p>	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
<p><b>Books:</b></p>	<p>Yarde B, Olsen S – The City &amp; Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020) ISBN 9781398305779</p>
<p><b>Websites:</b></p>	<ul style="list-style-type: none"> <li>• <a href="https://en.unesco.org/sustainabledevelopmentgoals">https://en.unesco.org/sustainabledevelopmentgoals</a> UNESCO and Sustainable Development Goals</li> <li>• <a href="https://www.paintshow.co.uk/">https://www.paintshow.co.uk/</a> National Painting and Decorating Show</li> </ul>

## Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate <b>(CSW1)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience <b>(CSW2)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Uses available software appropriately to present written communication, including numerical information <b>(CSW4)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication <b>(CSW5)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role <b>(CW1)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Applies sufficient effort to enable them to complete tasks set to the standard required <b>(CW3)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Demonstrates initiative in carrying out own role <b>(CW4)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem <b>(PSW1)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2
Assesses a range of potential solutions, applying appropriate problem-solving strategies <b>(PSW2)</b>	LO2: 2.4 LO4: 4.4 LO5: 5.4 LO6: 6.2

Selects a specific solution, justifying why this one is the most likely to prove effective **(PSW3)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem **(PSW4)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

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### Self-evaluation

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Identifies strengths and areas for development in an objective and positive way **(SEW3)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

Uses a self-evaluation tool/checklist appropriately and records reflections/progress **(SEW4)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

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### Time management skills

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Plans work:  
• according to priority LO2: 2.4  
• taking into account length of time needed to complete tasks LO4: 4.4  
• in order to meet deadlines **(TMS1)** LO5: 5.4  
LO6: 6.2

Works at an appropriate pace to carry out tasks in accordance with plan **(TMS2)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively **(TMS3)** LO2: 2.4  
LO4: 4.4  
LO5: 5.4  
LO6: 6.2

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## Unit 222 Application of surface coatings

<b>Unit level:</b>	2
<b>Guided Learning Hours (GLH):</b>	83
<b>Unit aim:</b>	The purpose of this unit is for learners to understand colour systems, surface coatings, their application and suitability for a surface. Knowing how to create a pleasing and acceptable colour effect, the attributes and properties of coatings and the best ways to apply them without defects, are key to any professional decorator. Learners will develop the skills necessary to apply these coatings to a variety of surfaces.
<b>Assessment method:</b>	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
<b>Links to Occupational Standard:</b>	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

### Learning outcomes

1. Understand creating colour
2. Protect work area
3. Understand coatings and new technologies
4. Prepare and apply coatings by brush and roller

### Learning outcome 1

Understand creating colour

Topics	Content elements
1.1 Theory of colour	1.1.1 The principles of colour and how they interrelate <ol style="list-style-type: none"> <li>a) The elements of the colour wheel:               <ol style="list-style-type: none"> <li>i. primary colours</li> <li>ii. secondary colours</li> </ol> </li> <li>b) Natural order of colours</li> <li>c) Colour terms:               <ol style="list-style-type: none"> <li>i. neutrals</li> <li>ii. warm and cool colours</li> </ol> </li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. advancing and receding</li> <li>iv. shades and tints</li> </ul> <p>d) Colour schemes:</p> <ul style="list-style-type: none"> <li>i. analogous colours</li> <li>ii. achromatic colours</li> <li>iii. complementary colours</li> <li>iv. monochromatic colours</li> </ul>
1.2 Colour organisational systems	<p>1.2.1 Colour organisational systems used in the production of paint</p> <p>a) Systems:</p> <ul style="list-style-type: none"> <li>i. Paint Colours for Building Purposes (BS 4800)</li> <li>ii. RAL Colour standard (RAL)</li> <li>iii. Natural Colour System (NCS)</li> </ul>

## Learning outcome 2

Protect work area

Topics	Content elements
2.1 Protection of domestic and commercial areas	<p>2.1.1 Materials used to protect items and their suitability in domestic and commercial areas and removal, storage and reinstatement considerations</p> <p>a) Materials:</p> <ul style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> <li>• drop</li> <li>• tarpaulin</li> <li>• self-adhesive plastic</li> <li>• hardboard</li> <li>• chipboard</li> <li>• blockboard</li> </ul> </li> <li>ii. masking tape types <ul style="list-style-type: none"> <li>• exterior</li> <li>• interior</li> <li>• low tack</li> <li>• 7 day</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>• various widths</li> </ul> <p>b) Domestic areas:</p> <ul style="list-style-type: none"> <li>i. room furniture</li> <li>ii. flooring</li> <li>iii. carpets and curtains</li> <li>iv. door and window furniture</li> <li>v. wall-mounted fixtures and fittings</li> <li>vi. television</li> <li>vii. IT systems</li> <li>viii. lighting</li> </ul> <p>c) Commercial areas:</p> <ul style="list-style-type: none"> <li>i. workstations</li> <li>ii. machinery</li> <li>iii. equipment</li> <li>iv. furniture</li> <li>v. lighting</li> </ul> <p>d) Removal, storage and reinstatement considerations:</p> <ul style="list-style-type: none"> <li>i. boxing, wrapping materials</li> <li>ii. security of storage facilities</li> <li>iii. prevention of damage during dismantling, storage and reassembly</li> </ul>
2.2 Safety considerations when working in domestic and commercial areas	<p>2.2.1 Safety considerations when working in domestic and commercial areas</p> <p>a) Considerations:</p> <ul style="list-style-type: none"> <li>i. public access to premises</li> <li>ii. signs and barriers</li> <li>iii. climate/weather</li> <li>iv. temperature</li> <li>v. ventilation</li> <li>vi. storage</li> <li>vii. fixing of protective materials</li> </ul>
2.3 Protect work area	<p>2.3.1 Plan for the protection of work area</p> <p>a) Plan:</p> <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from drawings and specifications</li> </ul> <p>2.3.2 Use materials to protect work and surrounding areas prior to the application of paint</p> <ul style="list-style-type: none"> <li>a) Materials <ul style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> </ul> </li> <li>ii. various width masking tapes</li> </ul> </li> </ul>

### Learning outcome 3

Understand coatings and new technologies

Topics	Content elements
3.1 Coatings and their properties	<p>3.1.1 Water-based coating components, their properties and suitability for use on surfaces</p> <ul style="list-style-type: none"> <li>a) Components: <ul style="list-style-type: none"> <li>i. pigment and extender</li> <li>ii. dispersant or emulsifier</li> <li>iii. additives</li> <li>iv. solvent/thinner</li> <li>v. driers</li> <li>vi. film former</li> <li>vii. epoxy</li> </ul> </li> <li>b) Properties: <ul style="list-style-type: none"> <li>i. evaporation</li> <li>ii. coalescence</li> <li>iii. film thickness</li> <li>iv. intumescence</li> <li>v. drying/setting time</li> </ul> </li> <li>c) Surfaces: <ul style="list-style-type: none"> <li>i. plaster</li> <li>ii. render</li> <li>iii. wood</li> <li>iv. metal</li> <li>v. plastic</li> </ul> </li> </ul>

Topics	Content elements
	<p>3.1.2 Solvent-based coating components, their properties and suitability for use on surfaces</p> <p>a) Components:</p> <ol style="list-style-type: none"> <li>i. film former</li> <li>ii. pigment</li> <li>iii. solvent/thinner</li> <li>iv. liquid driers</li> <li>v. additives</li> <li>vi. epoxy</li> </ol> <p>b) Properties:</p> <ol style="list-style-type: none"> <li>i. micro-porous</li> <li>ii. thixotropic</li> <li>iii. evaporation</li> <li>iv. oxidation</li> <li>v. polymerisation</li> <li>vi. film thickness</li> <li>vii. intumescence</li> <li>viii. drying/setting time</li> </ol> <p>c) Surfaces:</p> <ol style="list-style-type: none"> <li>i. plaster</li> <li>ii. render</li> <li>iii. wood</li> <li>iv. metal</li> <li>v. plastic</li> </ol>
<p>3.2 New technologies used in painting and decorating</p>	<p>3.2.1 New technologies and their use in painting and decorating</p> <p>a) New technologies:</p> <ol style="list-style-type: none"> <li>i. nano coatings <ul style="list-style-type: none"> <li>• self-cleaning</li> <li>• anti-scratch</li> </ul> </li> <li>ii. environmentally friendly coatings</li> </ol>
<p>3.3 Drying processes and stages of coatings</p>	<p>3.3.1 Drying processes for water-based, solvent-based and two-pack coatings and their stages</p> <p>a) Drying process for water-based coatings:</p> <ol style="list-style-type: none"> <li>i. evaporation</li> <li>ii. coalescence</li> </ol> <p>b) Drying process for solvent-based coatings:</p>

Topics	Content elements
	<ul style="list-style-type: none"> <li>i. evaporation</li> <li>ii. oxidation</li> <li>iii. polymerisation</li> </ul> <p>c) Drying process for two-pack coatings (exothermic)</p> <p>d) Stages of drying process</p> <ul style="list-style-type: none"> <li>i. flow</li> <li>ii. set</li> <li>iii. tack</li> <li>iv. touch dry</li> <li>v. hard dry</li> <li>vi. thorough dry or cured</li> </ul>

### Learning outcome 4

Prepare and apply coatings by brush and roller

Topics	Content elements
4.1 Types of water and solvent-based coatings	<p>4.1.1 Types of water and solvent-based coatings/paint, their finishes and suitability for use</p> <ul style="list-style-type: none"> <li>a) Types of coatings/paints: <ul style="list-style-type: none"> <li>i. pigmented</li> <li>ii. non-pigmented</li> <li>iii. stains</li> <li>iv. preservatives</li> <li>v. varnishes</li> <li>vi. emulsions</li> <li>vii. masonry paint</li> <li>viii. two-pack</li> </ul> </li> <li>b) Finishes: <ul style="list-style-type: none"> <li>i. matt</li> <li>ii. gloss</li> <li>iii. mid-sheen</li> <li>iv. soft-sheen</li> <li>v. silk</li> <li>vi. eggshell</li> </ul> </li> <li>c) Suitability for use: <ul style="list-style-type: none"> <li>i. interior</li> <li>ii. exterior</li> </ul> </li> </ul>

Topics	Content elements
4.2 Types of tools used for applying coatings and application methods	<p>4.2.1 Types of tools, their component parts and their suitability for use in applying coatings/paint</p> <p>a) Tools and their component parts:</p> <ol style="list-style-type: none"> <li>i. rollers <ul style="list-style-type: none"> <li>• frame/yoke</li> <li>• handle</li> <li>• sleeve (material, pile, sizes)</li> </ul> </li> <li>ii. brushes (sizes, types) <ul style="list-style-type: none"> <li>• handle</li> <li>• stock</li> <li>• ferrule</li> <li>• setting</li> <li>• filling (natural bristle – solvent-based, synthetic filament – water-based)</li> </ul> </li> <li>iii. palette knife</li> </ol> <p>b) Suitability for use:</p> <ol style="list-style-type: none"> <li>i. speed of application</li> <li>ii. scale of application</li> <li>iii. type of finish required</li> </ol> <p>4.2.2 Ancillary equipment used during application of coatings/paint</p> <p>a) Ancillary equipment:</p> <ol style="list-style-type: none"> <li>i. paint pot/kettle (plastic or metal)</li> <li>ii. roller tray</li> <li>iii. roller skuttle</li> <li>iv. roller extension pole</li> <li>v. strainer</li> </ol> <p>4.2.3 Application methods and their suitability for use with surface coatings/paint</p> <p>a) Methods:</p> <ol style="list-style-type: none"> <li>i. brush <ul style="list-style-type: none"> <li>• loading</li> <li>• laying on</li> <li>• laying off</li> </ul> </li> <li>ii. roller <ul style="list-style-type: none"> <li>• loading</li> <li>• laying on (spreading out)</li> <li>• laying off (backroll, by brush for solvent-based gloss)</li> </ul> </li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. High Volume Low Pressure (HVLV)</li> <li>b) Suitability for use:               <ul style="list-style-type: none"> <li>i. speed of application</li> <li>ii. scale of application</li> <li>iii. type of finish required</li> <li>iv. sequencing</li> </ul> </li> </ul>
<p>4.3 Coating application defects and treatment methods</p>	<p>4.3.1 Types of application and post-application defects, their causes and remedial treatment methods</p> <ul style="list-style-type: none"> <li>a) Application defects:           <ul style="list-style-type: none"> <li>i. bittiness</li> <li>ii. misses</li> <li>iii. grinning</li> <li>iv. runs and sags</li> <li>v. excessive brushmarks</li> <li>vi. ropiness</li> <li>vii. fat edges</li> <li>viii. wet edge build-up</li> <li>ix. paint on adjacent surfaces</li> <li>x. roller edge marks</li> <li>xi. roller skid marks</li> <li>xii. irregular cutting in</li> <li>xiii. flashing</li> </ul> </li> <li>b) Post-application defects:           <ul style="list-style-type: none"> <li>i. retarded drying</li> <li>ii. cratering</li> <li>iii. bleeding</li> <li>iv. blooming</li> <li>v. loss of gloss</li> <li>vi. fading</li> <li>vii. discolouration</li> <li>viii. yellowing</li> <li>ix. cracking</li> <li>x. crazing</li> <li>xi. flaking</li> <li>xii. peeling</li> <li>xiii. cissing</li> </ul> </li> <li>c) Causes:           <ul style="list-style-type: none"> <li>i. atmospheric conditions</li> <li>ii. application errors</li> </ul> </li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. material suitability</li> <li>iv. third party damage</li> <li>v. surface type</li> </ul> <p>d) Remedial treatment methods:</p> <ul style="list-style-type: none"> <li>i. stripping</li> <li>ii. solvent wiping</li> <li>iii. dry abrading</li> <li>iv. knotting</li> <li>v. priming</li> <li>vi. stainblock</li> <li>vii. stopping</li> <li>viii. filling</li> <li>ix. washing</li> <li>x. dusting off</li> <li>xi. re-coating</li> </ul>
<p>4.4 Cleaning and storage of tools, equipment and materials</p>	<p>4.4.1 Factors to consider when cleaning and storing application tools, equipment and materials</p> <p>a) Factors:</p> <ul style="list-style-type: none"> <li>i. manual handling</li> <li>ii. COSHH</li> <li>iii. VOC</li> <li>iv. disposal of waste</li> <li>v. personal protective equipment (PPE) and respiratory protective equipment (RPE)</li> <li>vi. stock rotation</li> <li>vii. environmental conditions</li> </ul> <p>b) Materials:</p> <ul style="list-style-type: none"> <li>i. coatings (paints, preservatives, varnishes, stains, driers)</li> <li>ii. solvents</li> <li>iii. cleaning agents and thinners (white spirit, turpentine)</li> </ul> <p>For tools and equipment see 4.2.1 and 4.2.2</p>
<p>4.5 Apply coatings by brush and roller</p>	<p>4.5.1 Plan for the preparation and application of coatings by brush and roller</p> <p>a) Plan:</p> <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> </ul>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iv. produce a colour scheme</li> <li>v. interpret information from safety data sheets, drawings and specifications</li> </ul> <p>4.5.2 Select and use tools, equipment and materials</p> <p>4.5.3 Select and use appropriate PPE and RPE</p> <p>4.5.4 Prepare solvent and water-based coatings in line with manufacturer's information</p> <p>4.5.5 Apply solvent and water-based coatings to previously painted surfaces, skirting, dado rail, architrave, flush or panelled door, lining, plasterboard, plaster, render, timber</p> <p>4.5.6 Minimise and dispose of waste</p> <p>4.5.7 Clean and store tools and equipment</p> <p>4.5.8 Maintain a safe and clean working environment</p> <p>4.5.9 Review work and check for defects</p> <p>For tools and equipment see 4.2.1 and 4.2.2 For materials see 4.4.1 b)</p>

## Unit guidance for delivery

### Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out application of surface coatings will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Real-life scenarios allow learners to practise in practical settings, building their confidence and competence in real-world situations.

Overall, this approach fosters a learner-centred learning environment, promotes learner success and contributes to a more comprehensive and effective painting and decorating qualification programme. It also recognises and values learners' prior experiences and skills, creating a positive and supportive learning atmosphere.

### Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

**Quizzes:** Regular quizzes can gauge learner understanding of different application methods. Include multiple-choice, true/false and short-answer questions to cover a range of topics related to painting and decorating.

**Scenario-based questions:** Present real-life scenarios involving different application methods. Ask learners to analyse the scenario, identify potential risks and suggest appropriate safety measures and best practices for applying surface coatings.

**Group discussions:** Divide the class into small groups and assign each group a specific topic related to application methods. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

	<p>Peer assessment: This not only reinforces learners' own understanding but also provides an opportunity for their peers to ask questions and learn from each other.</p> <p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and best practices for application methods. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Visits to paint manufacturers: Taking learners to visit paint manufacturers allows them to see the production process first hand, understand different types of materials and gain insights into industry standards. It provides a practical understanding of how the products they work with are made and how they can be utilised effectively.</p> <p>Masterclasses by employers: Inviting employers to deliver masterclasses can offer learners a unique opportunity to learn from experienced professionals. Demonstrating good industrial practical skills directly from the employers can inspire and motivate learners to excel in their craft.</p> <p>Visits to suppliers: Arranging visits to outlets where learners can explore the latest range of tools and materials is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best materials for specific projects.</p> <p>National Painting and Decorating Show: Visiting trade shows like the National Painting and Decorating Show can be a fantastic way for learners to connect with industry experts, explore cutting-edge products and gather samples for their projects. Engaging with company representatives provides an opportunity to network and learn about different career paths in the industry.</p> <p>By incorporating these initiatives, tutors can create a well-rounded and immersive learning environment, nurturing learners' passion for painting and decorating and equipping them with practical knowledge to thrive in their future careers. It also fosters collaboration between educational institutions, employers, suppliers and industry events, creating a strong bridge between training and the real world.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self- study, City &amp; Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>
<p><b>Ways of ensuring content is delivered in</b></p>	<p>Learners must comply with applicable Building Regulations and choose materials that reduce waste.</p>

**line with current, up to date industry practice:**

The application of paint can be hazardous if safety is not observed throughout. As well as working at height, there are a range of hazardous materials used in this unit.

Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Method statements must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.

**EDI or accessibility considerations:**

Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.

**Digital initiative considerations:**

Online resources: Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.

Virtual demonstrations: Conduct virtual painting and decorating demonstrations using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.

Simulation software: Utilise painting and decorating simulation software that allows learners to practise virtually in a risk-free environment. This provides an opportunity to refine their skills before working with actual materials.

Digital assessments: Implement formative online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

Collaborative platforms: Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

Mobile apps: Recommend useful painting and decorating related mobile apps that provide tips, tools and design inspiration. These apps can be a practical addition to a learning toolkit.

Augmented Reality (AR): Explore the use of AR technology to overlay digital information on real-world painting and decorating scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.

	<p>Social media integration: Use social media platforms to share updates, industry news and success stories related to painting and decorating. This creates a dynamic learning environment and keeps learners connected to current trends.</p> <p>When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging application of surface coatings unit.</p>
<b>Sustainability considerations:</b>	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to painting and decorating, which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of painting and decorating among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
<b>Books:</b>	<p>Yarde B, Olsen S – The City &amp; Guilds Textbook: Painting and Decorating for Level 1 and Level 2– (Hodder Education 2020) ISBN 9781398305779</p>
<b>Websites:</b>	<ul style="list-style-type: none"> <li>• <a href="https://en.unesco.org/sustainabledevelopmentgoals">https://en.unesco.org/sustainabledevelopmentgoals</a> UNESCO and Sustainable Development Goals</li> <li>• <a href="https://www.paintshow.co.uk/">https://www.paintshow.co.uk/</a> National Painting and Decorating Show</li> </ul>

## Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate <b>(CSW1)</b>	LO2: 2.3 LO4: 4.5
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience <b>(CSW2)</b>	LO2: 2.3 LO4: 4.5
Uses available software appropriately to present written communication, including numerical information <b>(CSW4)</b>	LO2: 2.3 LO4: 4.5
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication <b>(CSW5)</b>	LO2: 2.3 LO4: 4.5
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role <b>(CW1)</b>	LO2: 2.3 LO4: 4.5
Applies sufficient effort to enable them to complete tasks set to the standard required <b>(CW3)</b>	LO2: 2.3 LO4: 4.5
Demonstrates initiative in carrying out own role <b>(CW4)</b>	LO2: 2.3 LO4: 4.5
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem <b>(PSW1)</b>	LO2: 2.3 LO4: 4.5
Assesses a range of potential solutions, applying appropriate problem-solving strategies <b>(PSW2)</b>	LO2: 2.3 LO4: 4.5
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem <b>(PSW4)</b>	LO2: 2.3 LO4: 4.5
Self-evaluation	
Identifies strengths and areas for development in an objective and positive way <b>(SEW3)</b>	LO4: 4.5
Uses a self-evaluation tool/checklist appropriately and records reflections/progress <b>(SEW4)</b>	LO4: 4.5
Time management skills	
Plans work:	LO2: 2.3
• according to priority	LO4: 4.5
• taking into account length of time needed to complete tasks	
• in order to meet deadlines <b>(TMS1)</b>	
Works at an appropriate pace to carry out tasks in accordance with plan <b>(TMS2)</b>	LO2: 2.3 LO4: 4.5

Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively **(TMS3)**

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LO2: 2.3  
LO4: 4.5

## Unit 223 Application of wallcoverings to walls and ceilings

<b>Unit level:</b>	2
<b>Guided Learning Hours (GLH):</b>	90
<b>Unit aim:</b>	The purpose of this unit is to provide the learner with the skills and knowledge required to plan and apply various standard papers to walls. They will also develop the knowledge needed to apply standard papers to ceilings. Applying paper is an integral skill required for any professional decorator and used in both the domestic and commercial sectors. Paper can enhance any decorating project. Its application is a skill that requires precision and methodical working, incorporating calculations, measuring and an eye for detail. Understanding paper types, patterns and their respective applications will provide the modern decorator with an invaluable skill and increase their employability status.
<b>Assessment method:</b>	Externally set, multiple choice question (MCQ) exam, online, on-demand Externally set, practical assignment, on-demand
<b>Links to Occupational Standard:</b>	ST0295 Painter and Decorator See also qualification content mapping to Occupational Standard (Appendix 1)

### Learning outcomes

- 1 Understand paper production for wallcoverings
- 2 Understand adhesives for wallcovering application
- 3 Apply standard papers to walls and ceilings

### Learning outcome 1

Understand paper production for wallcoverings

Topics	Content elements
1.1 Paper production methods for wallcoverings	1.1.1 Commercial methods used in the production of wallcoverings  a) Methods: i. wet embossing ii. dry embossing iii. heat expansion iv. block printing v. screen printing

Topics	Content elements
	<p>vi. machine printing</p> <p>For wallcoverings see 1.2.1</p>
<p>1.2 Types of wallcovering and their suitability for application</p>	<p>1.2.1 Wallcovering types and their suitability for use in a range of locations</p> <p>a) Types:</p> <ol style="list-style-type: none"> <li>i. lining <ul style="list-style-type: none"> <li>• linen backed</li> <li>• non-woven</li> <li>• foil-backed</li> </ul> </li> <li>ii. embossed</li> <li>iii. blown vinyl</li> <li>iv. pulps/grounds</li> <li>v. vinyl</li> <li>vi. ready-pasted/pre-pasted</li> <li>vii. borders</li> </ol> <p>b) Suitability for use:</p> <ol style="list-style-type: none"> <li>i. humidity</li> <li>ii. durability</li> <li>iii. traffic</li> <li>iv. condition of existing surface</li> </ol> <p>1.2.2 Wallcovering pattern types and considerations for their use in a range of locations</p> <p>a) Types:</p> <ol style="list-style-type: none"> <li>i. set/straight match</li> <li>ii. drop/offset match</li> <li>iii. random/free match</li> <li>iv. reverse alternate lengths</li> </ol> <p>b) Considerations:</p> <ol style="list-style-type: none"> <li>i. room type</li> <li>ii. dimensions</li> </ol>
<p>1.3 Paper labelling</p>	<p>1.3.1 Information provided on wallcovering labels in relation to application procedures and care</p> <p>a) Information:</p> <ol style="list-style-type: none"> <li>i. international performance symbols</li> <li>ii. spongeable</li> <li>iii. washable</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iv. super washable</li> <li>v. scrubbable</li> <li>vi. moderate light fastness</li> <li>vii. good light fastness</li> <li>viii. ready-pasted</li> <li>ix. paste-the-wall</li> <li>x. random/free match</li> <li>xi. set/straight match</li> <li>xii. design/distance repeat</li> <li>xiii. drop/offset match</li> <li>xiv. direction of hanging</li> <li>xv. co-ordinated fabric available</li> <li>xvi. reverse alternate lengths</li> <li>xvii. batch number</li> <li>xviii. pattern number</li> <li>xix. hanging instructions</li> <li>xx. paper width size and repeat length</li> </ul>

## Learning outcome 2

Understand adhesives for wallcovering application

Topics	Content elements
2.1 Types of wallcovering adhesives	<p>2.1.1 Types of adhesives, their characteristics and their use in the application of wallcoverings</p> <ul style="list-style-type: none"> <li>a) Types of adhesives: <ul style="list-style-type: none"> <li>i. cellulose paste</li> <li>ii. starch/starch ether</li> <li>iii. overlap</li> <li>iv. ready-mixed</li> <li>v. PVA</li> </ul> </li> <li>b) Characteristics: <ul style="list-style-type: none"> <li>i. ease of application</li> <li>ii. adhesive properties</li> <li>iii. marking quality</li> <li>iv. mould inhibitor</li> <li>v. water content</li> </ul> </li> </ul> <p>For wallcovering types see 1.2.1</p>
2.2 Defects related to wallcovering adhesives	2.2.1 Defects related to wallcovering adhesives and their causes

Topics	Content elements
	<p>a) Defects:</p> <ol style="list-style-type: none"> <li>i. blisters</li> <li>ii. delamination</li> <li>iii. stretching</li> <li>iv. contamination <ul style="list-style-type: none"> <li>• lumps</li> <li>• bits</li> </ul> </li> <li>v. open joints and loose edges</li> </ol> <p>b) Causes:</p> <ol style="list-style-type: none"> <li>i. incorrect soaking time</li> <li>ii. incorrect mixing</li> <li>iii. incorrect selection of wallcovering adhesive</li> <li>iv. incorrect application</li> <li>v. incorrect sealing of substrate</li> </ol>

### Learning outcome 3

Apply standard papers to walls and ceilings

Topics	Content elements
3.1 Planning the application of wallcoverings	<p>3.1.1 Factors to consider when planning the setting out of a wallcovering</p> <p>a) Factors to consider:</p> <ol style="list-style-type: none"> <li>i. starting/finishing point on ceilings and walls</li> <li>ii. sequence of operations</li> <li>iii. centring</li> <li>iv. features/obstacles</li> <li>v. internal and external angles (corners and reveals)</li> <li>vi. borders</li> <li>vii. type of finishing paper</li> <li>viii. surface conditions <ul style="list-style-type: none"> <li>• solvent-painted wall</li> <li>• absorbency</li> <li>• movement</li> </ul> </li> <li>ix. pattern type and match <ul style="list-style-type: none"> <li>• batches</li> <li>• wastage</li> <li>• shading</li> <li>• repeat</li> </ul> </li> <li>x. calculations using girthing and area methods</li> </ol>

Topics	Content elements
3.2 Pasting, folding and applying wallcoverings	<p data-bbox="560 284 1468 356">3.2.1 Wallcovering types and considerations when pasting and folding prior to application</p> <ul style="list-style-type: none"> <li data-bbox="619 394 1468 427">a) Wallcovering types: <ul style="list-style-type: none"> <li data-bbox="667 434 1468 468">i. lining (non-woven)</li> <li data-bbox="667 474 1468 508">ii. embossed</li> <li data-bbox="667 515 1468 548">iii. blown vinyl</li> <li data-bbox="667 555 1468 589">iv. pulps/grounds</li> <li data-bbox="667 595 1468 629">v. vinyl</li> <li data-bbox="667 636 1468 669">vi. borders</li> </ul> </li> <li data-bbox="619 698 1468 732">b) Considerations: <ul style="list-style-type: none"> <li data-bbox="667 739 1468 772">i. adhesive type</li> <li data-bbox="667 779 1468 813">ii. calculation of quantity</li> <li data-bbox="667 819 1468 853">iii. fold types (concertina, half and half)</li> <li data-bbox="667 860 1468 925">iv. direction of hanging paper to walls or ceilings (horizontally, vertically)</li> </ul> </li> </ul> <p data-bbox="560 965 1468 999">3.2.2 Techniques for applying wallcovering adhesives</p> <ul style="list-style-type: none"> <li data-bbox="619 1005 1468 1039">a) Techniques: <ul style="list-style-type: none"> <li data-bbox="667 1046 1468 1079">i. brushing</li> <li data-bbox="667 1086 1468 1120">ii. rolling</li> </ul> </li> </ul> <p data-bbox="560 1160 1468 1193">3.2.3 Factors to consider when applying wallcovering adhesives</p> <ul style="list-style-type: none"> <li data-bbox="619 1234 1468 1267">a) Factors to consider: <ul style="list-style-type: none"> <li data-bbox="667 1274 1468 1308">i. pasting procedure</li> <li data-bbox="667 1314 1468 1348">ii. fold lengths using appropriate fold</li> <li data-bbox="667 1355 1468 1388">iii. soak times</li> <li data-bbox="667 1395 1468 1429">iv. paste contamination on paper surface</li> <li data-bbox="667 1435 1468 1469">v. excess paste</li> </ul> </li> </ul> <p data-bbox="560 1509 1468 1574">3.2.4 Tools and equipment and their use in wallcovering application</p> <ul style="list-style-type: none"> <li data-bbox="619 1615 1468 1680">a) Setting out (spirit level, tape measure, plumb bob, laser level, chalk line, pencil)</li> <li data-bbox="619 1720 1468 1785">b) Pasting (brush, roller, pasting table, bucket, pasting machine)</li> <li data-bbox="619 1825 1468 1890">c) Application (paper hanger's brush/sweep, spatula, seam roller)</li> <li data-bbox="619 1930 1468 1964">d) Trimming (shears, knife, straight edge)</li> </ul>

Topics	Content elements
	<p>e) Access (steps, hop-ups)</p> <p>3.2.5 Wallcovering application methods for walls and ceilings and their use</p> <p>a) Methods:</p> <ol style="list-style-type: none"> <li>i. hanging <ul style="list-style-type: none"> <li>• horizontal</li> <li>• vertical</li> </ul> </li> <li>ii. cutting <ul style="list-style-type: none"> <li>• star and envelope cuts</li> <li>• borders to walls with mitre cuts</li> </ul> </li> <li>iii. smoothing</li> </ol>
<p>3.3 Wallcovering application defects</p>	<p>3.3.1 Wallcovering application defects and their causes</p> <p>a) Defects:</p> <ol style="list-style-type: none"> <li>i. blistering</li> <li>ii. creasing</li> <li>iii. loss of emboss</li> <li>iv. overlapping</li> <li>v. tearing</li> <li>vi. springing joints</li> <li>vii. polished joints</li> <li>viii. shrinking</li> <li>ix. stretching</li> <li>x. open joints</li> <li>xi. loose edges</li> <li>xii. irregular cutting</li> <li>xiii. inaccurate matching</li> <li>xiv. staining and surface marking</li> <li>xv. corners incorrectly negotiated</li> <li>xvi. inaccurate plumbing and levels</li> </ol> <p>b) Causes:</p> <ol style="list-style-type: none"> <li>i. overpasting</li> <li>ii. oversoaking</li> <li>iii. careless handling</li> <li>iv. incorrect techniques</li> </ol>
<p>3.4 Cleaning and storage of tools, equipment and materials</p>	<p>3.4.1 Factors to consider when cleaning and storing application tools, equipment and materials:</p> <p>a) Factors:</p> <ol style="list-style-type: none"> <li>i. manual handling</li> <li>ii. COSHH</li> </ol>

Topics	Content elements
	<ul style="list-style-type: none"> <li>iii. disposal of waste</li> <li>iv. personal protective equipment (PPE) and respiratory protective equipment (RPE)</li> <li>v. storage of materials: <ul style="list-style-type: none"> <li>• stock rotation</li> <li>• racking</li> <li>• wrapping</li> <li>• atmospheric conditions (temperature, dampness, direct sunlight)</li> </ul> </li> </ul>
<p>3.5 Apply standard papers to walls</p>	<p>3.5.1 Plan for the application of standard papers to walls</p> <p>a) Plan:</p> <ul style="list-style-type: none"> <li>i. produce a method statement</li> <li>ii. identify potential hazards and risks</li> <li>iii. produce a tools and resource list</li> <li>iv. interpret information from safety data sheets, drawings and specifications</li> </ul> <p>3.5.2 Select and use tools and equipment</p> <p>3.5.3 Select and use appropriate PPE and RPE</p> <p>3.5.4 Use materials to protect work and surrounding areas prior to the application of papers</p> <p>a) Materials:</p> <ul style="list-style-type: none"> <li>i. protective sheeting types <ul style="list-style-type: none"> <li>• polythene</li> <li>• cotton twill</li> <li>• lightweight plastic</li> </ul> </li> <li>ii. various width masking tapes</li> </ul> <p>3.5.5 Prepare adhesives in line with manufacturer's information</p> <p>3.5.6 Apply wallcoverings (lining (non-woven), embossed, vinyl, random/free match, set/straight match) to walls (internal and external angles)</p> <p>3.5.7 Cut around ceilings, architrave, skirting, dado rails, sockets and switches</p> <p>3.5.8 Minimise and dispose of waste</p> <p>3.5.9 Clean and store tools and equipment</p>

Topics	Content elements
	3.5.10 Maintain a safe and clean working environment 3.5.11 Review work and check for defects For tools and equipment see 3.2.4

## Transferable employability skills

Communication in the workplace	LO and Topic
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate <b>(CSW1)</b>	LO3: 3.5
Produces documents of different types that are appropriate (eg in terms of length, style and language use) for the purpose and intended audience <b>(CSW2)</b>	LO3: 3.5
Uses available software appropriately to present written communication, including numerical information <b>(CSW4)</b>	LO3: 3.5
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication <b>(CSW5)</b>	LO3: 3.5
Workplace conduct	
Identifies and follows codes of conduct (eg for personal presentation, timekeeping) as appropriate to own role <b>(CW1)</b>	LO3: 3.5
Applies sufficient effort to enable them to complete tasks set to the standard required <b>(CW3)</b>	LO3: 3.5
Demonstrates initiative in carrying out own role <b>(CW4)</b>	LO3: 3.5
Problem solving	
Gathers appropriate information or advice from different sources to help solve a specific work-related problem <b>(PSW1)</b>	LO3: 3.5
Assesses a range of potential solutions, applying appropriate problem-solving strategies <b>(PSW2)</b>	LO3: 3.5
Presents a clear action plan, including tasks and timelines, for implementing a chosen solution to a specific work-related problem <b>(PSW4)</b>	LO3: 3.5
Self-evaluation	
Identifies strengths and areas for development in an objective and positive way <b>(SEW3)</b>	LO3: 3.5
Uses a self-evaluation tool/checklist appropriately and records reflections/progress <b>(SEW4)</b>	LO3: 3.5
Time management skills	
Plans work: <ul style="list-style-type: none"> <li>• according to priority</li> <li>• taking into account length of time needed to complete tasks</li> <li>• in order to meet deadlines <b>(TMS1)</b></li> </ul>	LO3: 3.5
Works at an appropriate pace to carry out tasks in accordance with plan <b>(TMS2)</b>	LO3: 3.5
Adjusts approach in response to any change of circumstance (eg one task over running), as appropriate, to ensure remaining time is spent effectively <b>(TMS3)</b>	LO3: 3.5

## Unit guidance for delivery

### Opportunities for efficiencies in delivery across/between units:

Naturally occurring training activities used to carry out application of wallcoverings will facilitate the completion of this unit. This will support the holistic approach of delivering and assessing the qualification as well as stimulate a realistic experience for the learners.

Tutors need to be aware of prior learning that has taken place and use this information to structure individualised learning where appropriate.

Understanding learners' prior learning allows tutors to tailor their teaching methods and materials to meet individual needs and build on learners' existing skills.

Real-life scenarios allow learners to practice in practical settings, building their confidence and competence in real-world situations. Tutors can streamline the learning process, avoiding repetition and focusing on areas where learners need the most improvement. This optimises the use of time and resources, making the learning experience more efficient and rewarding.

Overall, this approach fosters a learner-centred learning environment, promotes learner success and contributes to a more comprehensive and effective painting and decorating qualification programme. It also recognises and values learners' prior experiences and skills, creating a positive and supportive learning atmosphere.

### Suggestions for formative assessment opportunities, both for knowledge and practical outcomes:

**Quizzes:** Regular quizzes can gauge learner understanding of different application methods. Include multiple-choice, true/false and short-answer questions to cover a range of topics related to wallpapering.

**Scenario-based questions:** Present real-life scenarios involving different application methods. Ask learners to analyse the scenario, identify potential risks and suggest appropriate safety measures and actions to take.

**Group discussions:** Divide the class into small groups and assign each group a specific topic related to application methods. Have groups discuss the topic, prepare a short presentation and share their findings with the class.

**Peer assessment:** This not only reinforces their own understanding but also provides an opportunity for their peers to ask questions and learn from each other.

	<p>Feedback and self-assessment: Provide learners with rubrics or checklists outlining key safety measures and best practices for application methods. After completing a practical task or demonstration, ask them to assess their performance against the criteria and provide self-feedback.</p>
<p><b>Opportunities for visits/engagement with local industry and employers:</b></p>	<p>Visits to wallcovering manufacturers: Taking learners to visit wallcovering manufacturers allows them to see the production process first hand, understand different types of materials and gain insights into industry standards. It provides a practical understanding of how the products they work with are made and how they can be utilised effectively.</p> <p>Masterclasses by employers: Inviting employers to deliver masterclasses can offer learners a unique opportunity to learn from experienced professionals. Demonstrating good industrial practical skills directly from the employers can inspire and motivate learners to excel in their craft.</p> <p>Visits to suppliers: Arranging visits to outlets where learners can explore the latest range of tools and materials is valuable for staying up to date with industry trends. Learners can learn about new products, compare various options and understand how to select the best materials for specific projects.</p> <p>National Painting and Decorating Show: Visiting trade shows like the National Painting and Decorating Show can be a fantastic way for learners to connect with industry experts, explore cutting-edge products and gather samples for their projects. Engaging with company representatives provides an opportunity to network and learn about different career paths in the industry.</p> <p>By incorporating these initiatives, tutors can create a well-rounded and immersive learning environment, nurturing learners' passion for wallpapering and equipping them with practical knowledge to thrive in their future careers. It also fosters collaboration between educational institutions, employers, suppliers and industry events, creating a strong bridge between training and the real world.</p>
<p><b>Considerations for innovative methods of delivery:</b></p>	<p>Tutors should make the best use of available resources to provide learners with the opportunity to use a wide range of activities that could include lectures, discussions, self-study, City &amp; Guilds SmartScreen materials, research opportunities, visits to exhibitions and practical training to stimulate, motivate and educate the learner.</p>

**Ways of ensuring content is delivered in line with current, up to date industry practice:**

Learners must comply with applicable Building Regulations and choose materials that reduce waste.

Using wallcoverings can be hazardous, if safety is not observed throughout. As well as working at height, there are a range of hazardous materials used in this unit.

Health, safety and welfare issues are an important factor to consider during the delivery of this unit; therefore, strict safe working methods as outlined by legislation should be demonstrated and reinforced through close supervision of all activities. Risk assessments, method statements and COSHH assessments must be completed prior to any practical activities taking place. Adequate ventilation and the use of hand protection are paramount.

**EDI or accessibility considerations:**

Tutors need to be proactive in developing practical, theory lessons and formative assessment that ensure learners have equal access ensuring inclusion for all.

**Digital initiative considerations:**

**Online resources:** Provide access to online learning materials, such as video tutorials, interactive modules and e-books, to supplement traditional teaching methods. This allows learners to study at their own pace and review concepts as needed.

**Virtual demonstrations:** Conduct virtual wallpapering demonstrations using video conferencing tools or pre-recorded videos. This enables learners to observe techniques and best practices from anywhere, increasing accessibility.

**Simulation software:** Utilise wallpapering simulation software that allows learners to practice virtually in a risk-free environment. This provides an opportunity to refine their skills before working with actual materials.

**Digital assessments:** Implement online quizzes, tests and assignments to assess learners' knowledge and progress. Digital assessments can be automatically graded, saving time for both tutors and learners.

**Collaborative platforms:** Encourage learners to engage in online forums or discussion boards to share ideas, ask questions and collaborate on projects. This fosters a sense of community and peer learning.

**Digital portfolios:** Have learners create digital portfolios showcasing their wallpapering projects and progress. This can be a valuable resource for future employment opportunities.

**Mobile apps:** Recommend useful wallpapering-related mobile apps that provide tips, tools and design inspiration. These apps can be a practical addition to their learning toolkit.

**Augmented Reality (AR):** Explore the use of AR technology to overlay digital information on real-world wallpapering scenarios. AR can provide step-by-step guidance and assist learners in understanding complex concepts.

**Social media integration:** Use social media platforms to share updates, industry news and success stories related to wallpapering. This creates a dynamic learning environment and keeps learners connected to current trends.

When incorporating digital initiatives, it is essential to consider learners' access to technology and ensure that digital resources complement face-to-face instruction rather than replacing it entirely. A balanced approach that integrates the best of both traditional and digital methods can create a comprehensive and engaging wallpapering unit.

<b>Sustainability considerations:</b>	<p>Tutors are advised to integrate sustainability principles and the 17 sustainable goals into the curriculum whenever possible. Additionally, they should take the initiative to point out natural opportunities that arise in relation to wallcoverings and adhesives, which align with these sustainability goals. This approach aims to raise awareness and promote a better understanding of the significance of sustainable practices in the context of wallcoverings and adhesives among the learners. By doing this, tutors can help instil a sense of responsibility and consciousness about environmental impact and the role individuals can play in contributing to a more sustainable future.</p>
<b>Books:</b>	<p>Yarde B, Olsen S – The City &amp; Guilds Textbook: Painting and Decorating for Level 1 and Level 2 – (Hodder Education 2020) ISBN 9781398305779</p>
<b>Websites:</b>	<p><a href="https://en.unesco.org/sustainabledevelopmentgoals">https://en.unesco.org/sustainabledevelopmentgoals</a>  <a href="https://www.paintshow.co.uk/">https://www.paintshow.co.uk/</a></p>

## Appendix 1                      Qualification content mapping to Occupational Standard

The table below contains the mapping of the Occupational Standard ST0295 Knowledge, Skills and Behaviours (KSBs) to the City & Guilds Level 2 Extended Technical Occupational Entry in Painting and Decorating (Diploma) (7255-72).

**The KSB reference to each unit in this document is not exhaustive.**

Unit	Knowledge, Skills and Behaviours (KSBs) reference
101 Health and safety in a construction environment	K1, K2, K3, K4, K6, B1
201 Health, safety and welfare in construction environments	K1, K2, K3, K4, K6, K9, K29 S4 B1
202 Principles of working in the construction industry	K7, K8, K9, K10, K25, K26, K27, K28, K30, K31 S20, S21, S22, S23 B2, B4, B5, B6
220 Access equipment	K1, K2, K3, K4 S1, S3, S4, S5 B1, B3
221 Preparation of surfaces for decoration	K1, K2, K9, K10, K13, K14, K15, K18, K19, K20 S1, S2, S4, S5, S6, S8, S9, S10, S11, S12, S13, S14, S19 B1, B2, B3
222 Application of surface coatings	K1, K2, K5, K7, K9, K10, K11, K12, K13, K16, K23, K24 S1, S2, S4, S5, S6, S7, S8, S9, S10, S15, S16 B1, B2, B3
223 Application of wallcoverings to walls and ceilings	K1, K2, K4, K9, K10, K13, K17, K21, K22 S1, S2, S4, S5, S6, S8, S9, S10, S17, S18, B1, B2, B3

## Appendix 2 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 [Centre document library](http://www.cityandguilds.com) on [www.cityandguilds.com](http://www.cityandguilds.com) or click on the links below:

### Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

### **Centre Handbook: Quality Assurance Standards**

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

### **Access arrangements: When and how applications need to be made to City & Guilds**

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 document library](http://www.cityandguilds.com) also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

### **Useful contacts**

Please visit the [Contact us](http://www.cityandguilds.com) section of the City & Guilds website.

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