

# **Pearson Edexcel Level 2 NVQ Diploma in Specialist Concrete Occupations (Construction)**

## **Specification**

Competence-based qualification

First registration September 2020

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# 1 Introducing the qualification

## What are Pearson competence-based qualifications?

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Pearson competence-based qualifications are work-based qualifications that give learners the opportunity to develop and demonstrate their competence in the area of work or job role to which the qualification relates.

Learners will develop the knowledge, skills and behaviours to become competent in the area of work or job role. The requirements to be competent are set by occupational standards for the appropriate sector. Pearson has worked closely with the appropriate professional body in the development of this qualification. The qualifications are written in broad terms to enable employers and providers to apply them to a wide range of related occupational areas.

## Qualification purpose

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The Pearson Edexcel Level 2 Diploma in Specialist Concrete Occupations (Construction) is for learners who are working in the area of building and construction. These qualifications are nationally recognised and are based on the ConstructionSkills National Occupational Standards (NOS).

The Pearson Edexcel Level 2 Diploma in Specialist Concrete Occupations (Construction) is suitable for learners to:

- develop the fundamental technical skills and underpinning knowledge and understanding required to become competent in specialist concrete occupations. For details of the units included in this qualification, please see *Section 3 Qualification structure*
- gain recognition for existing skills and knowledge
- develop appropriate professional attitudes and behaviours that will support personal success in their job role and the long-term success of their organisation
- develop a range of interpersonal and intrapersonal skills to support progression to, and success in, further study and career advancement
- achieve a nationally-recognised Level 2 qualification
- achieve a CSCS (Construction Skills Certification Scheme) card to confirm competence and allow progression to employment.

## Industry support and recognition

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The Pearson Edexcel Level 2 NVQ Diploma in Specialist Concrete Occupations (Construction) was developed by the CITB Working Group, which included the following organisations:

Employers:

- Atkins
- Avesta Group (Scotland)
- BAC Corrosion Control
- Balvac Ltd Specialist Contracts
- BECO Wallform
- Brennan Associates
- Cathodic Protection Co Ltd
- Central Flooring Services
- CLM Ltd Specialist Concrete
- Concrete Repairs Ltd
- Construct
- Corrosion Engineering Solutions
- Corrpro
- Decorative Concrete Services
- East Midlands Diamond Drilling
- Fosroc Ltd
- Freyssinet
- Gunform
- Kentile
- Laing O'Rourke
- Mapei Ltd
- Mason UK Ltd
- McDaid Screeding Services
- Mott MacDonald Consultant Engineers
- Mulalley and Company Ltd Contractors
- Patterned Concrete
- Respol



- Sika Ltd
- Stafford Flooring
- The Preparation Group
- Training and Assessments Consultants Ltd
- Vector Corrosion
- Vinci Construction Ltd
- Volkerlaser Ltd Specialist Contractors

Professional organisations:

- Cathodic Protection Association
- Concrete Repair Association
- Corrosion Prevention Association
- Insulating Concrete Forwork Association
- Sprayed Concrete Association
- Structural Concrete Alliance
- The Drilling and Sawing Association
- The Resin Flooring Association

## Funding

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Qualifications eligible and funded for post-16-year-olds can be found on the funding Hub.

The apprenticeship funding rules can be found at [www.gov.uk](http://www.gov.uk).

For further information on the requirements for delivery and assessment of the Apprenticeship Standards, please refer to the apprenticeship funding rules for employers at:

<https://www.gov.uk/guidance/apprenticeship-funding-rules-for-employers>.

## 2 Qualification summary and key information

Qualification title	Pearson Edexcel Level 2 NVQ Diploma in Specialist Concrete Occupations
Qualification Number (QN)	603/6556/0
Regulation start date	28/08/2020
Operational start date	01/10/20
Approved age ranges	16–18 19+
Total Qualification Time (TQT)	370.
Guided Learning Hours (GLH)	202.
Assessment	Internal assessment (portfolio of evidence).
Grading information	The qualification and units are graded Pass/Fail.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification.  Centres must follow the information in our document, <i>A guide to recruiting learners onto Pearson qualifications</i> and <i>Section 6 Access to qualifications</i> .
Pathways	This qualification includes the following pathways: <ul style="list-style-type: none"> <li>• Concrete Repair</li> <li>• Sprayed Concrete</li> <li>• Decorative Concrete</li> <li>• Concrete Drilling</li> <li>• Concrete Sawing</li> <li>• Concrete Drilling and Sawing</li> <li>• In-Situ Flooring – Screed</li> <li>• In-Situ Flooring – Resin</li> <li>• In-Situ Flooring – Concrete Layer</li> <li>• In-Situ Flooring – Concrete Finisher</li> </ul>

Qualification title	Pearson Edexcel Level 2 NVQ Diploma in Specialist Concrete Occupations
	<ul style="list-style-type: none"> <li>• In-Situ Flooring – Concrete Plant Operator</li> <li>• Substrate Preparation and Profiling</li> <li>• Concrete Floating Floor Installation</li> <li>• Insulated Concrete</li> <li>• Concrete Survey</li> <li>• Install Composite Strengthening</li> <li>• Install Corrosion Protection to Concrete</li> </ul>

### 3 Qualification structure

#### Pearson Edexcel Level 2 NVQ Diploma in Specialist Concrete Occupations (Construction)

GLH now includes assessment time and may differ from the values presented for the same units in older qualifications.

#### Pathway 1: Concrete Repair

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
5	Surveying degraded concrete structures in the workplace	2	100
6	Preparing substrate and applying materials to repair concrete in the workplace	2	100

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

<b>Unit number</b>	<b>Additional units</b>	<b>Level</b>	<b>Guided learning hours</b>
30	Applying coatings as structure protection in the workplace	2	53

## Pathway 2: Sprayed Concrete

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
7	Preparing substrate for sprayed concrete in the workplace	2	100
8	Applying sprayed concrete in the workplace	2	100

### Pathway 3: Decorative Concrete

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	8
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
9	Preparing backgrounds prior to laying decorative concrete in the workplace	2	50
10	Placing concrete and producing a decorative finish in the workplace	2	70
11	Installing street ironwork in the workplace (metal, plastic, concrete and composite materials)	2	60
12	Setting out secondary dimensional work control in the workplace	2	33

## Pathway 4: Concrete Drilling

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
13	Reshaping using hand sawing techniques in the workplace	2	80
14	Forming drill holes or core in the structural fabric (diamond core bits) in the workplace	2	70



## Pathway 5: Concrete Sawing

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
13	Reshaping using hand sawing techniques in the workplace	2	80
15	Forming saw cuts in structural fabric material in the workplace	2	73

## Pathway 6: Concrete Drilling and Sawing

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	7
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
13	Reshaping using hand sawing techniques in the workplace	2	80
14	Forming drill holes or core in the structural fabric (diamond core bits) in the workplace	2	70
15	Forming saw cuts in structural fabric material in the workplace	2	73

Learners on Pathways 4, 5 and 6 may choose to take the following additional units, but these do not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
31	Carrying out concrete bursting operations in the workplace	2	63
32	Carrying out concrete crushing and breaking operations in the workplace	2	57
33	Carrying out wire sawing in the workplace	2	63
34	Erecting and dismantling access/working platforms in the workplace	2	37
35	Applying sealants mechanically in the workplace	3	80

## Pathway 7: In-Situ Flooring – Screed

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
16	Preparing and inspecting substrates prior to laying screed floors in the Workplace	2	53
17	Laying screed floors in the workplace	2	70

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
15	Forming saw cuts in structural fabric material in the workplace	2	73

## Pathway 8: In-Situ Flooring – Resin

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
18	Laying resin floors in the workplace	2	63
25	Repairing, preparing and inspecting substrates prior to laying resin floors in the workplace	2	73

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
15	Forming saw cuts in structural fabric material in the workplace	2	73

## Pathway 9: In-Situ Flooring – Concrete Layer

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
19	Preparing areas for concrete flooring in the workplace	2	60
20	Placement of in-situ concrete flooring in the workplace	2	57

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
15	Forming saw cuts in structural fabric material in the workplace	2	73

## Pathway 10: In-Situ Flooring – Concrete Finisher

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
19	Preparing areas for concrete flooring in the workplace	2	60
21	Applying surface finishes to concrete flooring in the workplace	2	57

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
15	Forming saw cuts in structural fabric material in the workplace	2	73

## Pathway 11: In-Situ Flooring – Concrete Plant Operator

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	5
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
23	Preparing and operating ride-on topping spreaders to distribute materials in the workplace	2	110

Learners may choose to take the following additional unit, but it does not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
15	Forming saw cuts in structural fabric material in the workplace	2	73



## Pathway 12: Substrate Preparation and Profiling

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	5
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
24	Operating plant or machinery to prepare, profile and finish substrates for specified materials in the workplace	2	73

## Pathway 13: Concrete Floating Floor Installation

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
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Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
19	Preparing areas for concrete flooring in the workplace	2	60
28	Jacking-up acoustic floating floors in the workplace	2	30

## Pathway 14: Insulated Concrete Construction

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	6
---	---

Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
29	Placing and compacting concrete in the workplace	2	47
22	Erecting insulating concrete formwork structures in the workplace	2	100

Learners may choose to take the following additional units, but these do not count towards achievement of the qualification.

Unit number	Additional units	Level	Guided learning hours
34	Erecting and dismantling access/working platforms in the workplace	2	37
36	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2	33

## Pathway 15: Concrete Survey

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	5
---	---

Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
5	Surveying degraded concrete structures in the workplace	2	100

## Pathway 16: Install Composite Strengthening Systems

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	5
---	---

Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
26	Installing composite strengthening systems in the workplace	2	110

## Pathway 17: Install Corrosion Protection to Concrete

The requirements outlined in the table below must be met for Pearson to award the qualification.

Minimum number of units that must be achieved	5
---	---

Unit number	Mandatory units	Level	Guided learning hours
1	Conforming to general health, safety and welfare in the workplace	1	17
2	Conforming to productive working practices in the workplace	2	20
3	Moving, handling and storing resources in the workplace	2	27
4	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	65
27	Applying corrosion protection systems to reinforced concrete in the workplace	2	110

## 4 Assessment requirements

The units in this qualification are internally assessed.

### Assessment strategy

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The assessment strategy for this qualification is included in *Annexe A*. It sets out the overarching assessment requirements and the framework for assessing the units to ensure that the qualification remains valid and reliable. It has been developed by the Construction Industry Training Board (CITB).

### Language of assessment

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Learners must use English only during the assessment of this qualification.

A learner taking the qualification(s) may be assessed in British Sign Language where it is permitted for the purpose of reasonable adjustment.

Further information on the use of language in qualifications is available in our *Use of languages in qualifications policy*, available on our website.

### Internal assessment

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The units in this qualification are assessed through an internally- and externally quality-assured Portfolio of Evidence made up of evidence gathered during the course of the learner's work.

Each unit has specified learning outcomes and assessment criteria. To pass each unit, learners must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- prove that the evidence is their own.

Learners must have an assessment record that identifies the assessment criteria that have been met. The assessment record should be cross-referenced to the evidence provided. The assessment record should include details of the type of evidence and the date of assessment. Suitable centre documentation should be used to form an assessment record.

## Presenting evidence

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In line with the assessment strategy, evidence for internally-assessed units can take a variety of forms as indicated below:

- direct observation of the learner's performance by their assessor (O)
- outcomes from oral or written questioning (Q&A)
- products of the learner's work (P)
- professional discussion (PD)
- authentic statements/witness testimony (WT)
- expert witness testimony (EWT)
- evidence of Recognition of Prior Learning (RPL).

Learners can use the abbreviations in their portfolios for cross-referencing purposes.

Learners can also use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. It is not necessary for learners to have each assessment criterion assessed separately. They should be encouraged to reference evidence to the relevant assessment criteria. However, the evidence provided for each unit must clearly reference the unit being assessed. Evidence must be available to the assessor, the internal verifier and the Pearson Standards Verifier.

Any specific evidence requirements for a unit are given in the *Unit assessment requirements* section of the unit.

## Assessment of knowledge and understanding

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Knowledge and understanding are key components of competent performance, but it is unlikely that performance evidence alone will provide sufficient evidence for knowledge-based learning outcomes and assessment criteria. Where the learners' knowledge and understanding is not apparent from performance evidence, it must be assessed through other valid methods and be supported by suitable evidence. The evidence provided to meet these learning outcomes and assessment criteria must be in line with the assessment strategy. Any specific assessment requirements are stated in the *Unit assessment requirements* section of each unit in *Section 9 Units*.



## Assessor requirements

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Centres must ensure:

- assessment is carried out by assessors with relevant expertise in both the occupational area and assessment. The requirements for assessor qualifications and experience are stated in the assessment strategy/plan in *Annexe A*.
- internal verification systems are in place to ensure the quality and authenticity of learners' work, as well as the accuracy and consistency of assessment. The requirements of internal verifiers (IVs) are stated in the assessment strategy/plan in *Annexe A*.

## 5 Centre recognition and approval

Centres must have approval prior to delivering or assessing any of the units in this qualification.

Centres that have not previously offered Pearson competence-based qualifications need to apply for, and be granted, centre recognition and approval to offer individual qualifications.

Existing Pearson centres seeking approval to offer Pearson competence-based qualifications, will be required to submit supplementary evidence for approval, aligned with the associated Standards and/or assessment requirements.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by a new qualification and the conditions for automatic approval are met.

Guidance on seeking approval to deliver Pearson vocational qualifications is available on our website.

### Approvals agreement

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All centres are required to enter into an approval agreement with Pearson, in which the head of centre or principal agrees to meet all the requirements of the qualification specification and to comply with the policies, procedures, codes of practice and regulations of Pearson and relevant regulatory bodies. If centres do not comply with the agreement, this could result in the suspension of certification or withdrawal of centre or qualification approval.

## Centre resource requirements

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As part of the approval process, centres must make sure that the resource requirements below are in place before offering the qualification:

- appropriate physical resources as outlined in the Assessment Strategy in *Annexe A* (for example a workplace in line with industry standards or a Realistic Working Environment (RWE), where permitted)
- centres must meet any specific human resource requirements outlined in the Assessment Strategy in *Annexe A*
- staff assessing learners and internally verifying programmes must meet the occupational competence requirements in the Assessment Strategy
- systems to ensure continuing professional development (CPD) for staff delivering, assessing and internally verifying the qualification
- health and safety policies that relate to the use of equipment by learners
- internal verification systems and procedures (see *Section 4 Assessment requirements*)
- any unit-specific resources stated in individual units.

## 6 Access to qualifications

### Access to qualifications for learners with disabilities or specific needs

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Equality and fairness are central to our work. Our *Equality, diversity and inclusion policy* requires all learners to have equal opportunity to access our qualifications and assessments, and that our qualifications are awarded in a way that is fair every learner.

We are committed to making sure that:

- learners with a protected characteristic (as defined by the Equality Act 2010) are not, when they are taking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve from their qualification and that this achievement can be compared fairly to the achievement of their peers.

For learners with disabilities and specific needs, the assessment of their potential to achieve the qualification must identify, where appropriate, the support that will be made available to them during delivery and assessment of the qualification.

Centres must deliver the qualification in accordance with current equality legislation. For full details of the Equality Act 2010, please visit [www.legislation.gov.uk](http://www.legislation.gov.uk).

### Reasonable adjustable and special consideration

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Centres are permitted to make adjustments to assessment to take account of the needs of individual learners. Any reasonable adjustment must reflect the normal learning or working practice of a learner in a centre or a learner working in the occupational area.

Centres cannot apply their own special consideration – applications for special consideration must be made to Pearson and can be made on a case-by-case basis only.

Centres must follow the guidance in the Pearson document *Guidance for reasonable adjustments and special consideration in vocational internally assessed units*.

## 7 Recognising prior learning and achievement

Recognition of Prior Learning (RPL) considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Pearson encourages centres to recognise learners' previous achievements and experiences in and outside the workplace, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. If the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be sufficient, reliable and valid.

Further guidance is available in our policy document *Recognition of prior learning policy and process*, available on our website.

## 8 Quality assurance of centres

For the qualification in this specification, the Pearson quality assurance model will consist of the following processes.

Centres will receive at least one visit from our Standards Verifier, followed by ongoing support and development. This may result in more visits or remote support, as required to complete standards verification. The exact frequency and duration of Standards Verifier visits/remote sampling will reflect the level of risk associated with a programme, taking account of the:

- number of assessment sites
- number and throughput of learners
- number and turnover of assessors
- number and turnover of internal verifiers
- amount of previous experience of delivery.

If a centre is offering a Pearson competence-based qualification alongside other qualifications related to a similar Apprenticeship Standard, wherever possible we will allocate the same Standards Verifier for both qualifications.

Following registration, centres will be given further quality assurance and sampling guidance.

For further details, please see the work-based learning quality assurance handbooks, available in the support section of our website:

- *Pearson centre guide to quality assurance – NVQs/SVQs and competence-based qualifications*
- *Pearson delivery guidance & quality assurance requirements – NVQs/SVQs and competence-based qualifications.*

## 9 Units

This section of the specification contains the unit(s) that form the assessment for the qualification.

For explanation of the terms within the units, please refer to *Section 13 Glossary*.

It is compulsory for learners to meet the learning outcomes and the assessment criteria to achieve a Pass. The unit assessment requirements must also be met by the evidence that is provided by the learner.

Where legislation is included in delivery and assessment, centres must ensure that it is current and up to date.

# **Unit 1: Conforming to general health, safety and welfare in the workplace**

**Level:** 1

**Unit type:** Mandatory in all pathways

**Guided learning hours:** 17

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## **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in conforming to general safety in the workplace within the relevant sector of industry.

## **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Comply with all workplace health, safety and welfare legislation requirements.	1.1	Comply with information from workplace inductions and any health, safety and welfare briefings attended relevant to the occupational area.			
		1.2	Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements.			
		1.3	Comply with statutory requirements, safety notices and warning notices displayed within the workplace and/or on equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		1.4 State why and when health and safety control equipment, identified by the principles of protection, should be used relating to types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		1.5 State how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.			
		1.6 State which types of health, safety and welfare legislation, notices and warning signs are relevant to the occupational area and associated equipment.			
		1.7 State why health, safety and welfare legislation, notices and warning signs are relevant to the occupational area.			
		1.8 State how to comply with control measures that have been identified by risk assessments and safe systems of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Recognise hazards associated with the workplace that have not been previously controlled and report them in accordance with organisational procedures.	2.1	Report any hazards created by changing circumstances within the workplace in accordance with organisational procedures.			
		2.2	List typical hazards associated with the work environment and occupational area in relation to resources, substances, asbestos, equipment, obstructions, storage, services and work activities.			
		2.3	List the current Health and Safety Executive top ten safety risks.			
		2.4	List the current Health and Safety Executive top five health risks.			
		2.5	State how changing circumstances within the workplace could cause hazards.			
		2.6	State the methods used for reporting changed circumstances, hazards and incidents in the workplace.			
3	Comply with organisational policies and procedures to contribute to health, safety and welfare.	3.1	Interpret and comply with given instructions to maintain safe systems of work and quality working practices.			
		3.2	Contribute to discussions by offering/providing feedback relating to health, safety and welfare.			
		3.3	Contribute to the maintenance of workplace welfare facilities in accordance with workplace welfare procedures.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.4 Safely store health and safety control equipment in accordance with given instructions.			
		3.5 Dispose of waste and/or consumable items in accordance with legislation.			
		3.6 State the organisational policies and procedures for health, safety and welfare, in relation to: <ul style="list-style-type: none"> <li>• dealing with accidents and emergencies associated with the work and environment</li> <li>• methods of receiving or sourcing information</li> <li>• reporting</li> <li>• stopping work</li> <li>• evacuation</li> <li>• fire risks and safe exit procedures</li> <li>• consultation and feedback.</li> </ul>			
		3.7 State the appropriate types of fire extinguishers relevant to the work.			
		3.8 State how and when the different types of fire extinguishers are used in accordance with legislation and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Work responsibly to contribute to workplace health, safety and welfare whilst carrying out work in the relevant occupational area.	4.1	Demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare.			
		4.2	State how personal behaviour demonstrates responsibility for general workplace health, safety and welfare, in relation to: <ul style="list-style-type: none"> <li>• recognising when to stop work in the face of serious and imminent danger to self and/or others</li> <li>• contributing to discussions and providing feedback</li> <li>• reporting changed circumstances and incidents in the workplace</li> <li>• complying with the environmental requirements of the workplace.</li> </ul>			
		4.3	Give examples of how the behaviour and actions of individuals could affect others within the workplace.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Comply with and support all organisational security arrangements and approved procedures.	5.1	Provide appropriate support for security arrangements in accordance with approved procedures: <ul style="list-style-type: none"> <li>• during the working day</li> <li>• on completion of the day's work</li> <li>• for unauthorised personnel (other operatives and the general public)</li> <li>• for theft.</li> </ul>			
		5.2	State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 2: Conforming to productive working practices in the workplace**

**Level:** 2

**Unit type:** Mandatory in all pathways

**Guided learning hours:** 20

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in conforming to productive working practices in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Communicate with others to establish productive work practices.	1.1	Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively.			
		1.2	Describe the different methods of communicating with line management, colleagues and customers.			
		1.3	Describe how to use different methods of communication to ensure that the work carried out is productive.			
2	Follow organisational procedures to plan the sequence of work.	2.1	Interpret relevant information from organisational procedures in order to plan the sequence of work.			
		2.2	Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		2.3	Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: <ul style="list-style-type: none"> <li>• using resources for own and other's work requirements</li> <li>• allocating appropriate work to employees</li> <li>• organising the work sequence</li> <li>• reducing carbon emissions.</li> </ul>			
		2.4	Describe how to contribute to zero/low carbon work outcomes within the built environment.			
3	Maintain relevant records in accordance with the organisational procedures.	3.1	Complete relevant documentation according to the occupation as required by the organisation.			
		3.2	Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: <ul style="list-style-type: none"> <li>• job cards</li> <li>• worksheets</li> <li>• material/resource lists</li> <li>• time sheets.</li> </ul>			
		3.3	Explain the reasons for ensuring documentation is completed clearly and within given timescales.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Maintain good working relationships when conforming to productive working practices.	4.1	Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships.			
		4.2	Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others.			
		4.3	Describe how to maintain good working relationships, in relation to: <ul style="list-style-type: none"> <li>• individuals</li> <li>• customer and operative</li> <li>• operative and line management</li> <li>• own and other occupations.</li> </ul>			
		4.4	Describe why it is important to work effectively with line management, colleagues and customers.			
		4.5	Describe how working relationships could have an effect on productive working.			
		4.6	Describe how to apply principles of equality and diversity when communicating and working with others.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 3: Moving, handling and storing resources in the workplace**

**Level:** 2

**Unit type:** Mandatory in all pathways

**Guided learning hours:** 27

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in moving and handling resources in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Comply with given information when moving, handling and/or storing resources.	1.1	Interpret the given information relating to moving, handling and/or storing resources, relevant to the given occupation.			
		1.2	Interpret the given information relating to the use and storage of lifting aids and equipment.			
		1.3	Describe the different types of technical, product and regulatory information, their source and how they are interpreted.			
		1.4	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.5	Describe how to obtain information relating to using and storing lifting aids and equipment.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when moving, handling and/or storing resources.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> <li>in the workplace, in confined spaces, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making the reports.			
		2.4	State the appropriate types of fire extinguishers relevant to the work.			
		2.5	Describe how and when the different types of fire extinguishers, relevant to the given occupation, are used in accordance with legislation and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe working practices when moving, handling and/or storing resources.	3.1	Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when moving, handling and/or storing resources.			
		3.2	Use lifting aids safely as appropriate to the work.			
		3.3	Protect the environment in accordance with safe working practices as appropriate to the work.			
		3.4	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to moving, handling <b>and/or</b> storing resources, and the types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.5	Describe how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.6	State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.			
4	Select the required quantity and quality of resources for the methods of work to move, handle and/or store occupational resources.	4.1	Select the relevant resources to be moved, handled and/or stored, associated with own work.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the occupational resources in relation to: <ul style="list-style-type: none"> <li>lifting and handling aids</li> <li>container(s)</li> <li>fixing, holding and securing systems.</li> </ul>			
		4.3	Describe how the resources should be handled and how any problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Prevent the risk of damage to occupational resources and surrounding environment when moving, handling and/or storing resources.	5.1	Protect occupational resources and their surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Dispose of waste and packaging in accordance with legislation.			
		5.3	Maintain a clean work space when moving, handling or storing resources.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when moving, handling and/or storing resources.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>• progress charts, timetables and estimated times</li> <li>• organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given occupational resource information to move, handle and/or store resources to the required guidance.	7.1	Demonstrate the following work skills when moving, handling and/or storing occupational resources: <ul style="list-style-type: none"> <li>moving, positioning, storing, securing and/or using lifting aids and kinetic lifting techniques.</li> </ul>			
		7.2	Move, handle and/or store occupational resources to meet product information and organisational requirements relating to three of the following: <ul style="list-style-type: none"> <li>sheet material</li> <li>loose material</li> <li>bagged or wrapped material</li> <li>fragile material</li> <li>tools and equipment</li> <li>components</li> <li>liquids.</li> </ul>			
		7.3	Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them when moving, handling and/or storing occupational resources.			
		7.4	Describe the needs of other occupations when moving, handling and/or storing resources.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 4: Installing, maintaining and removing work area protection and safety equipment in the workplace**

**Level:** 2

**Unit type:** Mandatory in all pathways

**Guided learning hours:** 65

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing, maintaining and removing work area protection and safety equipment in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing, maintaining and removing work area protection and safety equipment.	1.1	Interpret and extract relevant information from drawings, plans, risk assessments, method statements, specifications, schedules and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, plans, risk assessments, method statements, specifications, schedules, site inspection reports, manufacturers' information, verbal and written instructions, current regulations and official guidance associated with protecting work areas.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when establishing work area protection and safety.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when installing, maintaining and removing work area protection and safety equipment.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing, maintaining and removing work area protection and safety equipment.			
		3.2	Demonstrate compliance with given information and relevant legislation when installing, maintaining and removing work area protection and safety equipment in relation to at least two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to installing, maintaining and removing work area protection and safety equipment, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to install, maintain and remove work area protection and safety equipment.	4.1	Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• safety and security equipment (cones, tapes, fences, barriers, hoarding, doors, gates)</li> <li>• protection and safety notices</li> <li>• signs and lighting</li> <li>• hand tools, power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards associated with the resources and methods of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to install, maintain and remove work area protection and safety equipment.			
5	Minimise the risk of damage to the work and surrounding area when installing, maintaining and removing work area protection and safety equipment.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when installing, maintaining and removing work area protection and safety equipment.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of productivity targets and time scales</li> <li>how times are estimated</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to install, maintain and remove work area protection and safety equipment to the required specification.	7.1	Demonstrate the following work skills when installing, maintaining and removing work area protection and safety equipment: <ul style="list-style-type: none"> <li>measuring, setting out, positioning, assembling, constructing, securing, dismantling and removing.</li> </ul>			
		7.2	Use and maintain hand tools, power tools and ancillary equipment.			
		7.3	Install, maintain and remove temporary protection and safety arrangements for the work area, to given working instructions, relating to protection equipment, barriers, fences and at least one of the following: <ul style="list-style-type: none"> <li>protection and safety notices</li> <li>safety lighting.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.4 Report work undertaken.			
		7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• plan for the protection and the safety of the work and surrounding environment</li> <li>• conform to agreed specification</li> <li>• confirm the location of utility services and ensure they are protected</li> <li>• prepare and set out area protection equipment to required dimensions</li> <li>• install, check and maintain the protection and safety equipment</li> <li>• dismantle and remove protection and safety equipment</li> <li>• install safety notices</li> <li>• install lighting systems</li> <li>• monitor and check accuracy during progress and on completion of work</li> <li>• install, maintain and remove work area protection equipment in public areas</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• transport, load and off load work area protection equipment</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• use hand tools, power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.6	Describe the needs of other occupations and how to communicate effectively within a team when installing, maintaining and removing work area protection and safety equipment in the workplace.		
		7.7	Describe how to maintain the tools and equipment used when installing, maintaining and removing work area protection and safety equipment in the workplace.		

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

# Unit 5: Surveying degraded concrete structures in the workplace

**Level:** 2

**Unit type:** **Mandatory in the following pathways:**  
**Pathway 1: Concrete Repair**  
**Pathway 15: Concrete Survey**

**Guided learning hours:** 100

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## Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in surveying degraded concrete structures in the workplace within the relevant sector of industry.

## Unit assessment requirements

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when surveying degraded concrete structures.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, official guidance and current regulations associated with surveying degraded concrete structures.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when surveying degraded concrete structures.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when surveying degraded concrete structures and describe how and when they are used.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when surveying degraded concrete structures.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when surveying degraded concrete structures.			
		3.2	Demonstrate compliance with given information and relevant legislation when surveying degraded concrete structures in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to surveying degraded concrete structures, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.		
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.		
4	Select the required quantity and quality of resources for the methods of work to survey degraded concrete structures.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.		
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• hammer, dust sampler, phenolphthalein (ph indicator), cover meter</li> <li>• half-cell (potential) testing equipment</li> <li>• hand tools, portable power tools and equipment.</li> </ul>		
		4.3	Describe how to confirm that the resources and materials conform to the specification.		
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.		

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage of materials associated with the method and procedure to survey degraded concrete structures.			
5	Minimise the risk of damage to the work and surrounding area when surveying degraded concrete structures.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when surveying degraded concrete structures.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to survey degraded concrete structures to the required specification.	7.1	Demonstrate the following work skills when surveying degraded concrete structures: <ul style="list-style-type: none"> <li>identifying, measuring, marking out, protecting, preparing, testing, recording and reporting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Survey degraded concrete to identify and test for defects to given working instructions by at least three of the following methods: <ul style="list-style-type: none"> <li>• visual</li> <li>• mechanical means</li> <li>• chemical means</li> <li>• electro chemical means</li> <li>• magnetic means.</li> </ul>			
		7.4 Record and report results when surveying degraded concrete structures.			
		7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• identify and follow surveying quality requirements</li> <li>• position and prepare survey equipment</li> <li>• measure and mark out areas to be surveyed</li> <li>• visually determine defects in concrete</li> <li>• identify asbestos and products that may contain asbestos</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• use the equipment to collect samples, assess damage, cracking, carbonation, reinforcement corrosion, reinforcement cover</li> <li>• prepare and use chemicals to test concrete</li> <li>• survey degraded concrete to identify and test for defects by visual, mechanical, chemical, electro-chemical and magnetic means</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• record and report survey results</li> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.6	Describe the needs of other occupations and how to effectively communicate within a team when surveying degraded concrete structures.			
		7.7	Describe how to maintain the tools and equipment used when surveying degraded concrete structures.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## **Unit 6: Preparing substrate and applying materials to repair concrete in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 1: Concrete Repair**

**Guided learning hours:** 100

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing substrate and applying materials to repair concrete in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when preparing substrate and applying materials to repair concrete.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, official guidance and current regulations associated with preparing substrate and applying materials to repair concrete.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when preparing substrate and applying materials to repair concrete.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when preparing substrate and applying materials to repair concrete and describe how and when they are used.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when preparing substrate and applying materials to repair concrete.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing substrate and applying materials to repair concrete.			
		3.2	Demonstrate compliance with given information and relevant legislation when preparing substrate and applying materials to repair concrete in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to preparing substrate and applying materials to repair concrete, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to prepare substrate and apply materials to repair concrete.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• pre-blended bagged materials, formwork, repair compounds, aggregates, cements, additives, reinforcement, primers, bonding agents and membranes</li> <li>• saws, drills, mixers and sprayers</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area volume and wastage of materials associated with the method and procedure to prepare substrate and apply materials to repair concrete.			
5	Minimise the risk of damage to the work and surrounding area when preparing substrate and applying materials to repair concrete.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when preparing substrate and applying materials to repair concrete.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to prepare substrate and apply materials to repair concrete to the required specification.	7.1	Demonstrate the following work skills when preparing substrate and applying materials to repair concrete: <ul style="list-style-type: none"> <li>measuring, marking out, locating, protecting, breaking out, cleaning, replacing, erecting, mixing, applying, finishing and curing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			



Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.3 Repair degraded concrete to given working instructions using five of the following:</p> <ul style="list-style-type: none"> <li>• prepare substrates and reinforcement using mechanical means</li> <li>• apply primers, bonding agents and repair compounds</li> <li>• replace steel reinforcement</li> <li>• erect and dismantle formwork</li> <li>• protect and cure repaired area</li> <li>• record and report repairs carried out.</li> </ul>			
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• identify and follow the preparation and application quality requirements</li> <li>• locate services and protect adjacent areas</li> <li>• break out defective concrete</li> <li>• clean concrete and steel</li> <li>• measure, record and act on environmental conditions</li> <li>• replace steel reinforcement</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• apply corrosion protection</li> <li>• erect and dismantle formwork</li> <li>• apply primers and bonding agents</li> <li>• mix and apply repair compounds</li> <li>• mix and apply fairing and levelling mortars</li> <li>• monitor and control exposure to vibration</li> <li>• finish repaired areas</li> <li>• protect and cure</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• complete records and prepare reports</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when preparing substrate and applying materials to repair concrete.			
		7.6	Describe how to maintain the tools and equipment used when preparing substrate and applying materials to repair concrete.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 7: Preparing substrate for sprayed concrete in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 2: Concrete Repair**

**Guided learning hours:** 100

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing substrate for sprayed concrete in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when preparing substrate for sprayed concrete.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, official guidance and current regulations associated with preparing substrate for sprayed concrete.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when preparing substrate for sprayed concrete.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when preparing substrate for sprayed concrete and describe how and when they are used.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when preparing substrate for sprayed concrete.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing substrate for sprayed concrete.			
		3.2	Demonstrate compliance with given information and relevant legislation when preparing substrate for sprayed concrete in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to preparing substrate for sprayed concrete, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to prepare substrate for sprayed concrete.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>temporary supports, screens, barriers, reinforcement, tying wire, pins, formwork</li> <li>hand tools, portable power or pneumatic tools and equipment</li> <li>jet washing equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage of materials associated with the method and procedure to prepare substrate for sprayed concrete.			
5	Minimise the risk of damage to the work and surrounding area when preparing substrate for sprayed concrete.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when preparing substrate for sprayed concrete.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to prepare substrate for sprayed concrete to the required specification.	7.1	Demonstrate the following work skills when preparing substrate for sprayed concrete: <ul style="list-style-type: none"> <li>measuring, marking out, locating, protecting, supporting, breaking out, cleaning, profiling, tying, erecting, recording and reporting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.3 Prepare substrates prior to receiving sprayed concrete to given working instructions relating to seven of the following:</p> <ul style="list-style-type: none"> <li>• locate and protect services</li> <li>• break out loose and de-bonded materials using mechanical means</li> <li>• roughen smooth surfaces using mechanical means</li> <li>• clear and clean</li> <li>• surface profile levels</li> <li>• tie and secure reinforcement bar and/or mesh</li> <li>• fit guide wires</li> <li>• fit depth pins</li> <li>• erect formwork</li> <li>• record and report work carried out.</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• identify and follow the preparation quality requirements</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• break out, profile, square cut, clean and prepare using mechanical means</li> <li>• prepare substrates using ultra high pressure water jetting and abrasive blasting</li> <li>• confirm substrate is ready to receive sprayed concrete</li> <li>• position and secure reinforcement</li> <li>• erect and dismantle formwork</li> <li>• install guide wires and depth pins</li> <li>• record and report</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when preparing substrate for sprayed concrete.			
		7.6 Describe how to maintain the tools and equipment used when preparing substrate for sprayed concrete.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 8: Applying sprayed concrete in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 2: Concrete Repair**

**Guided learning hours:** 100

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying sprayed concrete in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying sprayed concrete.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, official guidance and current regulations associated with applying sprayed concrete.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying sprayed concrete.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when applying sprayed concrete and describe how and when they are used.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when applying sprayed concrete.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying sprayed concrete.			
		3.2	Demonstrate compliance with given information and relevant legislation when applying sprayed concrete in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to applying sprayed concrete, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.		
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.		
4	Select the required quantity and quality of resources for the methods of work to apply sprayed concrete.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.		
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• pre-blended bagged materials, sand, aggregate, cements, water, additives, admixtures, structural concrete, curing membranes</li> <li>• working platforms</li> <li>• hand tools, portable power or pneumatic tools, spraying and testing equipment and ancillaries.</li> </ul>		
		4.3	Describe how to confirm that the resources and materials conform to the specification.		

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area, volume and wastage of materials associated with the method and procedure to apply sprayed concrete.			
5	Minimise the risk of damage to the work and surrounding area when applying sprayed concrete.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when applying sprayed concrete.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to apply sprayed concrete to the required specification.	7.1	Demonstrate the following work skills when applying sprayed concrete: <ul style="list-style-type: none"> <li>measuring, marking out, assembling, checking, preparing, finishing, curing, protecting, testing, recording and reporting.</li> </ul>			
		7.2	Use and maintain concrete spraying machinery and compressor, hand tools, portable power tools and ancillary equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Apply sprayed concrete by wet and/or dry methods to given working instructions for five of the following: <ul style="list-style-type: none"> <li>• pre-wet surfaces for spraying</li> <li>• spray concrete to profile</li> <li>• produce samples for testing</li> <li>• cure and protect concrete</li> <li>• record and report on test</li> <li>• record and report on spraying</li> <li>• operate spraying nozzle</li> <li>• operate pump</li> <li>• clean pump</li> <li>• clear lines.</li> </ul>			
		7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• identify and follow the application quality requirements</li> <li>• assemble and check spray equipment (wet and/or dry application)</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• prepare substrates including wetting, depth guides and protection measures</li> <li>• include and accommodate cathodic protection materials</li> <li>• maintain protection against overspray and rebounding materials</li> <li>• set up spray and pumping equipment</li> <li>• operate robotic spraying equipment</li> <li>• operate hand-held spraying equipment</li> <li>• spray in layers to agreed profile and depth</li> <li>• apply specified finish</li> <li>• cure and protect concrete</li> <li>• provide samples for testing concrete (compression, tension, consistency and workability)</li> <li>• record and report</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• operate spraying machines, compressors and pumps</li> <li>• maintain spraying machines, nozzles, hoses, compressors and pumps during operations</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power and pneumatic tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when applying sprayed concrete.			
		7.6 Describe how to maintain the tools and equipment used when applying sprayed concrete.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## **Unit 9: Preparing backgrounds prior to laying decorative concrete in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 3: Decorative Concrete**

**Guided learning hours:** 50

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing backgrounds prior to laying decorative concrete in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when preparing backgrounds prior to laying decorative concrete.	1.1	Interpret and extract relevant information from drawings, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations governing buildings.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when preparing backgrounds prior to laying decorative concrete.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when preparing backgrounds prior to laying decorative concrete.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing backgrounds prior to laying decorative concrete.			
		3.2	Demonstrate compliance with given information and relevant legislation when preparing backgrounds prior to laying decorative concrete in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing backgrounds prior to laying decorative concrete, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to prepare backgrounds prior to laying decorative concrete.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• protection materials</li> <li>• blinding</li> <li>• sub-bases</li> <li>• drainage materials</li> <li>• edge restraint/shutters</li> <li>• fibre reinforcement</li> <li>• fixings</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, volume, length, area and wastage associated with the method/procedure to prepare backgrounds prior to laying decorative concrete.			
5	Minimise the risk of damage to the work and surrounding area when preparing backgrounds prior to laying decorative concrete.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when preparing backgrounds prior to laying decorative concrete.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to prepare backgrounds prior to laying decorative concrete to the required specification.	7.1	Demonstrate the following work skills when preparing backgrounds prior to laying decorative concrete: <ul style="list-style-type: none"> <li>measuring, marking out, locating, protecting, preparing, formatting, draining, placing, installing and securing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Prepare backgrounds for decorative concrete to given working instructions: <ul style="list-style-type: none"> <li>• earthworks, prepare, lay and compact substrates</li> <li>• site preparation, lines, levels and gradients</li> <li>• drainage installation</li> <li>• edge restraint.</li> </ul>			
		7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• locate and protect services (water, gas, electric and waste), including overhead utilities</li> <li>• protect existing structures</li> <li>• work around, in close proximity, with, plant and machinery</li> <li>• direct and guide plant and machinery</li> <li>• excavate to line, level and prepare formation</li> <li>• install drainage including soak-aways</li> <li>• level, spread and compact sub-bases</li> <li>• install and remove edge restraint/shutters</li> <li>• secure reinforcement</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• prepare vertical surfaces (steps and risers)</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when preparing backgrounds prior to laying decorative concrete.			
		7.6 Describe how to maintain the tools and equipment used when preparing backgrounds prior to laying decorative concrete.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 10: Placing concrete and producing a decorative finish in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 3: Decorative Concrete**

**Guided learning hours:** 70

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in placing concrete and producing a decorative finish in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when placing concrete and producing a decorative finish.	1.1	Interpret and extract relevant information from drawings, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations governing buildings.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when placing concrete and producing a decorative finish.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when placing concrete and producing a decorative finish.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when placing concrete and producing a decorative finish.			
		3.2	Demonstrate compliance with given information and relevant legislation when placing concrete and producing a decorative finish in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to placing concrete and producing a decorative finish, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to place concrete and produce a decorative finish.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• concrete</li> <li>• retarders, sealers, hardeners, resins (polymers, colours), cleaning agents, repair compounds, release agents</li> <li>• diluted acid</li> <li>• integral colouring agents</li> <li>• aggregate</li> <li>• stencils, mats and/or skins</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to place concrete and produce a decorative finish.			
5	Minimise the risk of damage to the work and surrounding area when placing concrete and producing a decorative finish.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when placing concrete and producing a decorative finish.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>• types of progress charts, timetables and estimated times</li> <li>• organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to place concrete and produce a decorative finish to the required specification.	7.1	Demonstrate the following work skills when placing concrete and producing a decorative finish: <ul style="list-style-type: none"> <li>• measuring, marking out, handling, placing, testing, compacting, screeding, applying, finishing, jointing, sealing, protecting and curing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Place concrete to levels and falls, test and produce specialist surface finishes to given working instructions, for one of the following: <ul style="list-style-type: none"> <li>• imprinted</li> <li>• exposed aggregate.</li> </ul>			
		7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• receive, handle, place, test and float concrete to falls and levels</li> <li>• form steps</li> <li>• place concrete for imprinting: apply colour, float and edge, apply release agents, prepare edge, align and position mats and print</li> <li>• place concrete for exposed aggregate: apply trowelled finish, seed aggregate, tamp, apply retarder, jet wash/hose off laitance, apply acid wash</li> <li>• recognise process timings</li> <li>• work to and meet agreed quality criteria</li> <li>• repair defects, cut joints, seal, protect and cure</li> <li>• apply acid etching</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• carry out remedials</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when placing concrete and producing a decorative finish.			
		7.6 Describe how to maintain the tools and equipment used when placing concrete and producing a decorative finish.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

# **Unit 11: Installing street ironwork in the workplace (metal, plastic, concrete and composite materials)**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 3: Decorative Concrete**

**Guided learning hours:** 60

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## **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing street ironwork in the workplace (metal, plastic, concrete and composite materials) within the relevant sector of industry.

## **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing street ironwork (metal, plastic, concrete and composite materials).	1.1	Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, risk assessments, method statements, manufacturers' information, verbal, written and graphical instructions and current regulations for installing street ironwork fixtures (metal, plastic, concrete and composite materials).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when installing street ironwork (metal, plastic, concrete and composite materials).	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when installing street ironwork (metal, plastic, concrete and composite materials).	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing street ironwork (metal, plastic, concrete and composite materials).			
		3.2	Demonstrate compliance with given information and relevant legislation when installing street ironwork (metal, plastic, concrete and composite materials) in relation to the following: <ul style="list-style-type: none"> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• those affected by the work.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to installing street ironwork (metal, plastic, concrete and composite materials), and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to install street ironwork (metal, plastic, concrete and composite materials).	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• sand, cement, mortar, resin-based materials</li> <li>• bricks, shims and proprietary products for adjusting</li> <li>• access covers and frames, gully grates and frames</li> <li>• hand tools, power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards associated with the resources and methods of work.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.7	Describe how to identify by calculation, quantity and size associated with the method and procedure to install street ironwork (metal, plastic, concrete and composite materials).			
5	Minimise the risk of damage to the work and surrounding area when installing street ironwork (metal, plastic, concrete and composite materials).	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when installing street ironwork (metal, plastic, concrete and composite materials).	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of productivity targets and time scales</li> <li>how times are estimated</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to install street ironwork (metal, plastic, concrete and composite materials) to the required specification.	7.1	Demonstrate the following work skills when installing street ironwork (metal, plastic, concrete and composite materials): <ul style="list-style-type: none"> <li>measuring, marking out, positioning, fitting, levelling, aligning and securing.</li> </ul>			
		7.2	Use and maintain hand tools, power tools and ancillary equipment.			
		7.3	Install street ironwork (metal, plastic, concrete and composite materials) to new and/or reinstated pavements to given working instructions relating to the following: <ul style="list-style-type: none"> <li>access covers and frames</li> <li>gully grates and frames.</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• confirm the area and location of work, the operations, safety and security requirements including temporary traffic management and immediate area protection</li> <li>• locate the area and position where the street ironwork is to be installed</li> <li>• conform to agreed specifications</li> <li>• remove, take up and set aside street ironworks</li> <li>• confirm the street ironwork, fixing and bedding requirements</li> <li>• work around street furniture</li> <li>• adjust height of existing street ironwork</li> <li>• position, fit, align, level and secure the street ironwork</li> <li>• protect ironwork during curing</li> <li>• return infrastructure to operational status</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, power tools and equipment</li> <li>• use ancillary equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when installing street ironwork (metal, plastic, concrete and composite materials).			
		7.6 Describe how to maintain the tools and equipment used when installing street ironwork (metal, plastic, concrete and composite materials).			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 12: Setting out secondary dimensional work control in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 3: Decorative Concrete**

**Guided learning hours:** 33

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in setting out secondary dimensional work control in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to setting out dimensional control of the work.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and reference points.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, reference points and current regulations governing buildings and construction work.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance to set out dimensional control of the work.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when setting out dimensional control of the work.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements during setting out dimensional control of the work.			
		3.2	<p>Demonstrate compliance with given information and relevant legislation when setting out dimensional control of the work in relation to two or more of the following:</p> <ul style="list-style-type: none"> <li>• safe use of access equipment/working platforms</li> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to setting out dimensional control of the work, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources to set out dimensional control of the work.	4.1	Select resources associated with the work in relation to measuring tools and instruments, marking materials/components, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to: <ul style="list-style-type: none"> <li>• measuring tools and instruments</li> <li>• marking equipment</li> <li>• level and alignment tools.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to identify quantity of resources associated with the method/procedure to set out for secondary dimensional work control.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when setting out dimensional control of the work.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Prevent damage and maintain a clean work area.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when setting out dimensional control of the work.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and describe why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to set out dimensional control of the work to the required specification.	7.1	Demonstrate the following work skills when setting out dimensional control of the work: <ul style="list-style-type: none"> <li>transferring, transposing, levelling, measuring, marking, positioning, fixing and securing.</li> </ul>			
		7.2	Use and maintain hand tools, measuring and marking equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.3 Set out secondary dimensional control for the work to given working instructions for three or more of the following:</p> <ul style="list-style-type: none"> <li>• line</li> <li>• level</li> <li>• depth</li> <li>• area</li> <li>• height</li> <li>• angle.</li> </ul>			
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to:</p> <ul style="list-style-type: none"> <li>• measure and set out secondary dimensional control for the work</li> <li>• measure, align and level to dimensional control requirements</li> <li>• transfer and set out lines, angles and levels to dimensional control requirements</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, measuring and marking equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe how to calculate height, depth, angle, length and area associated with the method/procedure to set out secondary dimensional work control.			
		7.6 Describe the needs of other occupations and how to effectively communicate within a team when setting out dimensional control of the work.			
		7.7 Describe how to maintain the hand tools, measuring, marking and ancillary and equipment used to set out dimensional control of the work.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 13: Reshaping using hand sawing techniques in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathways:**  
**Pathway 4: Concrete Drilling**  
**Pathway 5: Concrete Sawing**  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 70

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in reshaping using hand sawing techniques in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when reshaping using hand sawing techniques.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when reshaping using hand sawing techniques.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when reshaping using hand sawing techniques.	3.1	Use health and safety control equipment and comply with the methods of work safely to carry out the activity in accordance with current legislation and organisational requirements when reshaping using hand sawing techniques.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	3.2 Demonstrate compliance with given information and relevant legislation when reshaping using hand sawing techniques in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
	3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to reshaping using hand sawing techniques, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
	3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.			
4	Select the required quantity and quality of resources for the methods of work to reshape using hand sawing techniques.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• consumables, including blades</li> <li>• angle grinders, power saws, ring saws, chainsaws</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe how to calculate quantity, length, volume and area associated with the method/procedure to reshape using hand sawing techniques.			
5	Minimise the risk of damage to the work and surrounding area when reshaping using hand sawing techniques.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when reshaping using hand sawing techniques.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to reshape using hand sawing techniques to the required specification.	7.1	Demonstrate the following work skills when reshaping using hand sawing techniques: <ul style="list-style-type: none"> <li>measuring, chasing, checking, confirming, setting up, securing, aligning, connecting, cutting, reporting and recording.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, ancillary equipment, angle grinder and one from the following: <ul style="list-style-type: none"> <li>power saw</li> <li>ring saw</li> <li>chasing machine</li> <li>chainsaw</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Form saw cuts in one of the following to given working instructions, relating to vertical and/or horizontal surfaces: <ul style="list-style-type: none"> <li>• concrete</li> <li>• masonry</li> <li>• stone</li> <li>• asphalt.</li> </ul>			
		7.4 Measure and record work details on completion of forming saw cuts.			
		7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• complete pre-start and post stop checks</li> <li>• set up and operate: angle grinders, power saws, ring saws, chainsaws and chasing machines</li> <li>• locate and protect services (water, gas, electric, waste)</li> <li>• apply coolant and lubricants</li> <li>• form openings and cut to line, depth and size</li> <li>• deal with voids</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• monitor and control exposure to vibration</li> <li>• report, record and maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.6 Describe the needs of other occupations and how to effectively communicate within a team when reshaping using hand sawing techniques.			
		7.7 Describe how to maintain the tools and equipment used when reshaping using hand sawing techniques.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 14: Forming drill holes or core in the structural fabric (diamond core bits) in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathways:**  
**Pathway 4: Concrete Drilling**  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 70

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in forming drill holes or core in the structural fabric (diamond core bits) in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when forming drill holes or core in the structural fabric.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when forming drill holes or core in the structural fabric.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when forming drill holes or core in the structural fabric.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when forming drill holes or core in the structural fabric.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when forming drill holes or core in the structural fabric in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to forming drill holes or core in the structural fabric and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to form drill holes or core in the structural fabric.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• hand drill diamond core and drills, bits, power units, connectors, fixings and accessories</li> <li>• percussive drills</li> <li>• static drill rig diamond core</li> <li>• trailer rig diamond</li> <li>• recording and measuring equipment</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area and volume associated with the method/procedure to form drill holes or core in the structural fabric.			
5	Minimise the risk of damage to the work and surrounding area when forming drill holes or core in the structural fabric.	5.1	Protect the work and its surrounding area from damage.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when forming drill holes or core in the structural fabric.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to form drill holes or core in the structural fabric to the required specification.	7.1	Demonstrate the following work skills when forming drill holes or core in the structural fabric: <ul style="list-style-type: none"> <li>measuring, marking out, setting up, connecting, drilling or coring.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Form drill holes or take cores using two of the following to given working instructions relating to vertical and horizontal surfaces: <ul style="list-style-type: none"> <li>hand held diamond core or drill</li> <li>static drill rig diamond core</li> <li>trailer rig diamond core</li> <li>percussive drill.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.4 Measure and record work details on completion of forming holes or taking cores.			
		7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• complete pre-start and post stop checks</li> <li>• set up, and operate drilling and coring plant and equipment</li> <li>• identify the characteristics of percussive and diamond drilling</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• form drill holes, including angles, depth, diameter, recesses, stitch drilling and coring</li> <li>• apply coolant and lubricants</li> <li>• deal with voids</li> <li>• monitor and control exposure to vibration</li> <li>• maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.6 Describe the needs of other occupations and how to effectively communicate within a team when forming drill holes or core in the structural fabric.			
		7.7 Describe how to maintain the tools and equipment used when forming drill holes or core in the structural fabric.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## **Unit 15: Forming saw cuts in structural fabric material in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathways:**  
**Pathway 5: Concrete Sawing**  
**Pathway 6: Concrete Drilling and Sawing**  
**Additional for (not compulsory):**  
**Pathways 7 to 11: In-Situ Flooring**

**Guided learning hours:** 73

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in forming saw cuts in structural fabric material in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when forming saw cuts in structural fabric material.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations governing buildings.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when forming saw cuts in structural fabric material.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when forming saw cuts in structural fabric material.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when forming saw cuts in structural fabric material.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when forming saw cuts in structural fabric material in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to forming saw cuts in structural fabric material, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to form saw cuts in structural fabric material.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• consumables, including blades</li> <li>• accessories</li> <li>• push along floor saw</li> <li>• self-propelled floor saw</li> <li>• diamond-bladed track saw</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length area and volume associated with the method/procedure to form saw cuts in structural fabric material.			
5	Minimise the risk of damage to the work and surrounding area when forming saw cuts in structural fabric material.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when forming saw cuts in structural fabric material.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to form saw cuts in structural fabric material to the required specification.	7.1	Demonstrate the following work skills when forming saw cuts in structural fabric material: <ul style="list-style-type: none"> <li>measuring, chasing, checking, setting up, securing, aligning, connecting and cutting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Form saw cuts to given working instructions using one of the following: <ul style="list-style-type: none"> <li>push along floor saw</li> <li>self-propelled floor saw</li> <li>diamond-bladed track saw.</li> </ul>			
		7.4	Measure and record work details on completion of forming saw cuts.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• complete pre-start and post stop checks on saws</li> <li>• set up and operate: push along floor saw, self-propelled floor saw and diamond-bladed track saw</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• form openings and cut to line, depth and size</li> <li>• deal with voids</li> <li>• monitor and control exposure to vibration</li> <li>• report, record and maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.6	Describe the needs of other occupations and how to effectively communicate within a team when forming saw cuts in structural fabric material.			
		7.7	Describe how to maintain the tools and equipment used when forming saw cuts in structural fabric material.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 16: Preparing and inspecting substrates prior to laying screed floors in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 7: In-Situ Flooring – Screed**

**Guided learning hours:** 53

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing and inspecting substrates prior to laying screed floors in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when preparing and inspecting substrates prior to laying screed floors.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations and official guidance.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when preparing and inspecting substrates prior to laying screed floors.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when preparing and inspecting substrates prior to laying screed floors.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing and inspecting substrates prior to laying screed floors.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when preparing and inspecting substrates prior to laying screed floors in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing and inspecting substrates prior to laying screed floors, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to prepare and inspect substrates prior to laying screed floors.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• primers/bonding agents, repair compounds, reinforcement and damp proof membrane (DPM)</li> <li>• lines, pegs, levels and location marking equipment</li> <li>• joints</li> <li>• insulation</li> <li>• hand tools, portable power tools, plant, machinery and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, volume, length, area and wastage associated with the method/procedure to prepare and inspect substrates prior to laying screed floors.			
5	Minimise the risk of damage to the work and surrounding area when preparing and inspecting substrates prior to laying screed floors.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when preparing and inspecting substrates prior to laying screed floors.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to prepare and inspect substrates prior to laying screed floors to the required specification.	7.1	Demonstrate the following work skills when preparing and inspecting substrates prior to laying screed floors: <ul style="list-style-type: none"> <li>assessing, measuring, marking out, cleaning, breaking out, preparing, forming, compacting, chasing, priming, mixing, laying, spreading, levelling, repairing, curing protecting and inspecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment.			



Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	7.3 Prepare and inspect three of the following substrates to given working instructions prior to laying screed floors: <ul style="list-style-type: none"> <li>• cementitious substrates</li> <li>• insulated areas</li> <li>• membranes</li> <li>• areas with heating systems</li> <li>• ducted areas.</li> </ul>			
	7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• assess condition of existing substrates</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• prepare and protect service penetrations</li> <li>• break out defective areas</li> <li>• prepare substrates prior to laying screed including: cementitious, insulated areas, membranes, areas with heating systems and areas with ducting</li> <li>• prepare substrates by hand and mechanical methods</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• work around, in close proximity with, plant and machinery</li> <li>• direct and guide plant and machinery</li> <li>• remove contaminants</li> <li>• work to lines, levels, falls and gradients</li> <li>• locate and form joints and edges, expansion, contraction and crack inducement</li> <li>• mix repair compounds</li> <li>• install insulation</li> <li>• consider and check ambient conditions</li> <li>• protect and cure repaired areas</li> <li>• test surfaces by tensile strength tests, rebound hammer, pull off method</li> <li>• meet the agreed quality criteria</li> <li>• monitor and control exposure to vibration</li> <li>• record and report</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and dust extraction equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when preparing and inspecting substrates prior to laying screed floors.			
		7.6	Describe how to maintain the tools, plant, machinery and equipment used when preparing and inspecting substrates prior to laying screed floors.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 17: Laying screed floors in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 7: In-Situ Flooring – Screed**

**Guided learning hours:** 70

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in laying screed floors in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when laying screed floors.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when laying screed floors.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when laying screed floors.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when laying screed floors.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when laying screed floors in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to laying screed floors, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to lay screed floors.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• battens, reinforcement and drainage accessories</li> <li>• movement and construction joints</li> <li>• bonding agents, sand, cement, additives, aggregates, colouring agents, membranes</li> <li>• flowable screeds</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to lay screed floors.			
5	Minimise the risk of damage to the work and surrounding area when laying screed floors.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when laying screed floors.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to lay screed floors to the required specification.	7.1	Demonstrate the following work skills when laying screed floors: <ul style="list-style-type: none"> <li>measuring, marking out, locating, securing, forming, fixing, mixing, transporting, laying, testing, compacting, protecting and curing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment			
		7.3	Lay screeds to floors and stairs to given working instructions using sand and cementitious screeds or flowable screeds.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• set out for line and level</li> <li>• locate and protect cast-in services (heating, water, gas, electric and waste)</li> <li>• prepare and protect service penetrations</li> <li>• position and secure reinforcement, spacers and fixings</li> <li>• form drainage inlets, drainage channels and outlets</li> <li>• form joints, movement (expansion), anti-crack applicable to bay sizes</li> <li>• inspect prepared substrate to include cleanliness, testing and application of primers and damp proof membranes (DPM)</li> <li>• check and monitor ambient conditions</li> <li>• mix screeds using paddle, spiral and forced action mixer</li> <li>• transport screed material using mechanical (pumps, bulk bags by lifting equipment) and by hand (shovelled, barrowed)</li> <li>• working with and around plant and machinery</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• test screed mix for consistency</li> <li>• prepare samples for testing</li> <li>• lay and compact screed (vibrating screed beam and rollers) to floors, doors and around fixings to specified thickness, level and finish</li> <li>• monitor and control exposure to vibration</li> <li>• protect and cure screed</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• meet agreed quality criteria</li> <li>• record and report</li> </ul> <p>use hand tools, portable power tools and ancillary equipment.</p>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when laying screed floors.			
		7.6 Describe how to maintain the tools and equipment used when laying screed floors.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 18: Laying resin floors in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 8: In-Situ Flooring – Resin**

**Guided learning hours:** 53

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in laying resin floors in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when laying resin floors.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when laying resin floors.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when laying resin floors.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when laying resin floors.			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when laying resin floors in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to laying resin floors, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to lay resin floors.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• primers, seals, damp-proof membranes (DPM)</li> <li>• construction and movement joints</li> <li>• resin screed, resin self-smoothing, flow applied and resin coatings, multi-layer high build and heavy duty</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to lay resin floors.			
5	Minimise the risk of damage to the work and surrounding area when laying resin floors.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when laying resin floors.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to lay resin floors to the required specification.	7.1	Demonstrate the following work skills when laying resin floors: <ul style="list-style-type: none"> <li>measuring, marking out, forming, preparing, mixing, applying, finishing, curing and protecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, paddle, spiral, and forced action mixer and ancillary equipment.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.3 Lay resins floors to given working instructions using one of the following:</p> <ul style="list-style-type: none"> <li>• resin coatings: to include any two from floor seals, floor coatings or high build floor coatings</li> <li>• resin self-smoothing: to include any two from multi-layer flooring, flow applied flooring or heavy duty flowable flooring</li> <li>• resin screeds: to include resin screeds and heavy duty screed flooring</li> </ul>			
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• set out floor to receive resins</li> <li>• position and secure construction and movement joints</li> <li>• inspect prepared substrates to include applied primers and damp proof membranes (DPM)</li> <li>• mix and apply resin floor finishes for coatings, self-smoothing and screeds, to specified finish</li> <li>• lay resin around service penetrations</li> <li>• protect and cure finished floor</li> <li>• consider and check ambient conditions</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>meet agreed quality criteria</li> <li>record and report</li> <li>use hand tools, portable power tools and equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when laying resin floors.			
		7.6 Describe how to maintain the tools and equipment used when laying resin floors.			

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Learner signature: \_\_\_\_\_

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Assessor signature: \_\_\_\_\_

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Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 19: Preparing areas for concrete flooring in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathways:**  
**Pathway 9: In-Situ Flooring – Concrete Layer**  
**Pathway 10: In-Situ Flooring – Concrete Finisher**  
**Pathway 13: Concrete Flooring Installation**

**Guided learning hours:** 60

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing areas for concrete flooring in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when preparing areas for concrete flooring.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when preparing areas for concrete flooring.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when preparing areas for concrete flooring.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing areas for concrete flooring.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when preparing areas for concrete flooring in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing areas for concrete flooring, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to prepare areas for concrete flooring.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• formwork, reinforcement, dowels, membranes, joint formers</li> <li>• concrete ancillaries (spacers, tying wires)</li> <li>• fill materials and blinding (sand and concrete)</li> <li>• hand tools, portable power tools, plant, machinery and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to prepare areas for concrete flooring.			
5	Minimise the risk of damage to the work and surrounding area when preparing areas for concrete flooring.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when preparing areas for concrete flooring.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to prepare areas for concrete flooring to the required specification.	7.1	Demonstrate the following work skills when preparing areas for concrete flooring: <ul style="list-style-type: none"> <li>measuring, marking out, trimming, inspecting, compacting, positioning, aligning, levelling, fixing, cutting, installing, locating, securing and protecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.3 Prepare areas to lay concrete floors to given working instructions relating to three of the following: <ul style="list-style-type: none"> <li>• substrate preparation</li> <li>• timber formwork erection</li> <li>• proprietary formwork erection</li> <li>• reinforcement installation</li> <li>• membranes installation.</li> </ul>			
		7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• prepare ground bearing and suspended floor areas</li> <li>• locate and protect services (water, gas, electric and waste) including overhead utilities</li> <li>• protect existing structures</li> <li>• work around, in close proximity with, plant and machinery</li> <li>• direct and guide plant and machinery</li> <li>• inspect and test formation</li> <li>• determine finish floor levels</li> <li>• spread, trim and compact sub-base to line and level</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• measure and confirm sub-base levels</li> <li>• inspect and test area to be prepared</li> <li>• position and fix timber and proprietary formwork and to line and level including; joint systems, isolation details, box-outs and thresholds</li> <li>• form falls and gradients</li> <li>• cut joint, install and seal membranes</li> <li>• preparation of existing construction joints</li> <li>• locate and secure joints / and void formers</li> <li>• cut, locate and secure reinforcement and dowels and debonding sleeves</li> <li>• meet agreed quality criteria</li> <li>• protect prepared area</li> <li>• record and report</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools, machinery and equipment</li> <li>• work at height.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when preparing areas for concrete flooring.			
		7.6	Describe how to maintain the tools and equipment used when preparing areas for concrete flooring.			

Learner name: \_\_\_\_\_

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Learner signature: \_\_\_\_\_

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Assessor signature: \_\_\_\_\_

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Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## **Unit 20: Placing in-situ concrete flooring in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 9: In-Situ Flooring – Concrete Layer**

**Guided learning hours:** 57

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in placing in-situ concrete flooring in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when placing in-situ concrete flooring.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when placing in-situ concrete flooring.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when placing in-situ concrete flooring.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when placing In-Situ concrete flooring.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when placing In-Situ concrete flooring in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to placing In-Situ concrete flooring, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to place In-Situ concrete flooring.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• structural concrete, construction joint materials, formwork, membranes, reinforcement and embedments</li> <li>• testing equipment</li> <li>• hand tools, portable power tools, plant, machinery and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to place in-situ concrete flooring.			
5	Minimise the risk of damage to the work and surrounding area when placing in-situ concrete flooring.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when placing in-situ concrete flooring.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to place in-situ concrete flooring to the required specification.	7.1	Demonstrate the following work skills when placing In-Situ concrete flooring: <ul style="list-style-type: none"> <li>measuring, marking out, inspecting, receiving, handling, placing, spreading, levelling, vibrating, compacting, testing and protecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment.			
		7.3	Place and lay concrete for floors to given working instructions using three of the following placement methods: <ul style="list-style-type: none"> <li>chute</li> <li>elephant's trunk</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• skip</li> <li>• pump</li> <li>• mono-rail</li> <li>• manually.</li> </ul>			
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• inspect the prepared area prior to placement</li> <li>• check line, level and suitability of formwork retaining structures and other temporary work for the concrete pour</li> <li>• inspect joints, installed reinforcements and embedments, under floor heating, ducting, pipework, holding down bolts</li> <li>• check and monitor ambient conditions</li> <li>• receive, handle and test concrete</li> <li>• test integrated reinforcement, fibre, plastic, metal</li> <li>• place concrete for floors by chute, elephant's trunk, skip, pump, mono-rail and manually</li> <li>• level, vibrate and compact concrete</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• screed concrete to finished level</li> <li>• cure and protect concrete</li> <li>• record and report</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when placing In-Situ concrete flooring.			
		7.6 Describe how to maintain the tools and equipment used when placing In-Situ concrete flooring.			

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Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

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*(if sampled)*

# **Unit 21: Applying surface finishes to concrete flooring in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 10: In-Situ Flooring – Concrete Finisher**

**Guided learning hours:** 57

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## **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying surface finishes to concrete flooring in the workplace within the relevant sector of industry.

## **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying surface finishes to concrete flooring.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying surface finishes to concrete flooring.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when applying surface finishes to concrete flooring.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying surface finishes to concrete flooring.			
		3.2	Demonstrate compliance with given information and relevant legislation when applying surface finishes to concrete flooring in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying surface finishes to concrete flooring, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to apply surface finishes to concrete flooring.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• structural concrete</li> <li>• consumables, curing agents, blades</li> <li>• pedestrian and ride-on power floats, tamping bars, rollers and vibrating screed beams</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to apply surface finishes to concrete flooring.			
5	Minimise the risk of damage to the work and surrounding area when applying surface finishes to concrete flooring.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when applying surface finishes to concrete flooring.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to apply surface finishes to concrete flooring to the required specification.	7.1	Demonstrate the following work skills when applying surface finishes to concrete flooring: <ul style="list-style-type: none"> <li>measuring, finishing, curing and protecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment.			



Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.3 Apply finishes to concrete flooring to given working instructions by three of the following:</p> <ul style="list-style-type: none"> <li>• tamped</li> <li>• brushed</li> <li>• hand-float</li> <li>• pedestrian power float</li> <li>• ride-on power float.</li> </ul>			
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• set up, carry out pre-start and post stop checks and operate pedestrian power float or ride-on power float or other finishing equipment (tamping bars, rollers and vibrating screed beams)</li> <li>• identify and report defects</li> <li>• achieve surface finishes to concrete, tamped, brushed, hand-float, pedestrian power float, ride-on power float</li> <li>• cure and protect</li> <li>• record and report</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>use hand tools, portable power tools, plant and machinery and ancillary equipment.</li> <li>work at height</li> <li>use of access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when applying surface finishes to concrete flooring.			
		7.6 Describe how to maintain the tools and equipment used when applying surface finishes to concrete flooring.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 22: Erecting insulating concrete formwork structures in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 14: Insulated Concrete Construction**

**Guided learning hours:** 100

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in erecting insulating concrete formwork structures in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when erecting insulating concrete formwork structures.	1.1	Interpret and extract relevant information from drawings, specifications, digital information, schedules method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, digital information and 3D modelling, method statements, risk assessments, manufacturers' and system suppliers technical information, official guidance and current regulations governing buildings.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when erecting insulating concrete formwork structures.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, operative and vehicles.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when erecting insulating concrete formwork structures.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when erecting insulating concrete formwork structures.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when erecting insulating concrete formwork structures in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to the erecting of insulating concrete formwork structures, and the types, purpose and limitations of each type, the work situation and general work environment in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• local exhaust ventilation (LEV)</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to erect insulating concrete formwork structures.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>expanded polystyrene panels and blocks, concrete, preformed lintels, reinforcement, damp-proof materials, bracing components, prop and support components, fixings and fittings</li> <li>hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly, how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe any potential hazards associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to erect insulating concrete formwork.			
5	Minimise the risk of damage to the work and surrounding area when erecting insulating concrete formwork structures.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when erecting insulating concrete formwork structures.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of productivity targets and time scales</li> <li>how times are estimated</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to erect insulating concrete formwork structures to the required specification.	7.1	Demonstrate the following work skills when erecting insulating concrete formwork structures: <ul style="list-style-type: none"> <li>measuring, marking out, cutting, fitting, finishing, positioning and securing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Erect any one of the following concrete formwork structures to given working instructions: <ul style="list-style-type: none"> <li>basement structures below ground level</li> <li>single storey structures above ground level</li> <li>multi storey structures above ground level.</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• provide information for Building Information Modelling (BIM)</li> <li>• erect basement structures below ground level</li> <li>• erect single storey structures above ground level</li> <li>• erect multi storey structures above ground level</li> <li>• install and remove temporary bracing systems</li> <li>• install preformed lintels and wall plates</li> <li>• apply damp-proof barriers</li> <li>• install reinforcement</li> <li>• form service chases and holes</li> <li>• install structure connection systems</li> <li>• avoid thermal bridging, bypassing and condensation</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• identify and follow the installation quality requirements</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• work with, around and in close proximity to plant and machinery</li> <li>• direct and guide the operations and movement of plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment</li> <li>• economise the use of water, report leaks and turn taps off.</li> </ul>			
		7.5 Describe the needs of other occupations and how to communicate effectively within a team when erecting insulating concrete formwork structures.			
		7.6 Describe how to maintain the tools and equipment used for erecting insulating concrete formwork structures.			

Learner name: \_\_\_\_\_

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Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the preparation and use of ride-on topping spreaders to carry out distribution operations.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, and current regulations governing the operation of ride-on topping spreaders for distribution work.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Organise with others the sequence and operation in which distribution operations using ride-on topping spreaders are to be carried out.	2.1	Organise the work according to given information or instructions.			
		2.2	Describe how to communicate ideas between team members.			
		2.3	Organise and communicate with team members and other associated occupations.			
		2.4	Describe how to organise resources prior to and during distribution operations using ride-on topping spreaders.			
3	Know how to comply with relevant legislation and official guidance when carrying out distribution operations using ride-on topping spreaders.	3.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		3.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		3.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Maintain safe and healthy working practices when preparing for and carrying out distribution operations using ride-on topping spreaders.	4.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements during distribution operations.			
		4.2	Demonstrate compliance with given information and relevant legislation when carrying out distribution operations using ride-on topping spreaders in relation to two or more of the following: <ul style="list-style-type: none"> <li>• safe use and storage of plant or machinery</li> <li>• safe use and storage of tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		4.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to ride-on topping spreader use, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			
		4.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
5	Request and select the required quantity and quality of resources to prepare for and carry out distribution operations using ride-on topping spreaders.	5.1	Request and select resources associated with ride-on topping spreaders in relation to consumables, materials, tools, ancillary equipment and/or accessories.			
		5.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to: <ul style="list-style-type: none"> <li>• consumables, lubricants and fuels</li> <li>• attachments, distribution aids</li> <li>• hand tools, ancillary equipment and accessories.</li> </ul>			
		5.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		5.5	Describe any potential hazards associated with the resources and methods of work.			
		5.6	Describe how to identify weight, quantity, length and area associated with the method/procedures to carry out distribution operations using ride-on topping spreaders.			
6	Minimise the risk of damage to the work and surrounding area when preparing to and distributing materials.	6.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		6.2	Prevent damage and maintain a clean work space.			
		6.3	Dispose of waste in accordance with current legislation.			
		6.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		6.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
7	Complete the work within the allocated time when preparing to and distributing materials.	7.1	Demonstrate completion of the work within the allocated time.			
		7.2	Describe the purpose of the work programme and describe why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
8	Comply with the given contract information to distribute materials using ride-on topping spreaders to the required specification.	8.1	Demonstrate the following work skills when preparing for and distributing materials using ride-on topping spreaders: <ul style="list-style-type: none"> <li>checking, adjusting, communicating, manoeuvring, positioning, distributing and compacting.</li> </ul>			
		8.2	Use and maintain hand tools, ancillary equipment and/or accessories.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		8.3 Prepare to, position, set up and operate ride-on topping spreaders to distribute a variety of materials, in a variety of locations, to given working instructions.			
		8.4 Shut down and secure ride-on topping spreader.			
		8.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to: <ul style="list-style-type: none"> <li>• identify the characteristics of the ride-on topping spreader used for distribution operations</li> <li>• carry out function checks for the distribution work</li> <li>• identify the area for the distribution work</li> <li>• prepare, set up and adjust for operational requirements</li> <li>• carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area</li> <li>• confirm material characteristics</li> <li>• distribute materials in laying patterns</li> <li>• identify geological, environmental and material changes and report</li> <li>• check to avoid damage to structures and utilities service apparatus</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>complete laying and distribution work</li> <li>be on the public highway</li> <li>shut down and secure ride-on topping spreader</li> <li>use hand tools, ancillary equipment and accessories.</li> </ul>			
		8.6 Describe the needs of other occupations and how to effectively communicate within a team when preparing to and carrying out distribution operations.			
		8.7 Describe how to maintain the plant and machinery, hand tools and ancillary equipment used to distribute materials.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

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Assessor signature: \_\_\_\_\_

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*(if sampled)*

## **Unit 24: Operating plant or machinery to prepare, profile and finish substrates for specified materials in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 12: Substrate Preparation and Profiling**

**Guided learning hours:** 73

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in operating plant or machinery to prepare, profile and finish substrates for specified materials in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when operating plant or machinery to prepare, profile and finish substrates for specified materials.	1.1	Interpret and extract relevant information from drawings, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and official guidance associated with background surface preparation, profiling and finishing.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when operating plant or machinery to prepare, profile and finish substrates for specified materials.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when operating plant or machinery to prepare, profile and finish substrates for specified materials.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing, profiling and finishing substrates.			
		3.2	<p>Demonstrate compliance with given information and relevant legislation when operating plant or machinery to prepare, profile and finish substrates for specified materials in relation to:</p> <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• safe operation and storage of plant and machinery</li> <li>• specific risks to health.</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to operating plant or machinery to prepare, profile and finish substrates for specified materials, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to operate plant or machinery to prepare, profile and finish substrates for specified materials.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools, equipment, ancillaries and consumables.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• consumables</li> <li>• hand tools, portable power tools, plant, machinery and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length and area associated with the method/procedure to prepare, profile and finish substrates.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when operating plant or machinery to prepare, profile and finish substrates for specified materials.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when operating plant or machinery to prepare, profile and finish substrates for specified materials.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to operate plant or machinery to prepare, profile and finish substrates for specified materials to the required specification.	7.1	Demonstrate the following work skills when operating plant or machinery to prepare, profile and finish substrates for specified materials: <ul style="list-style-type: none"> <li>measuring, marking out, locating, cleaning, breaking out, chasing, checking, setting up, selecting, operating and closing down</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment			
		7.3	Prepare or profile or finish substrates to given working instructions by operating four of the following ride-on and/or pedestrian guided items of plant or machinery: <ul style="list-style-type: none"> <li>grinder</li> <li>planing machine</li> <li>sander</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• polisher</li> <li>• scabblers</li> <li>• tile stripper</li> <li>• captive or enclosed shotblast machine</li> <li>• vacuum machine</li> <li>• filtration systems.</li> </ul>			
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• check and set up plant and machinery for operation</li> <li>• complete pre-start and post stop checks</li> <li>• assess condition of substrate</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• repair damaged and weak areas</li> <li>• chase out joints</li> <li>• profile surfaces by grinding (wet and dry), planing, blasting, sanding and stripping</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• remove vinyl, carpet, tiles, paint, adhesive, resin, screeds, wood and wood-based products and self-levelling compounds</li> <li>• cut grooves</li> <li>• prepare edges</li> <li>• remove contaminants</li> <li>• finish surfaces, retextured, anti-slip, smooth and reducing.</li> <li>• clean and clear surfaces</li> <li>• polish surfaces</li> <li>• monitor and control exposure to vibration</li> <li>• record and report work details</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools, plant and machinery and ancillary equipment.</li> <li>• work at height</li> <li>• use of access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when operating plant or machinery to prepare profile and finish substrates for specified materials.			
		7.6	Describe how to maintain the tools and equipment used when operating plant or machinery to prepare, profile and finish substrates for specified materials.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

# Unit 25: **Repairing, preparing and inspecting substrates prior to laying resin floors in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 8: In-Situ Flooring – Resin**

**Guided learning hours:** 53

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## **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in repairing, preparing and inspecting substrates prior to laying resin floors in the workplace within the relevant sector of industry.

## **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when repairing, preparing and inspecting substrates prior to laying resin floors.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, current regulations and official guidance.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when repairing, preparing and inspecting substrates prior to laying resin floors.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when repairing, preparing and inspecting substrates prior to laying resin floors.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when repairing, preparing and inspecting substrates prior to laying resin floors.			
		3.2	Demonstrate compliance with given information and relevant legislation when repairing, preparing and inspecting substrates prior to laying resin floors in relation to: <ul style="list-style-type: none"> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to repairing, preparing and inspecting substrates prior to laying resin floors, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>respiratory protective equipment (RPE)</li> <li>local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
		3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to repair, prepare and inspect substrates prior to laying resin floors.	4.1 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>primers/bonding agents, repair compounds, reinforcement and damp proof membrane (DPM), curing agents</li> <li>joints</li> <li>hand tools, portable power tools, plant, machinery and ancillary equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to repair, prepare and inspect substrates prior to laying resin floors.			
5	Minimise the risk of damage to the work and surrounding area when repairing, preparing and inspecting substrates prior to laying resin floors.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when repairing, preparing and inspecting substrates prior to laying resin floors.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>• types of progress charts, timetables and estimated times</li> <li>• organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to repair, prepare and inspect substrates prior to laying resin floors to the required specification.	7.1	Demonstrate the following work skills when repairing, preparing and inspecting substrates prior to laying resin floors: <ul style="list-style-type: none"> <li>• assessing, measuring, marking out, cleaning, breaking out, removing, preparing, forming, chasing, priming, mixing, laying, compacting, levelling, repairing, curing, protecting and inspecting.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.2 Use and maintain hand tools, portable power tools, plant, machinery and ancillary equipment.			
		7.3 Repair, prepare, using planers and surface grinders, and inspect substrates to given working instructions prior to laying resin floors.			
		7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• assess condition of existing substrates</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• prepare and protect service penetrations</li> <li>• prepare substrates, new concrete, old concrete, fine concrete screed and overlays on existing surfaces prior to laying resin</li> <li>• break out defective areas</li> <li>• work around, in close proximity with, plant and machinery</li> <li>• direct and guide plant and machinery</li> <li>• install, form and protect perimeter prior to repair</li> <li>• remove laitance and dust</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• remove contamination</li> <li>• abrade surfaces by grinding, planing and shot blasting</li> <li>• prepare edges</li> <li>• monitor and control exposure to vibration</li> <li>• work to lines, levels, falls and gradients</li> <li>• consider and check ambient conditions</li> <li>• mix, apply, protect and cure repaired areas</li> <li>• locate and prepare for the formation of movement, expansion, induced, toe-in, transition and floor-to-wall joints</li> <li>• test surfaces for adhesion by pull off method</li> <li>• test surfaces for moisture using a moisture meter</li> <li>• meet the agreed quality criteria</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• record and report</li> <li>• use hand tools, portable power tools and dust extraction equipment.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when repairing, preparing and inspecting substrates prior to laying resin floors.			
		7.6	Describe how to maintain the tools and equipment used when repairing, preparing and inspecting substrates prior to laying resin floors.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 26: Installing composite strengthening systems in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:**  
**Pathway 16: Install Composite Strengthening Systems**

**Guided learning hours:** 110

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing composite strengthening systems in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing composite strengthening systems.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation, schedules, method statements, risk assessments, electronic data, manufacturers' information, official guidance and current regulations associated with installing composite strengthening systems.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when installing composite strengthening systems.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when applying sprayed concrete and describe how and when they are used.			
3	Maintain safe and healthy working practices when installing composite strengthening systems.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing composite strengthening systems.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when installing composite strengthening systems in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to installing composite strengthening systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to install composite strengthening systems.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• thinners, primers, adhesives</li> <li>• fittings and fixings</li> <li>• hand tools, portable power tools, and associated equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage of materials associated with the method and procedure to install composite strengthening systems.			
5	Minimise the risk of damage to the work and surrounding area when installing composite strengthening systems.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when installing composite strengthening systems.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to install composite strengthening systems to the required specification.	7.1	Demonstrate the following work skills when installing composite strengthening systems: <ul style="list-style-type: none"> <li>measuring, marking out, protecting, preparing, testing, recording and reporting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Install two of the following composite strengthening systems to given working instructions: <ul style="list-style-type: none"> <li>carbon fibre wrap</li> <li>carbon fibre plates</li> <li>carbon fibre rods</li> <li>aramid wraps.</li> </ul>			



Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date	
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• identify and follow the installation quality requirements</li> <li>• measure and mark out areas to be strengthened</li> <li>• visually determine defects in concrete</li> <li>• identify asbestos and products that may contain asbestos</li> <li>• use equipment to sample dust and detect decay, damage, cracking, carbonation, reinforcement, corrosion, reinforcement cover</li> <li>• prepare and use chemicals to test concrete</li> <li>• carry out surface preparation</li> <li>• install carbon fibre wrap, carbon fibre plate, carbon fibre rod and aramid wrap composite strengthening systems</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when installing composite strengthening systems.			
		7.6 Describe how to maintain the tools and equipment used when installing composite strengthening systems.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 27: Applying corrosion protection systems in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 17: Install Corrosion Protection to  
Concrete**

**Guided learning hours:** 110

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying corrosion protection systems in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying corrosion protection systems.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information, unsafe work practices, unsafe environment, unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, current legislation, schedules, method statements, risk assessments, electronic data, manufacturers' information, official guidance and current regulations associated with applying corrosion protection systems.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying corrosion protection systems.	2.1	Describe their responsibilities regarding duty of care legislation, potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, vehicles and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when applying sprayed concrete and describe how and when they are used.			
3	Maintain safe and healthy working practices when applying corrosion protection systems.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying corrosion protection systems.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when applying corrosion protection systems in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health relating to operatives and other personnel.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to applying corrosion protection systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to apply corrosion protection systems.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• anode materials and their related cabling or other connection methods</li> <li>• performance monitoring materials, including but not limited to, reference electrodes, coupons, pseudo electrodes and their related cabling</li> <li>• corrosion inhibitors</li> <li>• fittings and fixings</li> <li>• hand tools, portable power tools, and associated equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards, including those identified by Control of Substances Hazardous to Health (COSHH), associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage of materials associated with the method and procedure to apply corrosion protection systems.			
5	Minimise the risk of damage to the work and surrounding area when applying corrosion protection systems.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when applying corrosion protection systems.	6.1	Demonstrate safe completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to apply corrosion protection systems to the required specification.	7.1	Demonstrate the following work skills when applying corrosion protection systems: <ul style="list-style-type: none"> <li>measuring, marking out, locating, protecting, breaking out, cleaning, preparing, applying, testing, recording and reporting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	7.3 Apply one of the following corrosion protection systems to given working instructions: <ul style="list-style-type: none"> <li>• impressed current cathodic protection</li> <li>• galvanic anode cathodic protection</li> <li>• corrosion inhibitors.</li> </ul>			
	7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• identify and follow the installation method statements and related quality and safety requirements</li> <li>• measure and mark out areas to be protected</li> <li>• carry out reinforcement cover surveys and potential (half-cell) surveys, concrete electrical resistivity testing</li> <li>• assess concrete substrate surface profile and adhesion (pull-off) testing of coatings or overlays</li> <li>• carry out spot welding, cable crimping, heat shrink sleeving, down hole cover meter surveys, spark testing, electrical isolation and continuity testing</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• apply impressed current cathodic protection systems, galvanic anode cathodic protection and corrosion inhibitors</li> <li>• terminate, fix, protect and test cabling and components</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• understand the specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when applying corrosion protection systems.			
		7.6	Describe how to maintain the tools and equipment used when applying corrosion protection systems.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 28: Jacking-up acoustic floating floors in the workplace**

**Level:** 2

**Unit type:** Mandatory in the following pathway:  
**Pathway 13: Concrete Floating Floor Installation**

**Guided learning hours:** 30

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in jacking-up acoustic floating floors in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when jacking-up acoustic floating floors.	1.1	Interpret and extract relevant information from drawings, specifications, schedules method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statement, risk assessments, manufacturers' information and current regulations associated with acoustic floating floors.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when jacking-up acoustic floating floors.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, operative and vehicles.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
		2.4	Describe the types of fire extinguishers available when jacking-up acoustic floating floors and describe how and when they are used.			
3	Maintain safe and healthy working practices when jacking-up acoustic floating floors.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when jacking-up acoustic floating floors.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation jacking-up acoustic floating floors in relation to at least two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to jacking-up acoustic floating floors, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• local exhaust ventilation (LEV)</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to jack-up acoustic floating floors.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools, equipment and consumables.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• jacks and springs</li> <li>• reinforcement bar and mesh</li> <li>• consumables, polythene, mineral fibre insulation</li> <li>• fittings and fixings</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to jack-up acoustic floating floors.			
5	Minimise the risk of damage to the work and surrounding area when jacking-up acoustic floating floors.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when jacking-up acoustic floating floors.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of productivity targets and time scales</li> <li>how times are estimated.</li> </ul>			
7	Comply with the given contract information to jack-up acoustic floating floors to the required specification.	7.1	Demonstrate the following work skills when jacking-up acoustic floating floors: <ul style="list-style-type: none"> <li>measuring, locating, adjusting, levelling, checking and sealing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Jack up acoustic floating floors to given working instructions for at least one of the following: <ul style="list-style-type: none"> <li>rubber systems</li> <li>spring systems.</li> </ul>			
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>identify and follow the installation quality requirements</li> <li>conform to agreed specification</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• confirm manufacturers installation criteria</li> <li>• check resources for type, quantity and damage and report discrepancies</li> <li>• identify, recognise and work to gridlines and datum marks</li> <li>• measure and locate jacks</li> <li>• adjust floor to height and check level</li> <li>• prepare and mix grout to seal jacking locations</li> <li>• recognise the characteristics of rubber and spring systems</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to communicate effectively within a team when jacking-up acoustic floating floors.			
		7.6	Describe how to maintain the tools and equipment used when jacking-up acoustic floating floors.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 29: Placing and compacting concrete in the workplace**

**Level:** 2

**Unit type:** **Mandatory in the following pathway:  
Pathway 14: Insulated Concrete**

**Guided learning hours:** 47

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in placing and compacting concrete in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when placing and compacting concrete.	1.1	Interpret and extract relevant information from drawings, specifications, schedules method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, oral and written instructions, current regulations governing buildings and official guidance associated with the placement and compaction of concrete.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when placing and compacting concrete.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when placing and compacting concrete.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when placing and compacting concrete.			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when placing and compacting concrete in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to placing and compacting concrete, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to place and compact concrete.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• aggregates, cements, concrete, reinforcement, membranes, release agents, anti-heave materials, moulds, additives and retardants</li> <li>• hand tools portable power tools and equipment, slump test equipment, skips, compaction equipment, poker vibrator, tampers, floats and trowels.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe the methods of calculating quantity, length, area and wastage associated with the method and procedure to place and compact concrete.			
5	Minimise the risk of damage to the work and surrounding area when placing and compacting concrete.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when placing and compacting concrete.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to place and compact concrete to the required specification.	7.1	Demonstrate the following work skills when placing and compacting concrete: <ul style="list-style-type: none"> <li>measuring, marking out, inspecting, receiving, handling, transporting, placing, spreading, levelling, vibrating, compacting, testing and protecting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools, plant or machinery and ancillary equipment.			
		7.3	Place, lay and compact concrete to given working instructions using three of the following placement methods: <ul style="list-style-type: none"> <li>chute</li> <li>elephant's trunk</li> <li>skip</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• pump</li> <li>• mono-rail</li> <li>• manually.</li> </ul>			
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• identify installation quality requirements</li> <li>• conform to agreed specification</li> <li>• confirm integrity of formwork and temporary supports</li> <li>• handle and transport concrete</li> <li>• place concrete using shuts, elephant's trunk, skip, pump, mono-rail and manually</li> <li>• visually assess the quality of the concrete prior to and during pouring and placement</li> <li>• extract samples for testing</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• direct and guide the operations and movement of plant and machinery</li> <li>• compact and finish concrete</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<ul style="list-style-type: none"> <li>• protect concrete to assist the curing process</li> <li>• apply curing accelerants and aids</li> <li>• recognise requirements for working with concretes containing additives for waterproofing and retardants</li> <li>• recognise and determine when additional specialist skills and knowledge are required and report accordingly</li> <li>• determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• use hand tools, portable power tools, plant, machinery and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when placing and compacting concrete.			
		7.6	Describe how to maintain the tools and equipment used when placing and compacting concrete.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

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Assessor signature: \_\_\_\_\_

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Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 30: Applying coatings as structure protection in the workplace**

**Level:** 2

**Unit type:** **Additional:**  
**Pathway 1: Concrete Repair**

**Guided learning hours:** 53

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying coatings as structure protection in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying coatings as structure protection.	1.1	Interpret and extract relevant information from drawings, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations governing buildings.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying coatings as structure protection.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when applying coatings as structure protection.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying coatings as structure protection.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>3.2 Demonstrate compliance with given information and relevant legislation when applying coatings as structure protection in relation to three of the following:</p> <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		<p>3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying coatings as structure protection, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:</p> <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		<p>3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.</p>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to apply coatings as structure protection.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• thinners, primers and coatings</li> <li>• hand tools, portable power tools, testing equipment and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe how to calculate quantity, coverage, length, area, volume and wastage associated with the method/procedure to apply coatings as structure protection.			
5	Minimise the risk of damage to the work and surrounding area when applying coatings as structure protection.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when applying coatings as structure protection.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to apply coatings as structure protection to the required specification.	7.1	Demonstrate the following work skills when applying coatings as structure protection: <ul style="list-style-type: none"> <li>measuring, marking out, locating, preparing, mixing, applying, testing and curing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.3 Prepare substrates and apply coatings to given working instructions to:</p> <ul style="list-style-type: none"> <li>• clean and prepare surface to be coated</li> <li>• check and confirm condition of substrate and environment</li> <li>• mix and apply coatings</li> <li>• test applied coatings</li> <li>• cure and protect.</li> </ul>			
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• locate, measure and mark out the area to be coated</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• select the materials to be applied</li> <li>• prepare the substrate</li> <li>• measure record and act on environmental conditions</li> <li>• mix and apply coatings</li> <li>• test applied thickness</li> <li>• measure adhesion of the coating (pull off test)</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• cure and protect applied coatings</li> <li>• clean equipment</li> <li>• handle, store and dispose of hazardous waste</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> <li>• use hand tools, portable power tools and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.5 Describe the needs of other occupations and how to effectively communicate within a team when applying coatings as structure protection.			
		7.6 Describe how to maintain the tools and equipment used when applying coatings as structure protection.			

Learner name: \_\_\_\_\_

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Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



# Unit 31: Carrying out concrete bursting operations in the workplace

**Level:** 2

**Unit type:** Additional:  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 63

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## Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in carrying out concrete bursting operations in the workplace within the relevant sector of industry.

## Unit assessment requirements

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when carrying out concrete bursting operations.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when carrying out concrete bursting operations.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when carrying out concrete bursting operations.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when carrying out concrete bursting operations.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when carrying out concrete bursting operations in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to carrying out concrete bursting operations, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to carry out concrete bursting operations.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• consumables</li> <li>• diamond and rotary drilling rigs</li> <li>• drills, bursting equipment, bits bolt croppers, connectors, power units, fixings and accessories</li> <li>• chemical bursting components</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to calculate quantity, length area and any volume associated with the method/procedure to carry out concrete bursting operations.			
5	Minimise the risk of damage to the work and surrounding area when carrying out concrete bursting operations.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when carrying out concrete bursting operations.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to carry out concrete bursting operations to the required specification.	7.1	Demonstrate the following work skills when carrying out concrete bursting operations: <ul style="list-style-type: none"> <li>measuring, marking out, setting up, connecting, drilling and bursting.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Carry out bursting in reinforced concrete to given working instructions relating to vertical and/or horizontal surfaces.			
		7.4	Sort and remove rubble and materials resulting from concrete bursting operations.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.5 Measure and record work details on completion of concrete bursting operations.			
		7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• complete pre-start and post stop checks on concrete bursting machines</li> <li>• set up, and operate drilling and bursting equipment (hydraulic, pneumatic and chemical)</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• secure work with isolation cuts (separation lines)</li> <li>• drill concrete</li> <li>• deal with voids</li> <li>• carry out bursting, including sequence and varying patterns (star bursting)</li> <li>• cut reinforcement</li> <li>• segregate and remove rubble and materials</li> <li>• maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.7 Describe the needs of other occupations and how to effectively communicate within a team when carrying out concrete bursting operations.			
		7.8 Describe how to maintain the tools and equipment used when carrying out concrete bursting operations.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 32: Carrying out concrete crushing and breaking operations in the workplace**

**Level:** 2

**Unit type:** **Additional:**  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 57

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in carrying out concrete crushing and breaking operations in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when carrying out concrete crushing and breaking operations.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when carrying out concrete crushing and breaking operations.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when carrying out concrete crushing and breaking operations.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when carrying out concrete crushing and breaking operations.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when carrying out concrete crushing and breaking operations in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to carrying out concrete crushing and breaking operations, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to carry out concrete crushing and breaking operations.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• jaws, breakers, bolt croppers, crushers and breakers, power source, control panels and fittings</li> <li>• remote/radio control and umbilical cord control equipment</li> <li>• hand tools, portable power tools and equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe how to calculate quantity, length, area and volume associated with the method/procedure to carry out concrete crushing and breaking operations.			
5	Minimise the risk of damage to the work and surrounding area when carrying out concrete crushing and breaking operations.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when carrying out concrete crushing and breaking operations.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to carry out concrete crushing and breaking operations to the required specification.	7.1	Demonstrate the following work skills when carrying out concrete crushing and breaking operations: <ul style="list-style-type: none"> <li>measuring, adjusting, manoeuvring, positioning, checking, identifying, setting up, fitting, cutting, crushing, breaking, removing and recording.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Carry out crushing and breaking of concrete structures to given working instructions using one of the following: <ul style="list-style-type: none"> <li>portable hand crusher</li> <li>remote/radio-control crusher and breaker</li> <li>umbilical cord control crusher and breaker.</li> </ul>			



Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.4 Sort and remove rubble and materials resulting from concrete crushing and breaking operations.			
		7.5 Measure and record work details on completion of concrete crushing and breaking operations.			
		7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• complete pre-start and post-stop checks on crushing and breaking machinery</li> <li>• set up and operate crushing machinery and equipment</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• crush and break concrete</li> <li>• cut reinforcement</li> <li>• segregate and dispose of crushed and broken materials</li> <li>• deal with voids</li> <li>• maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.7 Describe the needs of other occupations and how to effectively communicate within a team when carrying out concrete crushing and breaking operations.			
		7.8 Describe how to maintain the tools and equipment used when carrying out concrete crushing and breaking operations.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 33: Carrying out wire sawing in the workplace**

**Level:** 2

**Unit type:** **Additional:**  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 63

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in carrying out wire sawing in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when carrying out wire sawing.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, work instructions, electronic data, manufacturers' information, and current regulations.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when carrying out wire sawing.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when carrying out wire sawing.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when carrying out wire sawing.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	3.2 Demonstrate compliance with given information and relevant legislation when carrying out wire sawing in relation to two of the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health</li> <li>• provision of lighting and ventilation.</li> </ul>			
	3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to carrying out wire sawing, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			
	3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to carry out wire sawing.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• drills, wire saws, bits, saw blades, power unit, connectors, fittings and accessories</li> <li>• hand tools, portable power tools and ancillary equipment.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.5	Describe any potential hazards associated with the resources and methods of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.6	Describe how to calculate quantity, length, area and volume associated with the method/procedure to carry out wire sawing.			
5	Minimise the risk of damage to the work and surrounding area when carrying out wire sawing.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when carrying out wire sawing.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to carry out wire sawing to the required specification.	7.1	Demonstrate the following work skills when carrying out wire sawing: <ul style="list-style-type: none"> <li>measuring, marking out, checking, identifying, setting up, connecting, sawing, disposing and recording.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Carry out wire sawing of concrete/masonry structures using wire saw and drilling equipment to given working instructions.			
		7.4	Sort and remove rubble resulting from wire sawing.			
		7.5	Measure and record work details on completion of wire sawing.			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• complete pre-start and post-stop checks on wire sawing machines</li> <li>• isolate work area</li> <li>• set up, guard and use wire saw</li> <li>• locate and protect services (water, gas, electric and waste)</li> <li>• drill starter holes or saw starting positions</li> <li>• thread and tension wire (push or pull)</li> <li>• twist, join and crimp wires</li> <li>• cut in sequence using wire saw</li> <li>• apply lubricant and coolant</li> <li>• deal with voids</li> <li>• segregate and remove rubble and materials</li> <li>• maintain records</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• use hand tools, portable power tools and equipment using different power sources (three phase, cordless, mains, fuel driven and generator linked)</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			
		7.7 Describe the needs of other occupations and how to effectively communicate within a team when carrying out wire sawing.			
		7.8 Describe how to maintain the tools and equipment used when carrying out wire sawing.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## **Unit 34: Erecting and dismantling access/working platforms in the workplace**

**Level:** 2

**Unit type:** **Additional:**  
**Pathway 6: Concrete Drilling and Sawing**  
**Pathway 14: Insulated Concrete Construction**

**Guided learning hours:** 37

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### **Unit summary**

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in erecting and dismantling access/working platforms in the workplace within the relevant sector of industry.

### **Unit assessment requirements**

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when erecting and dismantling access/working platforms.	1.1	Interpret and extract information from specifications, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statement.			
		1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>specifications, current legislation, method statements, risk assessments and manufacturers' information.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling access/working platforms.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> <li>in the workplace, at height, in confined areas, with tools and equipment, with movement/storage of materials and by manual handling.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	State what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe working practices when erecting and dismantling access/working platforms.	3.1	Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when erecting and dismantling access/working platforms.			
		3.2	Explain why, when and how personal protective equipment (PPE) should be used, relating to erecting and dismantling access/working platforms, and the types, purpose and limitations of each type.			
		3.3	State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to erect and dismantle access/working platforms.	4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• ladders/crawler boards</li> <li>• stepladders/platform steps</li> <li>• trestles</li> <li>• proprietary staging/podiums</li> <li>• proprietary towers</li> <li>• mobile scaffold towers</li> <li>• protection equipment and notices</li> <li>• tools and ancillary equipment.</li> </ul>			
		4.2	Select resources associated with own work in relation to materials, components, tools and equipment.			
		4.3	State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.			
		4.4	Outline potential hazards associated with the resources and method of work.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe how to calculate quantity of equipment required associated with the method/procedure to erect and dismantle access equipment/working platforms.			
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling access/working platforms.	5.1	Protect the work and its surrounding area from damage.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.4	Dispose of waste in accordance with legislation.			
		5.5	State why the disposal of waste should be carried out in relation to the work.			
6	Complete the work within the allocated time when erecting and dismantling access/working platforms.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to erect and dismantle access/working platforms to the required specification.	7.1	Demonstrate the following work skills when erecting and dismantling access/working platforms: <ul style="list-style-type: none"> <li>• moving, positioning/erecting, securing, checking, dismantling and removing.</li> </ul>			
		7.2	Erect, dismantle and store two of the following access equipment to given access regulations: <ul style="list-style-type: none"> <li>• ladders/crawler boards</li> <li>• stepladders/platform steps</li> <li>• proprietary towers</li> <li>• trestle platforms</li> <li>• mobile scaffold towers</li> <li>• proprietary staging/podiums.</li> </ul>			
		7.3	Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>• provide protection to the work area</li> <li>• establish a base for equipment</li> <li>• erect proprietary access equipment to manufacturer's instructions suitable for the work</li> <li>• erect non-proprietary access equipment suitable for the work</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• place protective screens and notices</li> <li>• check/monitor equipment during the period of use</li> <li>• dismantle and store access equipment</li> <li>• use tools and equipment</li> <li>• work at height.</li> </ul>			
		7.4 Safely use and store materials, hand tools and ancillary equipment.			
		7.5 State the needs of other occupations and how to communicate within a team when erecting and dismantling access/working platforms.			
		7.6 Describe how to maintain the tools and equipment used when erecting and dismantling access/working platforms.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

# Unit 35: Applying sealants mechanically in the workplace

**Level:** 3

**Unit type:** Additional:  
**Pathway 6: Concrete Drilling and Sawing**

**Guided learning hours:** 80

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## Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying sealants mechanically in the workplace within the relevant sector of industry.

## Unit assessment requirements

This unit must be assessed in a work environment, in accordance with the Construction Skills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying sealants mechanically.	1.1	Interpret and extract relevant information from of drawings, specifications, schedules, job sheets, method statements, risk assessments and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, job sheets, method statements and manufacturers' information.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying sealants mechanically.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, operative and vehicles.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when applying sealants mechanically.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying sealants mechanically.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		3.2 Demonstrate compliance with given information and relevant legislation when applying sealants mechanically in relation to the following: <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe use, storage and handling of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		3.3 Explain why and when health and safety control equipment, identified by the principles of preventions, should be used, relating to applying sealants mechanically, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• local exhaust ventilation (LEV)</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE).</li> </ul>			
		3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources for the methods of work to apply sealants mechanically.	4.1	Select resources associated with own work in relation to materials, components, tools, equipment, mechanical applicators and ancillary equipment.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>• tapes</li> <li>• bond breaker</li> <li>• primers</li> <li>• single and multi-part sealants</li> <li>• backing materials</li> <li>• mechanical application equipment</li> <li>• hand tools, power tools and equipment.</li> </ul>			
		4.3	Describe how to confirm that the resources and materials conform to the specification.			
		4.4	Describe how the resources should be used correctly and how problems associated with the resources are reported.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			
		4.6	Describe any potential hazards associated with the resources and methods of work.			
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to apply sealants mechanically.			
5	Minimise the risk of damage to the work and surrounding area when applying sealants mechanically.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Maintain a clear and tidy work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when applying sealants mechanically.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of productivity targets and timescales</li> <li>how times are estimated</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to apply sealants mechanically to the required specification.	7.1	Demonstrate the following work skills when applying sealants mechanically: <ul style="list-style-type: none"> <li>measuring, preparing, cleaning, checking, installing, selecting, applying and finishing.</li> </ul>			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.			
		7.3	Prepare backing materials and apply sealants mechanically to contractor's working instructions relating to one of the following: <ul style="list-style-type: none"> <li>concrete slabs</li> <li>forecourts</li> <li>hard-standings.</li> </ul>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>• seal concrete slabs, forecourts and hard-standings, walls and floors</li> <li>• protect work</li> <li>• recognise and determine when specialist skills and knowledge are required and report accordingly</li> <li>• determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance</li> <li>• identify and follow the installation quality requirements</li> <li>• work with, around and in close proximity to plant and machinery</li> <li>• use and maintain application equipment, hand tools, power tools, and equipment</li> <li>• work at height</li> <li>• use access equipment.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to communicate effectively within a team when applying sealants mechanically.			
		7.6	Describe how to maintain the tools and equipment used when applying sealants mechanically.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*



## Learning outcomes and assessment criteria

To pass this unit, learners need to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the preparation and use of powered units, tools or pedestrian plant, machinery or equipment.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, risk assessments, operating instructions and manufacturers' information.			
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.			
		1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.			
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>drawings, specifications, schedules, method statements, risk assessments, legislation, Codes of Practice, manufacturers' information and operating instructions.</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance to prepare and use powered units, tools or pedestrian plant, machinery or equipment.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: <ul style="list-style-type: none"> <li>in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>			
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.			
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.			
3	Maintain safe and healthy working practices when preparing for and using powered units, tools or pedestrian plant, machinery or equipment.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with legislation and organisational requirements when using powered units, tools or pedestrian plant, machinery or equipment.			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>3.2 Demonstrate compliance with given information and relevant legislation when using powered units, tools or pedestrian plant, machinery or equipment in relation to two or more of the following:</p> <ul style="list-style-type: none"> <li>• safe use of access equipment</li> <li>• safe handling of materials</li> <li>• safe use and storage of materials, tools and equipment</li> <li>• specific risks to health.</li> </ul>			
		<p>3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to powered units, tools or pedestrian plant, machinery or equipment use, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:</p> <ul style="list-style-type: none"> <li>• collective protective measures</li> <li>• personal protective equipment (PPE)</li> <li>• respiratory protective equipment (RPE)</li> <li>• local exhaust ventilation (LEV).</li> </ul>			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.			
4	Select the required quantity and quality of resources to prepare for and sustain powered units, tools or pedestrian plant, machinery or equipment.	4.1	Select resources associated with the type of work in relation to fuel/power source, lubricants and consumables.			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to: <ul style="list-style-type: none"> <li>power source/fuels</li> <li>consumables, lubricants.</li> </ul>			
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.			
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.			



Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	Describe any potential hazards associated with the resources and methods of work.			
		4.6	Describe how to identify quantity, length, area and wastage associated with the method/procedures to operate powered units, tools or pedestrian plant, machinery or equipment.			
5	Minimise the risk of damage to the work and surrounding area when preparing to and using powered units, tools or pedestrian plant, machinery or equipment.	5.1	Protect the work and its surrounding area from damage. in accordance with safe working practices and organisational procedures.			
		5.2	Prevent damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with current legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
6	Complete the work within the allocated time when preparing to and using powered units, tools or pedestrian plant, machinery or equipment.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	Describe the purpose of the work programme and describe why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>types of progress charts, timetables and estimated times</li> <li>organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			
7	Comply with the given contract information to operate powered units, tools or pedestrian plant, machinery or equipment to the required specification.	7.1	Demonstrate the following work skills when using powered units, tools or pedestrian plant, machinery or equipment: <ul style="list-style-type: none"> <li>starting, stopping, replenishing, controlling and cleaning.</li> </ul>			
		7.2	Use and maintain powered units, tools and ancillary equipment.			
		7.3	Operate and monitor powered units and tools or pedestrian plant, machinery or associated equipment to given working instructions relating to: <ul style="list-style-type: none"> <li>continual running</li> <li>closing down</li> <li>cleaning.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.4 Return powered unit, tools or pedestrian plant, machinery or equipment to a safe operational condition on completion of work.			
		7.5 Disassemble and/or clean powered unit, tools or pedestrian plant, machinery or equipment.			
		7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to: <ul style="list-style-type: none"> <li>• prepare, position and set up for work</li> <li>• secure accessories and tool attachments</li> <li>• carry out pre-use and function checks to manufacturers' and suppliers' information and procedures</li> <li>• complete pre-start and post stop checks</li> <li>• recognise the characteristics of the plant, machinery and equipment</li> <li>• identify specific operating and safety requirements for the task and work</li> <li>• recognise and determine when specific skills and knowledge are required and report accordingly.</li> </ul>			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<ul style="list-style-type: none"> <li>• operate, use and control</li> <li>• monitor and maintain</li> <li>• replenish consumables</li> <li>• close down and secure</li> <li>• disassemble and clean</li> <li>• use access equipment</li> <li>• transport and store.</li> </ul>			
		7.7 Describe the needs of other occupations and how to effectively communicate within a team when preparing for and using powered units, tools or pedestrian plant, machinery or equipment.			
		7.8 Describe how to maintain the hand tools, portable power tools, powered units, pedestrian plant, machinery and ancillary equipment used for the work.			

Learner name: \_\_\_\_\_

Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_

Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_

Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_

Date: \_\_\_\_\_

*(if sampled)*

## 10 Appeals

Centres must have a policy for dealing with appeals from learners. Appeals may relate to assessment decisions being incorrect or assessment not being conducted fairly. The first step in such a policy is a consideration of the evidence by a Lead Internal Verifier or other member of the programme team. The assessment plan should allow time for potential appeals after learners have been given assessment decisions.

Centres must document all learners' appeals and their resolutions. Further information on the appeals process can be found in the document *Internal assessment in vocational qualifications: Reviews and appeals policy*, available on our website.

# 11 Malpractice

## Dealing with malpractice in assessment

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Malpractice means acts that undermine the integrity and validity of assessment, the certification of qualifications and/or may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actual or attempted actions of malpractice by learners, centre staff or centres in connection with Pearson qualifications. Pearson may impose penalties and/or sanctions on learners, centre staff or centres where malpractice or attempted malpractice has been proven.

Malpractice may occur or be suspected in relation to any unit or type of assessment within a qualification. For further details on malpractice and advice on preventing malpractice by learners, please see Pearson's *Centre guidance: Dealing with malpractice*, available on our website.

The procedures we ask you to adopt vary between units that are internally assessed and those that are externally assessed.

Centres are required to take steps to prevent malpractice and to investigate instances of suspected malpractice. Learners must be given information that explains what malpractice is for internal assessment and how suspected incidents will be dealt with by the centre. The *Centre guidance: Dealing with malpractice* document gives full information on the actions we expect you to take.

Pearson may conduct investigations if we believe a centre is failing to conduct internal assessment according to our policies. The above document gives further information and examples, and details the penalties and sanctions that may be imposed.

In the interests of learners and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

### Learner malpractice

- The head of centre is required to report incidents of suspected learner malpractice that occur during Pearson qualifications. We ask centres to complete Joint Council for Qualifications (JCQ) *Form M1* ([www.jcq.org.uk/exams-office/malpractice](http://www.jcq.org.uk/exams-office/malpractice)) and email it with any accompanying documents (signed statements from the learner, invigilator, copies of evidence, etc.) to the Investigations Processing team at [candidatemalpractice@pearson.com](mailto:candidatemalpractice@pearson.com). The responsibility for determining appropriate sanctions or penalties to be imposed on learners lies with Pearson.

Learners must be informed at the earliest opportunity of the specific allegation and the centre's malpractice policy, including the right of appeal. Learners found guilty of malpractice may be disqualified from the qualification for which they have been entered with Pearson.

Failure to report malpractice constitutes staff or centre malpractice.

### **Teacher/centre malpractice**

The head of centre is required to inform Pearson's Investigations team of any incident of suspected malpractice (which includes maladministration) by centre staff, before any investigation is undertaken. The head of centre is requested to inform the Investigations team by submitting a *JCQ M2* form ([www.jcq.org.uk/exams-office/malpractice](http://www.jcq.org.uk/exams-office/malpractice)) with supporting documentation to [pqsmalpractice@pearson.com](mailto:pqsmalpractice@pearson.com). Where Pearson receives allegations of malpractice from other sources (for example Pearson staff, anonymous informants), the Investigations team will conduct the investigation directly or may ask the head of centre to assist.

Pearson reserves the right in cases of suspected malpractice to withhold the issuing of results/certificates while an investigation is in progress. Depending on the outcome of the investigation, results and/or certificates may not be released or they may be withheld.

We reserve the right to withhold certification when undertaking investigations, audits and quality assurance processes. You will be notified within a reasonable period of time if this occurs.

### **Sanctions and appeals**

Where malpractice is proven, we may impose sanctions or penalties, such as:

- mark reduction for affected external assessments
- disqualification from the qualification
- debarment from registration for Pearson qualifications for a period of time.

If we are concerned about your centre's quality procedures we may impose sanctions such as:

- working with centres to create an improvement action plan
- requiring staff members to receive further training
- temporarily withholding certification of learners
- placing temporary blocks on registration of learners
- debarring staff members or the centre from delivering Pearson qualifications
- suspending or withdrawing centre approval status.

The centre will be notified if any of these apply.

Pearson has established procedures for centres that are considering appeals against penalties and sanctions arising from malpractice. Appeals against a decision made by Pearson will normally be accepted only from the head of centre (on behalf of learners and/or members or staff) and from individual members (in respect of a decision taken against them personally). Further information on appeals can be found in the JCQ Appeals booklet: *A guide to the awarding bodies' appeals process*.



## 12 Further information and publications

- Edexcel, BTEC and Pearson Work Based Learning contact details: [qualifications.pearson.com/en/support/contact-us.html](https://qualifications.pearson.com/en/support/contact-us.html).
- Books, software and online resources for UK schools and colleges: [www.pearsonschoolsandfecolleges.co.uk](http://www.pearsonschoolsandfecolleges.co.uk).
- Our publications catalogue lists all the material available to support our qualifications. To access the catalogue and order publications, please visit our website.

Further documents that support the information in this specification:

- *Access arrangements and reasonable adjustments* (JCQ)
- *A guide to the special consideration process* (JCQ)
- *Collaborative and consortium arrangements for the delivery of vocational qualifications policy* (Pearson)
- *UK information manual* (updated annually and available in hard copy) or *Entries and information manual* (available online) (Pearson)
- *Distance learning and assessment policy* (Pearson)

### **Publisher information**

Any publisher can seek endorsement for their resources and, if they are successful, we will list their resources on our website.

# 13 Glossary

## Section A – General terminology used in specification

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Level	Units and qualifications have a level assigned to them. The level assigned is informed by the level descriptors defined by Ofqual, the qualifications regulator.
Guided learning hours (GLH)	This indicates the number of hours of activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study. Units may vary in size.
Total qualification time (TQT)	This indicates the total number of hours that a typical learner will take to complete the qualification. This is in terms of both guided learning hours but also unguided learning, for example private study, time spent in the workplace to master skills.
Learning outcomes	The learning outcomes of a unit set out what a learner knows, understands or is able to do as the result of a process of learning.
Assessment criteria	The assessment criteria specify the standard the learner is required to meet to achieve a learning outcome.
Competence	The minimum knowledge, skills and behaviours required to perform a job role effectively.
Valid assessment	The assessment assesses the skills or knowledge/understanding in the most sensible, direct way to measure what it is intended to measure.
Reliable assessment	The assessment is consistent and the agreed approach delivers the correct results on different days for the same learners and different cohorts of learners.
Workplace simulation	Realistic tasks carried out in the workplace that are additional to the normal work duties for the day to produce evidence for criteria that are very challenging to meet in the natural course of work.

## Section B – Terms used in knowledge and understanding criteria

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Describe	Give a clear account in their own words, including all the relevant information (e.g. qualities, characteristics or events, etc.). Description shows recall and in some cases application.
Explain	Provide details and give reasons and/or evidence to support an opinion, view or argument.  OR  Provide details and give relevant examples to clarify and extend a point. This would usually be in the context of learners showing their understanding of a technical concept or principle.
Identify	Shows the main features or purpose of something. Can recognise it and/or name characteristics or facts that relate to it.
State	Express information in clear and precise terms.

# Annexe A: Consolidated Assessment Strategy for Construction and the Built Environment

## Introduction

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This assessment strategy provides principles and guidance to awarding organisations so the assessment of units within qualifications denoted as NVQs in the Regulated Qualification Framework (RQF) and SVQs in the Scottish Credit and Qualification Framework (SCQF) is valid, effective and consistent, and has credibility across the Construction and Built Environment sector. This is a consolidated Construction Skills Assessment Strategy covering construction and the built environment – craft, operative, supervisory, technical, managerial and professional NVQs and SVQs.

These principles are in addition to the requirements that awarding organisations must meet for the delivery of qualifications as required by the qualification regulators' documentation.

This consolidated assessment strategy provides the overarching principles as systems may vary from one awarding organisation to another. Awarding organisations must consistently put these principles into practice.

Appendix A provides guidance to help awarding organisations incorporate relevant parts of these principle requirements in their documentation.

Appendix B provides additional information on assessment guidance for awarding organisations relevant to specific NVQ or SVQ qualifications and units.

Appendix C provides guidance on the use of simulation; it is an SSC's responsibility to define the acceptability of evidence from simulation in the context of National Occupational Standards (NOS) and NVQs/SVQs. Simulation will only usually apply as a result of one or more of the listed constraints.

Awarding organisations must make this Strategy and the appendices available to assessors, verifiers, candidates and assessment centres.

## Principles

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### 1. External quality control of assessment

1.1 Awarding organisations must use risk management for external quality control of assessment. They must evaluate all external verification reports and other data relating to assessment centres. Awarding organisations must address any risks relating to quality control, considering the sector assessment strategy requirements for:

- workplace evidence
- the use of simulation
- the occupational competence of assessors and verifiers.

1.2 The monitoring and standardisation of assessment decisions must be achieved by robust and strong internal and external verification systems that meet the requirements of the qualification regulators' documentation.

1.3 Awarding organisations must be members of the sector's Built Environment Awarding Body Forum. Members will be expected to provide feedback on National Occupational Standards (NOS), NVQs or SVQs, including aspects informing incremental change.

1.4 The Forum will, in respect of this strategy:

- build on the good relationships with awarding organisations
- provide opportunities to identify and address particular issues of external quality control
- contribute to improving quality and consistency
- support awarding organisations to monitor assessment centres' performance to identify areas and levels of risk
- provide information and statistics about take-up and completion, as well as trends and developments that can be used by ConstructionSkills and awarding organisations to identify any problem areas and agree remedial action
- discuss matters concerning quality assurance, as well as providing the opportunity to identify issues arising from implementation of NOS and related vocational qualifications
- inform the continuous improvement of NOS, and awards derived from them
- identify and share best practices to build a whole industry approach to pursue excellence in education and work-based learning and assessment process to achieve competence.

1.5 Awarding organisations and their partners, assessment centres, verifiers and assessors must maintain robust and transparent operational arrangements. They must preserve independence in assessment, certification and quality assurance processes. Awarding organisations must ensure clear separation of their NVQ/SVQ assessment responsibilities from their industry, training, membership, certification, accreditation and commercial interests and resolve any conflicts of interest.

1.6 Where e-assessment is used, it must meet the requirements of the qualification regulators' documentation.

## **2. Aspects to be assessed through performance in the workplace**

2.1 Direct evidence produced through normal performance in the workplace is the primary source for meeting the requirements. This includes naturally occurring documentary evidence (hard copy and electronic), direct observation of activities and witness testimony as relevant. ConstructionSkills' National Working Groups will specify any exceptions to this position (see section 3).

2.2 Workplace evidence must be supported by the required evidence of knowledge and understanding. This evidence may be identified by:

- questioning the candidate
- recognised industry education and training programme assessment or professional interview assessment that has been matched to NOS requirements
- performance evidence.

2.3 A holistic approach towards the collection of evidence should be encouraged. The focus should be on assessing activities generated by the whole work experience rather than focusing on specific tasks. This would show how evidence requirements could be met across the qualification to make the most efficient use of evidence. Appendix A suggests standard evidence notes for awarding organisations.

## **3. How simulated working conditions may be used to assess competence**

3.1 Simulations (designed situations for producing artificially generated evidence) may only be used where candidates are prevented from gathering direct evidence from the workplace in the normal way because:

- there are hazards
- it is difficult to distinguish individual performance in team situations
- circumstances occur infrequently or long term results are involved
- confidentiality is important
- there are organisational constraints

3.2 Any instances where simulation is considered to be acceptable as an alternative (to direct workplace evidence) means of generating evidence, will be determined by the relevant ConstructionSkills National Working Group and stated in the unit. Appendix A suggests standard evidence notes for awarding organisations.

3.3 The ConstructionSkills National Working Group will determine and specify on the required realistic working environment and context to be adopted. This could include appropriate:

- tools, equipment and instruments
- materials
- types of contingencies
- standards and quality specifications
- real timescales
- quantities of work
- physical conditions
- relationships with people
- types of interaction
- communication methods and media
- information and data.

3.4 Where simulated evidence is stated as acceptable in the unit, the circumstances and requirements for the simulation needs to be confirmed by discussions between the candidate and the assessor, and which are then agreed by the internal and external verifiers.

3.5 Where other Standard Setting Bodies' units are imported into a ConstructionSkills suite, the evidence requirements of the originating body will be adopted and specified.

## 4. Occupational expertise requirements for assessors and verifiers

4.1 Awarding organisations must ensure that assessors:

4.1.1 have sufficient, verifiable, relevant current industry experience, knowledge and understanding of the occupational working area at, or above, the level being assessed. This must be of sufficient depth to be effective and reliable when judging candidates' competence. Assessors' experience, knowledge and understanding could be verified by a combination of:

- curriculum vitae and employer endorsement or references
- possession of a relevant NVQ/SVQ, or vocationally related qualification
- corporate membership of a relevant professional institution
- interview

(The verification process must be recorded and available for audit)

4.1.2 have sufficient occupational expertise so they have up to date experience, knowledge and understanding of the particular aspects of work they are assessing. This could be verified by records of continuing professional development achievements

4.1.3 only assess in their acknowledged area of occupational competence

4.1.4 have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy (this document)

4.1.5 are prepared to participate in activities for their continued professional development

4.1.6 hold, or are working towards, a qualification as listed within 'Assessing and Assuring Quality of Assessment':

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Award in Assessing Vocationally Related Achievement
- RQF/QCF Level 3 Certificate in Assessing Vocationally Related Achievement
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement
- an appropriate Assessor qualification in the SCQF as identified by SQA Accreditation

or hold one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence

Holders of A1 and D32/33 must assess to the current National Occupational Standards (NOS) for Learning and Development.

In Scotland, approval for exemptions must be obtained from SQA Accreditation.



4.2 Awarding organisations must ensure that **internal verifiers:**

4.2.1 have sufficient, verifiable, relevant up to date experience, knowledge and understanding of the occupational working area at, or above, the level being verified. This must be of sufficient depth to be effective and reliable when verifying judgements about assessors' assessment processes and decisions. Internal verifiers' experience, knowledge and understanding could be verified by a combination of:

- curriculum vitae and employer endorsement or references
- possession of a relevant NVQ/SVQ, or vocationally related qualification
- corporate membership of a relevant professional institution
- interview

(The verification process must be recorded and available for audit)

4.2.2. have expertise so they have up to date experience, knowledge and understanding of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements

4.2.3 have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy (this document)

4.2.4 are prepared to participate in activities for their continued professional development

4.2.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment:

- RQF/QCF Level 4 Award in the Internal Quality Assurance of the Assessment Process and Practice
- RQF/QCF Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
- an appropriate Internal Verifier qualification in the SCQF as identified by SQA Accreditation

or hold one of the following

- V1 Conduct internal quality assurance of the assessment process
- D34 Internal verify the assessment process

Holders of V1/D34 must quality assure to the current National Occupational Standards (NOS) for Learning and Development.

It is strongly recommended that within the role of Internal Quality Assurance one of the following qualifications is held.

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement
- an appropriate Assessor qualification in the SCQF as identified by SQA Accreditation

or one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence.

4.3 Awarding organisations must ensure that **external verifiers:**

4.3.1 have sufficient, verifiable, relevant experience, knowledge and a broad understanding of the occupational working area at, or above, the level being verified. This must be of sufficient depth to be effective and reliable when verifying judgements about internal verification and assessment processes and decisions. External verifiers' experience, knowledge and understanding could be verified by a combination of:

- curriculum vitae and employer endorsement or references
- possession of a relevant NVQ/SVQ, or vocationally related qualification
- corporate membership of a relevant professional institution
- interview

(The verification process must be recorded and available for audit)

4.3.2 have sufficient expertise so they have an up to date experience, knowledge and understanding of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements.

4.3.3. have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy (this document)

4.3.4 are prepared to participate in activities for their continued professional development.

4.3.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment':

- RQF/QCF Level 4 Award in the External Quality Assurance of the Assessment Process and Practice
- RQF/QCF Level 4 Certificate in Leading the External Quality Assurance of Assessment
- an appropriate External Verifier qualification in the SCQF as identified by SQA Accreditation

or hold one of the following

- V2 Conduct external quality assurance of the assessment process
- D35 Externally verify the assessment process

Holders of V2/D35 must quality assure to the current National Occupational Standards (NOS) for Learning and Development.

It is strongly recommended that within the role of External Quality Assurance one of the following qualifications is held at Level 3 and Level 4.

Level 3:

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement
- an appropriate Assessor qualification in the SCQF as identified by SQA Accreditation

or one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence

Level 4:

- RQF/QCF Level 4 Award in the Internal Quality Assurance of the Assessment Process and Practice
- RQF/QCF Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
- an appropriate Internal Verifier qualification in the SCQF as identified by SQA Accreditation
- V1 Conduct internal quality assurance of the assessment process
- D34 Internal verify the assessment process

#### 4.4. Selection and appointment of assessors and verifiers

All applicants should be advised that they may be interviewed. Applicants' CVs should be profiled against the activities and range of the NVQ/SVQ(s) they will assess/verify to check that the applicant has the relevant current experience, knowledge and understanding of the occupational working area:

- at, or above, the level they will be assessing
- of sufficient depth to credibly verify judgements and assessments
- to uphold the integrity of the NOS and this Consolidated Assessment Strategy.

All assessors should have experience as well as, not in lieu of, qualifications. Where there seem to be gaps in a potentially suitable applicant's experience and knowledge, the applicant should be interviewed. Successful applicants' CVs, profiling, reasons for not needing to interview and interview records should be available for audit.

## Appendix A

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### ConstructionSkills' standard evidence notes for awarding organisations

These guidance notes have been produced to ensure consistency in interpreting the principles set out in sections 2 and 3 of the ConstructionSkills' Assessment Strategy. The notes should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for construction and built environment – craft, supervisory, technical, managerial and professional NVQs/SVQs. The following general standard notes are strongly recommended for adoption by awarding organisations in their assessment specification:

Standard note 1:

*"Taken as a whole, the evidence must show that the candidate consistently meets all the following performance criteria/learning outcomes and assessment criteria across the scope/range."*

Standard note 2:

*"There must be workplace evidence against each performance criterion/learning outcome and assessment criterion. Where the workplace evidence does not cover the whole scope/range, knowledge evidence must be provided to cover the remaining items of scope/range for each relevant performance criterion/learning outcome and assessment criterion."*

Standard note 3:

*"Knowledge evidence may be established from questioning the candidate, or from industry recognised industry education and training programme assessment, or professional interview assessment, that has been matched to the requirements of the National Occupational Standards. Such assessments should also have their own independent external assessment, moderation or verification. A candidate's knowledge and understanding can also be demonstrated through presented performance evidence."*

Standard note 4:

Either:

*"Simulations are not considered to be acceptable for producing this evidence."*

OR

*"Simulations are considered to be an acceptable alternative for producing evidence for the following item(s) which is/are considered to be rare/infrequent, but key/critical to demonstrating competence. The following realistic working environment and context must be adopted for the simulation, with appropriate: tools, equipment and instruments; materials; types of contingencies; standards and quality specifications; real timescales; quantities of work; physical conditions; relationship with people; type of interaction; communication methods and media; information and data\*."*

See also Annex C: 'Guidance on the use of simulation' which also includes guidance on the acceptable use and characteristics of simulation within N/SVQs during the current economic climate.

## Appendix B

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### **Additional Information On Assessment Guidance For Awarding Organisations Relevant To Specific NVQ or SVQ Qualifications and Units**

The information below should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for construction and built environment NVQs and SVQs. The following guidance is strongly recommended for adoption by awarding organisations in their assessment methodology.

#### **Additional Information on the Assessment of CITB NVQ Units only**

- CITB NVQ Unit Ref: 641 – Assessment Criteria 2.3 and 2.4
  - 2.3 – 'List the current Health and Safety Executive top ten safety risks' should be assessed as 'List the current common safety risks'.
  - 2.4 – 'List the current Health and Safety Executive top five health risks' should be assessed as 'List the current common health risks
- All CITB NVQ units – Assessment Criteria 1.4
  - 1.4 – 'State why and when health and safety control equipment, identified by the principles of protection' should be assessed as 'State why and when health and safety control equipment, identified by the principles of prevention'.

#### **Thermal Insulation NVQ and SVQ units and qualifications**

- Training Providers offering Thermal Insulation NVQ and SVQ units and qualifications:
  - must ensure that their Thermal Insulation assessors are registered with the Thermal Insulation Contractor Association (TICA) and are Thermal Installation installers with at least 5 years verifiable, relevant, current industry experience, knowledge and understanding of the occupational area at, or above the level being assessed. This must be of sufficient depth to be effective and reliable when judging candidates' competence. Assessors' experience, knowledge and understanding could be verified by a combination of:
    - curriculum vitae and employer endorsement
    - references
    - possession of a relevant NVQ/SVQ, or vocationally related qualification
    - interview

(The verification process must be recorded and available for audit)

- will provide opportunities to identify and address particular issues of external control, including the assessment of Thermal Insulation NVQ/SVQ qualifications and Apprenticeship Standards.

### Guidance on the use of simulation

#### Introduction

National Occupational Standards (NOS) are developed by Sector Skills Councils (SSCs) and describe the level of occupational competence required of a particular job role. NOS are then used to build National and Scottish Vocational Qualifications (NVQs/SVQs) that are competence based qualifications and demand assessment in a workplace environment.

Assessment of NVQs/SVQs through simulation is indicated where the achievement of valid and reliable assessment calls for evidence of performance under workplace conditions, but where it will be difficult to assess through normal working practice. This will usually apply as a result of one or more of the following constraints:

- activities which are inherently hazardous and where mistakes made in carrying them out would pose unacceptable risks to the candidate, other people, animals or property (e.g. electricity and gas sectors, fire service etc.)
- the costs incurred would be unacceptably high if mistakes were made during an activity and a candidate would therefore be required to 'prove' competence before progressing onto the actual work (e.g. handling rare or precious objects)
- situations where the qualities and outcomes of the candidate's behaviour are almost impossible to distinguish from those of their peers or colleagues, making authenticity uncertain (e.g. in some teamwork contexts)
- activities or situations which are sufficiently rare (e.g. where processes, such as a 'shut-down', may only occur on an annual basis)
- when the collection and/or review of evidence of workplace performance would intrude unacceptably on personal privacy or confidentiality, or would significantly alter the nature of an interaction or relationship (e.g. in some health care settings)
- a requirement to work with new techniques and/or work practices which may not be available in all workplaces.

Where permitted, simulation can take one or a combination of the two following forms:

- the candidate is presented with an activity to perform using equipment and/or in a location which replicates that found in the workplace
- the candidate is presented with a situation to which they must respond; taking and playing the role they would expect to play in the workplace.

It is a SSC's responsibility to define the acceptability of evidence from simulation in the context of National Occupational Standards (NOS) and National and Scottish Vocational Qualifications (NVQs/SVQs). The ConstructionSkills Consolidated Assessment Strategy provides this guidance.

### **Guidance on the acceptable use and characteristics of simulation within NVQs/SVQs during the current economic climate**

Due to the UK's economic recession over the past few years, ConstructionSkills had implemented flexibilities relating to simulation of NVQs/SVQs for displaced Apprentices and although there were small signs of a recovery in 2014 ConstructionSkills' agreed to extend these flexibilities for a further twelve months.

Now that the construction industry has shown definite signs of growth, these flexibilities were withdrawn on 31st March 2015. However in regard to Apprentices registered before the 1st January 2015 the flexibilities will remain in place until their completion date.

Therefore only for Apprentices who registered before the 1st January 2015 the following can apply:

In situations where a displaced or employed apprentice (this does not apply to full-time learners) will not be able to demonstrate evidence in the workplace within an acceptable time span, Awarding Bodies can arrange with their centres to apply the following principles.

1 Units cannot be assessed using simulation alone – there must be some supporting work-based evidence.

2 A centre's strategy for simulation must be examined and approved by the external verifier.

3 The location and environment of simulation must be agreed with the internal verifier prior to taking place, and must be checked by the internal verifier.

4 The nature of the contingency and the physical environment must be realistic and candidates should not be given any indication as to exactly what contingencies they may come across.

5 All simulations must be planned, developed and documented by the centre in a way that ensures the simulation correctly reflects what the unit seeks to assess, and all simulations must follow these documented plans.

6 There should be a range of simulation to cover the same aspect of the unit so that the risk of candidates successfully colluding is reduced.

7 All simulation must reflect the urgency with which the activity would normally be carried out and the normal time needed to complete it, including the usual complexity of factors affecting the activity.



8 All simulation should involve the same personnel as would normally be included (e.g. bricklayer, supervisor, labourer etc.) and also similar realistic facilities.

9 Any instances of insufficient work-based evidence must be supported by adequate supplementary evidence which might include questioning; interviews with professional discussion; work projects; case studies; special assignments; self-testimony.

ConstructionSkills would strongly recommend that centres explore strategies with the candidate's employers for obtaining work-based evidence before considering the use of simulation. Examples might include using Group Training Associations, thereby carrying out real jobs within the college/training centre and/or involvement with community projects.

Group Training Association (GTA) is the government term for a training group which also shares Apprentices. The GTA model is where a number of like-minded employers come together to create a separate business entity, which sources appropriate training and delivers Apprenticeships by providing work experience across the range of engaged businesses.

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