ProQual Level 3 NVQ Diploma in Accessing Operations and Rigging (Construction)

Qualification Specification

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Introduction

The ProQual Level 3 NVQ Diploma in Accessing Operations and Rigging (Construction) qualification provides a nationally recognised qualification for candidates working in the construction sector. It is designed to develop and recognise candidate skills, knowledge, and competence in this specialised area within the construction industry.

The awarding body for this qualification is ProQual Awarding Body (www.proqualab.com) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual).

The qualification has been accredited onto the Regulated Qualifications Framework (RQF) and is published on Ofqual's Register of Qualifications.

Qualification Profile

Qualification title	**ProQual Level 3 NVQ Diploma in Accessing Operations and Rigging (Construction)**
Ofqual qualification number	610/4372/2
Level	3
Total qualification time	840 – 1740 Hours (Dependant on Pathway)
Guided learning hours	494 – 977 Hours (Dependant on Pathway)
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	01/09/2024
Qualification end date	

Entry Requirements

There are no formal entry requirements for this qualification.

Centres should carry out an **initial assessment** of candidate skills and knowledge to identify any gaps and help plan the assessment.

Qualification Structure

Candidates must complete all of the required units for one of the following pathways:

Pathway	Minimum TQT
Scaffolding and Offshore	1050
Steeplejacking	1740
Lightning Protection Engineer	1620
Lightning Protective Systems Inspection and Testing	840
Temporary Suspended Access Equipment	1570

Information about the units required for each pathway can be found on the following pages.

Pathway One: Scaffolding and Offshore				
Mandatory Units – Candidates must complete ALL of the units in the group				
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**	***CITB Ref No***
A/503/2772	Confirming Work Activities and Resources For an Occupational Work Area in the Workplace	3	43	209v2
A/651/0177	Developing and Maintaining Good Occupational Working Relationships in the Workplace	3	37	210v3
R/503/2924	Confirming the Occupational Method of Work in the Workplace	3	47	211v2
Y/651/1760	Utilising the Provision of Fall Protection Systems in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two or more** of the following:* • *Scaffold/Rigging* • *Secured Steelwork Structures* • *Wire and Rope Systems* • *Permanently Installed Anchorage Points* • *Temporary Anchorage Points* • *Track Systems* • *Proprietary Systems*	2	90	252v2
M/651/2171	Erecting Specialised, Designed Scaffolds and Rigging in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***One** of the following:* • *Scaffolding* • *Steeplejacking* • *Rigging – Suspended Access Equipment* • *Off-Shore Scaffolding*	3	120	405v2
M/508/6537	Conforming to General Health, Safety and Welfare in the Workplace	1	17	641v2

Optional Units – TWO units required				
R/651/2172	Erecting and Dismantling Overhead Scaffolds in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two** of the following:* • *Drop Scaffolds* • *Hung Scaffolds* • *Scaffolds to Span Gaps (Bridging)* • *Load Bearing Scaffold* • *Scaffolds with Restricted Access and/or Build Restrictions* • *Truss Out*	3	120	406v2
T/651/2173	Erecting and Dismantling Falsework Scaffolds in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***One** of the following:* • *Tube and Fitting* • *Systems Scaffold*	3	110	407v2
Y/651/2174	Erecting and Dismantling Shoring Scaffolds in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two** of the following:* • *Raking-Shore Scaffolds* • *Flying-Shore Scaffolds* • *Deadshore Scaffolds*	3	120	408v2
A/651/2175	Erecting and Dismantling Temporary Roof Scaffolds in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***One** of the following:* • *Tube and Fitting* • *Systems Scaffold*	3	100	609v2
Additional Units – These units are not compulsory				
L/651/1776	Inspecting Scaffolding and Rigging Systems in the Workplace	3	150	411v3

Pathway Two: Steeplejacking				
Mandatory Units – Candidates must complete ALL of the units in the group				
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**	***CITB Ref No***
L/503/9919	Carrying Out Site Measurements and Evaluations in the Workplace	3	73	120v2
A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace	3	43	209v2
A/651/0177	Developing and Maintaining Good Occupational Working Relationships in the Workplace	3	37	210v3
R/503/2924	Confirming the Occupational Method of Work in the Workplace	3	47	211v2
Y/651/1760	Utilising the Provision of Fall Protection Systems in the Workplace *This unit has the following endorsement requirements:* ***Two or more** of the following:* • *Scaffold/Rigging* • *Secured Steelwork Structures* • *Wire and Rope Systems* • *Permanently Installed Anchorage Points* • *Temporary Anchorage Points* • *Track Systems* • *Proprietary Systems*	2	90	252v2
R/651/1778	Erecting and Removing Specialist Access Equipment in the Workplace *This unit has the following endorsement requirements:* *When completed as part of Pathway Two: Steeplejacking; **one** of the following:* • *Steeplejack Vertical Ladders* • *Roof Ladders*	2	90	254v3
T/651/1788	Installing and Removing Temporary Lifting and Suspension Apparatus in the Workplace *This unit has the following endorsement requirements:* *When completed as part of Pathway Two: Steeplejacking, **two** of the following:* • *Block and Tackle Material Lifting Gear (manual and Mechanical)* • *Suspended Platforms* • *Rope Access Anchor Systems* • *Bosun's Seats* • *Winches*	2	100	255v2

	• *Counterbalance Suspension Rigs* • *Suspension Rigs*			
Y/651/1789	Preparing and Operating Scissor-Type Mobile Elevating Work Platforms (MEWP) in the Workplace (Lowest Value Option Used) *This unit has the following endorsement requirements:* ***One** of the following:* • *Mobile Elevated Working Platform Scissor* • *Mobile Elevated Working Platform Boom Vehicle Mounted* • *Mobile Elevated Working Platform Boom Self Propelled* • *Mobile Elevated Working Platform Mast Climber*	2	50	392Av3
M/651/2171	Erecting Specialised, Designed Scaffolds and Rigging in the Workplace *This unit has the following endorsement requirements:* ***One** of the following:* • *Scaffolding* • *Steeplejacking* • *Rigging – Suspended Access Equipment* • *Off-Shore Scaffolding*	3	120	405v2
D/651/2176	Erecting and Dismantling Steeplejack Scaffolds for Multi-Faceted Surfaces in the Workplace *This unit has the following endorsement requirements:* ***One** of the following:* • *Tube and Fitting* • *Systems Scaffold*	3	120	410v3
L/651/1776	Inspecting Scaffolding and Rigging Systems in the Workplace	3	150	411v3
M/508/6537	Conforming to General Health, Safety and Welfare in the Workplace	1	17	641v2
Additional Units – These units are not compulsory				
F/651/1790	Erecting Metal Chimneys in the Workplace	2	73	53v3
L/618/8485	Dismantling and/or Demolishing Masonry and/or Concrete Structures in the Workplace	2	110	155v4
F/651/2177	Installing Sheet Metal Cladding to Chimneys or Ducting in the Workplace	3	120	414v3
H/651/2178	Installing Ducting and Flue Systems in the Workplace	3	120	415v3

Pathway Three: Lightning Protection Engineer				
Mandatory Units – Candidates must complete ALL of the units in the group				
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**	***CITB Ref No***
L/503/9919	Carrying Out Site Measurements and Evaluations in the Workplace	3	73	120v2
A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace	3	43	209v2
A/651/0177	Developing and Maintaining Good Occupational Working Relationships in the Workplace	3	37	210v3
R/503/2924	Confirming the Occupational Method of Work in the Workplace	3	47	211v2
Y/651/1760	Utilising the Provision of Fall Protection Systems in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two or more** of the following:* • *Scaffold/Rigging* • *Secured Steelwork Structures* • *Wire and Rope Systems* • *Permanently Installed Anchorage Points* • *Temporary Anchorage Points* • *Track Systems* • *Proprietary Systems*	2	90	252v2
R/651/1778	Erecting and Removing Specialist Access Equipment in the Workplace *<u>This unit has the following endorsement requirements:</u>* *When completed as part of Pathway Three: Lightning Protection Engineer; **one** of the following:* • *Roof Ladders* • *Fixed Ladders* • *Tower Scaffolds*	2	90	254v3
H/651/1791	Installing Lightning Conductor Systems in the Workplace	2	100	256v2
J/651/1792	Commissioning Lightning Conductor Installation Systems in the Workplace	2	140	257v2
K/650/8922	Identifying and Marking the Location of Utilities Apparatus and Sub-structures in the Workplace	2	75	372v3

Y/651/1789	Preparing and Operating Scissor-type Mobile Elevating Work Platforms (MEWP) in the Workplace (Lowest Value Option Used) *<u>This unit has the following endorsement requirements:</u>* ***One** of the following:* • *Mobile Elevated Working Platform Scissor* • *Mobile Elevated Working Platform Boom Vehicle Mounted* • *Mobile Elevated Working Platform Boom Self Propelled* • *Mobile Elevated Working Platform Mast Climber*	2	50	392Av3
J/651/2179	Installing Electrical Earthing Systems in the Workplace	3	215	412v2
M/508/6537	Conforming to General Health, Safety and Welfare in the Workplace	1	17	641v2
Additional Units – These units are not compulsory				
T/651/1788	Installing and Removing Temporary Lifting and Suspension Apparatus in the Workplace *<u>This unit has the following endorsement requirements:</u>* *When completed as part of Pathway Three: Lightning Protection Engineer, **two** of the following:* • *Block and Tackle Material Lifting Gear (manual and Mechanical)* • *Rope Access Anchor Systems* • *Counterbalance Suspension Rigs* • *Suspension Rigs*	2	210	255v2

Pathway Four: Lightning Protective Systems Inspection and Testing				
Mandatory Units – Candidates must complete ALL of the units in the group				
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**	***CITB Ref No***
L/503/9919	Carrying out Site Measurements and Evaluations in the Workplace	3	73	120v2
A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace	3	43	209v2
A/651/0177	Developing and Maintaining Good Occupational Working Relationships in the Workplace	3	37	210v3
R/503/2924	Confirming the Occupational Method of Work in the Workplace	3	47	211v2
M/651/2180	Using Access Equipment up to Six Metres in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two** of the following:* • *Ladders* • *Stepladders/Platform Steps* • *Proprietary Towers* • *Podiums* • *Mobile Scaffold Towers*	2	37	250v3
Y/651/1760	Utilising the Provision of Fall Protection Systems in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two or more** of the following:* • *Scaffold/Rigging* • *Secured Steelwork Structures* • *Wire and Rope Systems* • *Permanently Installed Anchorage Points* • *Temporary Anchorage Points* • *Track Systems* • *Proprietary Systems*	2	90	252v2
R/651/2181	Inspecting and Testing Lightning Protection Systems in the Workplace	3	150	325v2
M/508/6537	Conforming to General Health, Safety and Welfare in the Workplace	1	17	641v2

Pathway Five: Temporary Suspended Access Equipment				
Mandatory Units – Candidates must complete ALL of the units in the group				
Unit Reference Number	**Unit Title**	**Unit Level**	**GLH**	***CITB Ref No***
A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace	3	43	209v2
A/651/0177	Developing and Maintaining Good Occupational Working Relationships in the Workplace	3	37	210v3
R/503/2924	Confirming the Occupational Method of Work in the Workplace	3	47	211v2
Y/651/1760	Utilising the Provision of Fall Protection Systems in the Workplace *This unit has the following endorsement requirements:* ***Two or more*** *of the following:* • *Scaffold/Rigging* • *Secured Steelwork Structures* • *Wire and Rope Systems* • *Permanently Installed Anchorage Points* • *Temporary Anchorage Points* • *Track Systems* • *Proprietary Systems*	2	90	252v2
F/616/4457	Operating Plant or Machinery for Non-Operational Activities in the Workplace *This unit has the following endorsement requirements:* ***Two*** *of the following:* • *Hand-Operated Power Tools* • *Static Machinery* • *Pedestrian Controlled Equipment* • *Tracked Plant* • *Wheeled Plant* • *Rollers*	2	43	659v1
L/616/4462	Diagnosing Faults in Plant or Machinery Systems or Components in the Workplace *This unit has the following endorsement requirements:* ***Four*** *of the following:* • *Power Unit* • *Transmission* • *Steering* • *Hydraulics* • *Pump*	3	90	664v1

	• *Brakes* • *Pneumatics* • *Electrics* • *Electronics* • *Operating Ancillaries or Attachments*			
A/617/3724	Determining and Completing Service to Maintain Plant or Machinery in the Workplace	3	73	670v1
J/617/3726	Determining and Advising on the Viability of Repair or Replacement for Returning Plant or Machinery to Service in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Five** of the following:* • *Time* • *Labour Costs* • *Cost of Component* • *Sub-Assemblies and Parts* • *Cost of Consumables* • *Cost of Overheads (Transport, Delivery, Operational Downtime, Power Consumption, Specialist Tools and Services)* • *Cost of Replacement, Like for Like* • *Cost of Replacement Alternative Item of Plant or Machinery* • *Benefits of Replacement* • *Availability of Resources and Capability* • *Report Findings*	3	103	671v1
M/508/6537	Conforming to General Health, Safety and Welfare in the Workplace	1	17	641v2
Optional Units – THREE units required				
J/616/4461	Inspecting Plant or Machinery for Operational Serviceability in the Workplace	2	107	663v2
R/616/4463	Installing, Repairing or Modifying Construction Resources by Heating, Welding, Brazing, Soldering And Thermal Cutting in the Workplace *<u>This unit has the following endorsement requirements:</u>* *Heating: **Two** of the following:* • *Free Components (Thermal Shock)* • *Heat Treatment* • *Corrosion Reduction/Removal* • *Adjustment* • *Expansion and Contraction Fit* *Welding: **Two** of the following:* • *Oxygen and Fuel Gas*	2	110	665v1

	• *Manual Metal Arc* • *MIG or MAG* • *Tungsten Inert Gas* *Soldering: **One** of the following:* • *Oxygen and Fuel Gas* • *Iron and Flux* • *Electric Soldering Iron* *Joints: **Two** of the following:* • *Butt* • *Lap* • *Fillet* *Corner Positions: **Two** of the following:* • *Flat* • *Vertical/Horizontal* • *Vertical* • *Overhead* *Thermal Cutting: **One** of the following:* • *Oxy Fuel Gas* • *Plasma*			
Y/616/4464	Producing One-Off Components To Restore Or Maintain The Operational Functions Of Plant Or Machinery In The Workplace	2	73	666v1
D/616/4465	Installing Plant or Machinery for Operational Activities in the Workplace	3	130	667v1
H/616/4466	Carrying Out Specific Tests on Plant or Machinery to Determine Operational Serviceability in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Four** of the following:* • *Electric Systems* • *Cooling Systems* • *Lubrication Systems* • *Emission Control* • *Hydraulic Systems* • *Hydrostatic Drive* • *Transmission Systems* • *Pneumatic Systems* • *Braking Systems* • *Vibration Management* • *Steering/Suspension Systems* • *Generator Output Control* • *Electronic Management* • *Powered Access Equipment*	3	120	668v3

	• *Material Handling Equipment* • *Water Pumps* • *Craneage* • *Lifting Equipment* • *Load Testing (Cranes, Hoists, MEWPs, MHE9)*			
K/616/4467	Configuring Plant or Machinery for Specific Operational Activities in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two** of the following:* • *Attachments* • *Ancillaries* • *Fire Prevention (Spark Arrestors)* • *Structural Support (Anchors and Ties)* • *Safety Measures (Restricted Movement Passage or Access, Warning Alarms, Notices, Lights or Governors)* • *Contaminant Reduction (Noises, Gases, Fluids)* • *Carriage of Ancillaries/Additional Equipment* • *Rail and Trackside* • *Cutting Equipment (Blade or Teeth Angles and Aspects)* • *Additions (e.g. Publicity Boards, Notices, Lights)* • *Machine Control (Laser Measurement or Guidance, Global Positioning System)* • *Productivity Measurement (Weigh Load Sensors, Compaction Sensors)*	2	80	669v1
M/616/4468	Handing Over Plant Or Machinery To The Control Of Others In The Workplace	3	73	672v1
Y/615/1987	Providing Technical Information, Advice and Guidance to Users of Plant or Machinery in the Workplace *<u>This unit has the following endorsement requirements:</u>* ***Two** of the following:* • *Breakdown* • *Handover* • *Request* • *Contract/Guarantee/Warranty/Hire Agreement* • *Recall* • *Modification/Alteration*	3	73	673v1

Centre Requirements

Centres must be approved to offer this qualification. If your centre is not approved please complete and submit form **ProQual Additional Qualification Approval Application**.

Staff
Staff delivering this qualification must be appropriately qualified and/or occupationally competent.

Assessors/Internal Quality Assurance
Assessors for each 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.

Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or internal quality assurance qualifications.

Suitable assessment qualifications may include:

- ProQual Level 3 Certificate in Teaching, Training and Assessment
- ProQual Level 3 Award in Education and Training
- ProQual Level 3 Award in Assessing Competence in the Work Environment
- ProQual Level 3 Award in Assessing Vocational Achievement
- ProQual Level 4 Certificate in Education and Training

Suitable internal verification qualifications may include:

- ProQual Level 4 Award in the Internal QA of Assessment Processes and Practice
- ProQual Level 4 Certificate in Leading the Internal QA of Assessment Processes and Practice

Support for Candidates

Materials produced by centres to support candidates should:

- Enable them to track their achievements as they progress through the learning outcomes and assessment criteria;
- Provide information on where ProQual's policies and procedures can be viewed;
- Provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence

Assessment

This qualification is competence-based, candidates must demonstrate the level of competence described in the units. Assessment is the process of measuring a candidate's skill, knowledge and understanding against the standards set in the qualification.

This qualification must be internally assessed by an appropriately experienced and qualified assessor.

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

Evidence can include:

- Observation report by assessor
- Assignments/projects/reports
- Professional discussion
- Witness testimony
- Candidate product
- Worksheets
- Record of oral and written questioning
- Recognition of Prior Learning

Learning outcomes set out what a candidate is expected to know, understand or be able to do.

Assessment criteria specify the standard a candidate must meet to show the learning outcome has been achieved.

Learning outcomes and assessment criteria can be found from page 20.

Additional information for assessment and requirements for unit **endorsements** where relevant is included after all of the learning outcomes and assessment criteria for each unit.

Internal Quality Assurance

An internal quality assurance verifier confirms that assessment decisions made in centres are made by competent and qualified assessors, that they are the result of sound and fair assessment practice and that they are recorded accurately and appropriately.

Adjustments to Assessments

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

Results Enquiries and Appeals

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title -

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Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement certificates.

Units – Learning Outcomes and Assessment Criteria

Title:	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace
Unit Number:	A/503/2772

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Identify work activities, assess required resources and plan the sequence of work.	1.1	Identify work activities, assess required resources and plan the sequence of work.
		1.2	Identify work activities and formulate a plan for their own sequence of work.
		1.3	Explain the types of work relative to the occupational area and how to identify different work activities.
		1.4	Explain methods of assessing the resources needed from a range of available information.
		1.5	Explain the required information and the different methods used to prepare a work programme relative to the occupational area.
2	Obtain clarification and advice where the resources required are not available.	2.1	Seek advice and clarity from appropriate sources on resources available and the alternatives that can be used for the work when required resources are not available.
		2.2	Explain the different sources and methods that can be used to obtain clarification and advice when the required resources are not available.
3	Evaluate the work activities and the requirements of any significant external factors against the project requirements.	3.1	Assess progress of work against project requirements, taking into account external factors relating to: • Other occupations and/or customers. • Resources. • Weather conditions. • Health and safety requirements.
		3.2	Explain different methods of evaluating work activities against the following project requirements: • Contract conditions. • Contract programme. • Health and safety requirements of operatives.

3	*Cont.*	3.3	Evaluate the requirements of significant external factors that could affect the progress of work, in relation to: • Other related programmes. • Special working conditions. • Weather conditions. • Other occupations/people. • Resources. • Health and safety requirements.
4	Identify work activities which influence each other and make the best use of the resources available.	4.1	Determine work activities that have an influence on each other.
		4.2	Evaluate which work activities make the best use of available resources in relation to: • Occupations and/or customers associated with the work. • Tools, plant and/or ancillary equipment. • Materials and components.
		4.3	Explain different methods and sources that can identify which work activities influence each other.
		4.4	Describe how to determine the sequence of work activities and how long each work activity will take.
		4.5	Describe what zero and low carbon requirements are.
		4.6	Explain how work activities and different ways of using resources can impact on zero and low carbon requirements, and make a positive contribution to the environment.
5	Identify changed circumstances that require alterations to the work programme and justify them to decision makers.	5.1	Evaluate project progress against the work programme to identify any changed circumstances.
		5.2	Inform line management and/or customers on the type and extent of any required changes to the work programme.
		5.3	Explain how to identify possible alterations to the work programme to meet changed circumstances relating to action lists, method statements, duration, schedules and/or occupation specific requirements.
		5.4	Explain how to assess contractual/work effects resulting from alterations to the work programme.

5	*Cont.*	5.5	Explain the methods used to justify to decision makers on the effects resulting from alterations to the work programme.

Title:	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	33
Assessment hours	10

Title:	Developing and Maintaining Good Occupational Working Relationships in the Workplace
Unit Number:	A/651/0177

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Develop, maintain and encourage working relationships to promote good will and trust.	1.1	Give appropriate advice and information to relevant people about the occupational work activities and/or associated occupations involved.
		1.2	Apply the principles of equality and diversity by considering the needs of individuals when working and communicating with others.
		1.3	Explain the methods and techniques used and personal attributes required to encourage and maintain working relationships that promote goodwill and trust with relevant people.
		1.4	Explain the principles of equality and diversity and how to apply them when working and communicating with others.
2	Inform relevant people about work activities in an appropriate level of detail, with the appropriate level of urgency.	2.1	Communicate on the following work activity information to relevant people following organisational procedures: • Appropriate timescales. • Health and safety requirements. • Co-ordination of work procedures.
		2.2	Explain the different methods and techniques used to inform relevant people about work activities.
		2.3	Explain the effects of not informing relevant people with the expected level of urgency.
		2.4	Explain the different types of work activity related information and to what level of detail the following people would expect to receive: • Colleagues. • Employers. • Customers. • Contractors. • Suppliers of products and services. • Other people affected by the work/project.

3	Offer advice and help to relevant people about work activities and encourage questions/requests for clarification and comments.	3.1	Give appropriate advice and information to relevant people about the different methods of carrying out occupational work activities to achieve the required outcome.
		3.2	Explain the techniques of encouraging questions and/or requests for clarification and comments.
		3.3	Explain the different ways of offering advice and help to different people about work activities, in relation to: • Progress. • Results. • Achievements. • Occupational problems. • Occupational opportunities. • Health and safety requirements. • Co-ordinated work.
4	Clarify proposals with relevant people and discuss alternative suggestions.	4.1	Engage regular discussions with relevant people about the occupational work activity and/or other occupations involved.
		4.2	Explain the methods of clarifying alternative proposals with relevant people.
		4.3	Explain the methods of suggesting alternative proposals.
5	Resolve differences of opinion in ways that minimise offence and maintain goodwill, trust and respect.	5.1	Examine and agree the work activities that satisfy all people involved and will meet the required outcome of the proposed method of work.
		5.2	Explain the methods and techniques used to resolve differences of opinion in ways which minimise offence and maintain goodwill, trust and respect.

Title:	Developing and Maintaining Good Occupational Working Relationships in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	27
Assessment hours	10

Title:	Confirming the Occupational Method of Work in the Workplace
Unit Number:	R/503/2924

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Assess available project data accurately to determine the occupational method of work.	1.1	Interpret and extract information from drawings, specifications, schedules, manufacturer's information, methods of work, risk assessments and programmes of work.
		1.2	Explain how to summarise the following project data: • Required quantities. • Specifications. • Detailed drawings. • Health and safety requirements. • Timescales. • Scope of works.
		1.3	Explain the different methods of assessing available project data.
		1.4	Explain how to use project data to interpret the work method, in relation to: • Standard work procedures. • Sequence of work. • Organisation of resources (people, equipment, materials). • Work techniques. • Working conditions (health, safety and welfare). • Risk assessment.
2	Obtain additional information from alternative sources in cases where the available project data is insufficient.	2.1	Collect and collate additional information from alternative sources to clarify the work to be carried out.
		2.2	Explain different methods and techniques of obtaining additional information from the following alternative sources when available project data is insufficient: • Customers or representatives. • Suppliers. • Regulatory authorities. • Manufacturer’s literature.

3	Identify work methods that will make best use of resources and meet project, statutory and contractual requirements.	3.1	Examine potential work methods to carry out the occupational work activity.
		3.2	Determine which work methods will make best use of relevant resources and meet health and safety requirements relating to technical and/or project criteria.
		3.3	Explain how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against technical criteria, in relation to: • Health and safety welfare (principles of protection). • Fire protection. • Access and egress. • Equipment availability. • Availability of competent workforce. • Pollution risk. • Waste and disposal. • Zero and low carbon outcomes. • Weather conditions.
		3.4	Explain how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against project criteria, in relation to: • Conforming to statutory requirements. • Customer and user needs. • Contract requirements in terms of time, quantity and quality. • Environmental considerations.
		3.5	Explain how different methods of work can achieve zero/low carbon outcomes.
4	Confirm and communicate the selected work method to relevant personnel.	4.1	Confirm the selected occupational work method that meets project, statutory and contractual requirements.
		4.2	Communicate appropriately to relevant people on the selected occupational work method.
		4.3	Describe the different techniques and methods of confirming and communicating work methods to relevant people.

4	*Cont.*	4.4	Explain the principles of equality and diversity and how to apply them when working and communicating with others.

Title:	Confirming the Occupational Method of Work in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	37
Assessment hours	10

Title:	Utilising the Provision of Fall Protection Systems in the Workplace
Unit Number:	Y/651/1760

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when utilising the provision of fall protection systems.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when utilising the provision of fall protection systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 utilising the provision of fall 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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to utilise provision of fall protection systems.	4.1	Select resources associated with own work in relation to: • Materials and components. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, limitations, and defects associated with the resources in relation to: • Collective protective equipment. • Full body harness and associated personal equipment. • Lanyard with and without shock absorber. • Associated hooks, rings, and buckles. • Hand tools, portable power tools and equipment.
		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.
		4.6	Describe any potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity associated with the method and procedure to utilise the provision of fall protection systems.
5	Minimise the risk of damage to the work and surrounding area when utilising the provision of fall 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 workspace.
		5.3	Dispose of waste in accordance with legislation.
		5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • Adverse weather conditions.

5	*Cont.*	5.5	Explain why the disposal of waste should be carried out safely in accordance with: • Environmental responsibilities. • Organisational procedures. • Manufacturers' information. • Statutory regulations. • Official guidance.
6	Complete the work within the allocated time when utilising the provision of fall protection systems.	6.1	Demonstrate completion of the work within the estimated allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to utilise the provision of fall protection systems to the required specification.	7.1	Demonstrate the following work skills: • Wearing. • Attaching. • Setting out. • Positioning. • Securing. • Checking. • Removing.
		7.2	Use and maintain hand tools and fall protection systems and equipment.
		7.3	Employ and utilise fall protection systems and equipment to given working instructions, using recognised anchor points for at least **two** of the following: • Scaffold/rigging. • Secured steelwork structures. • Wire and rope systems. • Permanently installed anchorage points. • Temporary anchorage points. • Track systems. • Proprietary systems.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems, and establish the authority needed to rectify them, to: • Locate and position fall protection systems. • Wear safety harnesses, attach, and secure to fall protection system's equipment. • Identify the differences between, fall arrest, restraint and access systems and harnesses. • Identify the differences between shock absorbent and restraining lanyards. • Visually inspect the fall protection system and equipment for security, safety, and operational movement. • Identify the thorough examination and test criteria for fall protection equipment (inertia reels, eyebolts, and anchor points). • Apply hierarchy of control measures for working at height. • Detach and remove fall protection attire and equipment. • Comply with a rescue plan. • Work with, around and in close proximity to plant and machinery. • Use hand tools. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team.
		7.6	Describe how to maintain the tools, systems and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

Two or more *of the following:*

- *Scaffold/Rigging*
- *Secured Steelwork Structures*
- *Wire and Rope Systems*
- *Permanently Installed Anchorage Points*
- *Temporary Anchorage Points*
- *Track Systems*
- *Proprietary Systems*

Title:	Utilising the Provision of Fall Protection Systems in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	80
Assessment hours	10

Title:	Erecting Specialised, Designed Scaffolds and Rigging in the Workplace
Unit Number:	M/651/2171

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting specialised, designed scaffolds and rigging.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when erecting specialised, designed scaffolds and rigging.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 specialised, designed scaffolds and rigging.	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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools, and equipment. • Specific risks to health.
		3.3	Explain why, and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to erect specialised, designed scaffolds and rigging.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors and ties. • Tools and equipment. • Access equipment.
		4.2	Describe the characteristics, quality, uses, limitations, and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components). • Hand tools, portable power tools, measuring and calculation tools and ancillary equipment.
		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.
		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 erect specialised, designed scaffolds and rigging.
5	Minimise the risk of damage to the work and surrounding area when erecting specialised, designed scaffolds and rigging.	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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

4	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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. • Official guidance.
6	Complete the work within the allocated time when erecting specialised, designed scaffolds and rigging.	6.1	Demonstrate completion of the work within the estimated, allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect specialised, designed scaffolds and rigging to the required specification.	7.1	Demonstrate the following work skills: • Inspecting. • Measuring. • Positioning. • Setting out. • Evaluating. • Organising.
		7.2	Use and maintain: • Hand tools. • Portable power tools. • Measuring and calculation tools. • Ancillary equipment. • Access equipment.

7 *Cont.*

7.3 Erect an engineer's designed specialised scaffold and/or rigging structure to given working instructions for at least one of the following occupational areas:

- Scaffolding.
- Steeplejacking.
- Rigging: suspended access equipment.
- Off-shore scaffolding.

7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:

- Refer to survey and site inspection for the specialised, designed scaffold or rigging requirement.
- Confirm that the stability of the foundation/structure on which the scaffold will be erected and secured has been considered.
- Measure and evaluate the scope and design of the scaffold/rigging.
- Plan for and organise resources to erect the scaffold/rigging to the design.
- Confirm and set out for the scaffold/rigging to be erected.
- Erect scaffolds for use by other occupations.
- Maintain records and document design of scaffold/rigging.
- Visually inspect fall protection equipment.
- Install and test ties and anchors.
- Work with, around and in close proximity to plant and machinery.
- Use hand tools, measuring and calculation tools and ancillary equipment.
- Work at height.
- Use access equipment.

7.5 Describe the needs of other occupations and how to communicate effectively within a team.

7.6 Describe how to maintain the tools and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

One *of the following:*

- *Scaffolding*
- *Steeplejacking*
- *Rigging – suspended access equipment*
- *Off-shore scaffolding*

Title:	Erecting Specialised, Designed Scaffolds and Rigging in the Workplace

Additional information about this unit

Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Conforming to General Health, Safety and Welfare in the Workplace
Unit Number:	M/508/6537

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
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.
		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: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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.

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.
		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	*Cont.*	3.6	State the organisational policies and procedures for health, safety and welfare, in relation to: • Dealing with accidents and emergencies associated with the work and environment. • Methods of receiving or sourcing information. • Reporting. • Stopping work. • Evacuation. • Fire risks and safe exit procedures. • Consultation and feedback.
		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.
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: • Recognising when to stop work in the face of serious and imminent danger to self and/or others. • Contributing to discussions and providing feedback. • Reporting changed circumstances and incidents in the workplace. • Complying with the environmental requirements of the workplace.
		4.3	Give examples of how the behaviour and actions of individuals could affect others within the workplace.
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: • During the working day. • On completion of the day's work. • For unauthorised personnel (other operatives and the general public). • For theft.

5	*Cont.*	5.2	State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.

Title:	Conforming to General Health, Safety and Welfare in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	7
Assessment hours	10

Title:	Erecting and Dismantling Overhead Scaffolds in the Workplace
Unit Number:	R/651/2172

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and dismantling overhead scaffolds.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling overhead scaffolds.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials and by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 and dismantling overhead scaffolds.	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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to erect and dismantle overhead scaffolds.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors and ties. • Tools and equipment. • Access equipment.
		4.2	Describe the characteristics, quality, uses, limitations, and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components). • Hand tools, portable power tools and ancillary equipment.
		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.
		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 erect and dismantle overhead scaffold structures.
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling overhead scaffolds.	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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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. • Official guidance.
6	Complete the work within the allocated time when erecting and dismantling overhead scaffolds.	6.1	Demonstrate completion of the work within the estimated allocated time.
		6.2	State the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and dismantle overhead scaffolds to the required specification.	7.1	Demonstrate the following work skills: • Measuring. • Setting out. • Assembling. • Fixing. • Positioning. • Securing. • Removing.
		7.2	Use and maintain: • Hand tools. • Portable power tools. • Ancillary equipment. • Access equipment.

7 *Cont.*

7.3 Erect and dismantle tube and fitting and/or system scaffold for overhead scaffolds to given working instructions to form at least two of the following:

- Drop scaffolds.
- Hung scaffolds.
- Scaffolds to span gaps (bridging).
- Load bearing scaffold.
- Scaffolds with restricted access or build restrictions.
- Truss out.

7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems, and establish the authority needed to rectify them, to:

- Identify requirements of scaffold design drawings and formula.
- Confirm the area to erect the overhead scaffold.
- Confirm the stability of the foundation and structure on which the scaffold will be erected and secured has been considered.
- Calculate weight distribution and load balance.
- Confirm the materials and component make-up (tube and fitting, systems scaffold).
- Set out and prepare for the scaffold structure.
- Erect and secure the following scaffolds: drop, hung and load bearing scaffolds, scaffolds with restricted access and build restrictions, truss out.
- Erect and secure scaffold for the use of other occupations.
- Dismantle and remove overhead scaffolds.
- Visually inspect fall protection equipment.
- Install and test anchors and ties.
- Work with, around and in close proximity to plant and machinery.
- Use hand tools and ancillary equipment.
- Work at height.
- Use access equipment.

7.5 Describe the needs of other occupations and how to communicate effectively within a team.

7.6 Describe how to maintain the tools and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

***Two** of the following:*

- *Drop Scaffolds*
- *Hung Scaffolds*
- *Scaffolds to Span Gaps (Bridging)*
- *Load Bearing Scaffold*
- *Scaffolds with Restricted Access and/or Build Restrictions*
- *Truss Out*

Title:	Erecting and Dismantling Overhead Scaffolds in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Erecting and Dismantling Falsework Scaffolds in the Workplace
Unit Number:	T/651/2173

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and dismantling falsework scaffolds.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling overhead scaffolds.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 and dismantling falsework scaffolds.	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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools, and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to erect and dismantle falsework scaffolds.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors and ties. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations, and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components). • Hand tools, portable power tools and ancillary equipment.
		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 method of work.
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to erect and dismantle falsework scaffolds.
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling falsework scaffolds.	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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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. • Official guidance.
6	Complete the work within the allocated time when erecting and dismantling falsework scaffolds.	6.1	Demonstrate completion of the work within the estimated, allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and dismantle falsework scaffolds to the required specification.	7.1	Demonstrate the following work skills: • Measuring. • Setting out. • Assembling. • Fixing. • Positioning. • Securing. • Removing.
		7.2	Use and maintain: • Hand tools. • Portable power tools. • Ancillary equipment.
		7.3	Erect and dismantle tube and fitting or systems scaffold to given working instructions to form falsework scaffolds (live loads).

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify requirements of scaffold drawings and formula. • Confirm the area to erect falsework scaffolds. • Confirm that the stability of the foundation and structure on which the scaffold will be erected and secured has been considered. • Calculate weight distribution and load balance (live loads). • Confirm the materials and component make-up (tube and fitting, systems scaffold). • Set out and prepare for the scaffold structure. • Erect and secure the scaffold for the use of other occupations. • Dismantle and remove falsework scaffolds. • Visually inspect fall protection equipment. • Work with, around and in close proximity to plant and machinery. • Use hand tools and ancillary equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team.
		7.6	Describe how to maintain the tools and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

***One** of the following:*

- *Tube and Fitting*
- *Systems Scaffold*

Title:	Erecting and Dismantling Falsework Scaffolds in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment hours	10

Title:	Erecting and Dismantling Shoring Scaffolds in the Workplace
Unit Number:	Y/651/2174

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and dismantling shoring scaffolds.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling shoring scaffolds.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials and by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 and dismantling shoring scaffolds.	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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools, and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to erect and dismantle shoring scaffolds.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors, and ties. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, limitations, and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components). • Hand tools, portable power tools and ancillary equipment.
		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 method of work.
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to erect and dismantle shoring scaffolds.
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling shoring scaffolds.	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 tide workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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.
6	Complete the work within the allocated time when erecting and dismantling shoring scaffolds.	6.1	Demonstrate completion of the work within the estimated, allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and dismantle shoring scaffolds to the required specification.	7.1	Demonstrate the following work skills: • Measuring. • Setting out. • Assembling. • Fixing. • Positioning. • Securing. • Removing.
		7.2	Use and maintain: • Hand tools. • Portable power towers. • Ancillary equipment.

7	*Cont.*	7.3	Erect and dismantle tube and fitting and/or systems scaffold to given working instructions to form at least two of the following: • Raking-shore scaffolds. • Flying-shore scaffolds. • Dead shore scaffolds.
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems, and establish the authority needed to rectify them, to: • Identify requirements of scaffold drawings and formula. • Confirm the area to erect the shoring scaffold. • Confirm that the stability of the foundation and structure on which the scaffold will be erected and secured has been considered. • Calculate weight distribution and load balance. • Confirm the materials and component make-up (tube and fitting, systems scaffold). • Set out and prepare for the scaffold structure. • Erect and secure the scaffold for the use of other occupations. • Dismantle and remove scaffold structure. • Visually inspect fall protection equipment. • Work with, around and in close proximity to plant and machinery. • Install and test ties and anchors. • Use hand tools and ancillary equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate effectively within a team.
		7.6	Describe how to maintain the tools and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

***Two** of the following:*

- *Raking-Shore Scaffolds*
- *Flying-Shore Scaffolds*
- *Deadshore Scaffolds*

Title:	Erecting and Dismantling Shoring Scaffolds in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Erecting and Dismantling Temporary Roof Scaffolds in the Workplace
Unit Number:	A/651/2175

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and dismantling temporary roof scaffolds.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling temporary roof scaffolds.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Site. • Workplace. • Company. • Operative. • Vehicles.
		2.3	Explain what the accident reporting procedures are and who is responsible making reports.
3	Maintain safe and healthy working practices when erecting and dismantling temporary roof scaffolds.	3.1	Use health and safety control equipment and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment and fall arrest equipment to carry out the activity. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to erecting and dismantling temporary roof scaffolds, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to erect and dismantle temporary roof scaffolds.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors and ties. • Tools and equipment. • Lifting accessories. • Access equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations, and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components). • Lifting accessories. • Hand tools, portable power tools and ancillary equipment.
		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.
		4.6	Describe any potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to erecting and dismantling temporary roof scaffold structures.
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling temporary roof scaffolds.	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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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.
6	Complete the work within the allocated time when erecting and dismantling temporary roof scaffolds.	6.1	Demonstrate completion of the work within the estimated, allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and dismantle temporary roof scaffolds to the required specification.	7.1	Demonstrate the following work skills: • Measuring. • Setting out. • Assembling. • Fixing. • Positioning. • Securing. • Removing.
		7.2	Use and maintain: • Hand tools. • Portable power tools. • Ancillary equipment. • Lifting accessories. • Access equipment.

7	*Cont.*	7.3	Erect and dismantle tube and fitting or systems scaffolds to given working instructions to form: • Mobile temporary roofs. • Prefabricated roof scaffolds. • Beams.

		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems, and establish the authority needed to rectify them, to:
			
			• Identify requirements of scaffold design drawings and formula.
			• Confirm the area to erect the temporary roof scaffold.
			• Confirm that the stability of the foundation or structure on which the scaffold will be erected and secured has been considered.
			• Calculate weight distribution and load balance.
			• Confirm the materials and component make-up (tube and fitting, systems scaffold).
			• Set out and prepare for the scaffold structure.
			• Erect, secure, dismantle and remove the following:
			  ○ Temporary roof scaffolds.
			  ○ Structures using independent scaffolds and beams.
			  ○ Mobile temporary roofs.
			  ○ Prefabricated roof scaffolds.
			• Erect and secure the scaffold for the use of other occupations.
			• Work with lifting equipment and accessories.
			• Visually inspect fall protection equipment.
			• Work with, around and in close proximity to plant and machinery.
			• Install and test anchors and ties.
			• Use hand tools, portable power tools and ancillary equipment.
			• Work at height.
			• Use access equipment.

		7.5	Describe the needs of other occupations and how to communicate within a team.
		7.6	Describe how to maintain the tools and equipment used.

Unit Endorsements

This unit has the following endorsement requirements:

***One** of the following:*

- *Tube and Scaffolding*
- *Systems Scaffold*

Title:	Erecting and Dismantling Temporary Roof Scaffolds in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment hours	10

Title:	Inspecting Scaffolding and Rigging Systems in the Workplace
Unit Number:	L/651/1776

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when inspecting scaffolding and rigging systems.	1.1	Interpret and extract relevant information from: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • 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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when inspecting scaffolding and rigging systems.	2.1	Describe their responsibilities regarding potential accidents and health hazards and the environment, whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials and by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for: • Site. • Tools. • Equipment. • Personal belongings. • Workplace. • Company. • Operative. • 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 inspecting scaffolding and rigging 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.
		3.2	Demonstrate compliance with given information and relevant legislation when inspecting scaffolding and rigging systems in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools, and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment relating to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust equipment (LEV).
		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. • Other task-related activities.

4	Select the required quantity and quality of resources for the methods of work to inspect scaffolding and rigging systems.	4.1	Select resources associated with own work.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations, and defects associated with the resources in relation to inspection and recording equipment.
		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 and how they are overcome.
5	Minimise the risk of damage to the work and surrounding area when inspecting scaffolding and rigging 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 workspace.
		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. • 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. • Official guidance.
6	Complete the work within the allocated time when inspecting scaffolding and rigging systems.	6.1	Demonstrate completion of the work within the estimated, allocated time.

6	*Cont.*	6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to inspect scaffolding and rigging systems to the required specification.	7.1	Demonstrate the following work skills: • Measuring. • Checking. • Recording.
		7.2	Use and maintain inspection and recording equipment.
		7.3	Inspect scaffolding and/or rigging systems for compliance with current legislation and issue an inspection or thorough examination certificate.
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems, and establish the authority needed to rectify them, to: • Identify the location and the type of scaffolding and rigging arrangement for inspection. • Confirm frequency of inspection and thorough examination. • Inspect stability and security of the scaffold and rigging structures. • Confirm that the structure complies with current legislation and approved practices. • Communicate with appropriate personnel for corrections to the structure that will uphold its integrity and security. • Record and report findings. • Issue appropriate certification. • Visually inspect fall protection equipment. • Use inspection and recording equipment. • Work with, around and in close proximity to plant and machinery. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to effectively communicate within a team.

7	*Cont.*	7.6	Describe how to maintain the tools and equipment used.

Title:	Inspecting Scaffolding and Rigging Systems in the Workplace
Additional information about this unit	
Assessment Guidance	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.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	140
Assessment hours	10

Title:	Carrying Out Site Measurements and Evaluations in the Workplace
Unit Number:	L/503/9919

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when carrying out site measurements and evaluations.	1.1	Interpret and extract information from drawings, specifications, method statements, schedules, manufacturers' information and oral/written instructions.
		1.2	Comply with information and/or instructions derived from risk assessments and/or 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: drawings, specifications, schedules, method statements, manufacturers' information and regulations governing buildings.
2	Know how to comply with relevant legislation and official guidance when carrying out site measurements and evaluations.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: 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.
		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 site measurements and evaluations.	3.1	Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when carrying out site measurements and evaluations.
		3.2	Explain why and when personal protective equipment (PPE) should be used, relating to carrying out site measurements and evaluations, and the types, purpose and limitations of each type.

3	*Cont.*	3.3	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 carry out site measurements and evaluations.	4.1	Select resources associated with own work in relation to measuring and recording tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Measuring tapes, levels, documentation, materials and components. • Measuring and recording tools and equipment.
		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 and wastage associated with the method/procedure to carry out site measurements and evaluations.
5	Minimise the risk of damage to the work and surrounding area when carrying out site measurements and evaluations.	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.

6	Complete the work within the allocated time when carrying out site measurements and evaluations.	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: • Types of work schedules/diaries, progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to carry out site measurements and evaluations to the required specification.	7.1	Demonstrate the following work skills when carrying out site measurements and evaluations: • Measuring, marking out, evaluating, reporting and communicating.
		7.2	Carry out site measurements and evaluations relating to construction and allied activities, for own work area, to given working instructions: • Measure and check dimensions. • Confirm structural backgrounds as complete and acceptable for work requirements. • Report results of findings to manager, as appropriate.
		7.3	Safely use materials, measuring tools and/or equipment.
		7.4	Safely store the materials, tools and equipment used when carrying out site measurements and evaluations.
		7.5	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Measure and check dimensions. • Confirm structural backgrounds as complete and acceptable to work requirements. • Evaluate work requirements. • Report to manager, as appropriate. • Use access equipment. • Work at height. • Use measuring and recording tools and equipment.

7	*Cont.*	7.6	Describe the needs of other occupations and how to effectively communicate within a team when carrying out site measurements and evaluations.
		7.7	Describe how to maintain the measuring and recording tools and/or equipment used when carrying out site measurements and evaluations.

Title:	Carrying Out Site Measurements and Evaluations in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with: • The Additional Requirements for Qualifications using the title NVQ in QCF. • 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.** This unit must be assessed against the following endorsement: • Own occupational area of work.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

Title:	Erecting and Removing Specialist Access Equipment in the Workplace
Unit Number:	R/651/1778

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and removing specialist access equipment.	1.1	Interpret and extract relevant information from: • Drawings. • Specifications. • Schedules. • Method statements. • Risk assessments. • 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: • Drawings. • Specifications. • Schedules. • Method statements. • Risk assessments. • Manufacturers' information. • Regulations and official guidance associated with accessing work.
2	Know how to comply with relevant legislation and official guidance when erecting and removing specialist access equipment.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for tools, equipment, and personal belongings in relation to: • Site. • Workplace. • Company. • 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 and describe how and when they are used for: • Water. • CO_2. • Foam. • Powder.
3	Maintain safe and healthy working practices when erecting and removing specialist access equipment.	3.1	Use health and safety control equipment and comply with the method of work to carry out the activity in accordance with current legislation and organisational requirements when erecting and removing specialist access equipment.
		3.2	Demonstrate compliance with given information and relevant legislation when erecting and removing specialist access equipment in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to erecting and removing specialist access equipment, and the types, purpose and limitations of each type the work situation and general work environment in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with given instructions.

3	*Cont.*	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 and remove specialist access equipment.	4.1	Select resources associated with own work in relation to: • Materials. • Components. • Fixings. • Anchors and ties. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Fixed ladders. • Steeplejack vertical ladders. • Roof ladders. • Associated securing materials (rope, lashings, clamps, anchors and ties). • Hand tools and ancillary equipment.
		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 and length associated with the method and procedure to erect and remove specialist access equipment.
5	Minimise the risk of damage to the work and surrounding area when erecting and removing specialist access 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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	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.
6	Complete the work within the allocated time when erecting and removing specialist access equipment.	6.1	Demonstrate completion of the work within the estimated allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts. • Timetables. • Estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and remove specialist access equipment to the required specification.	7.1	Demonstrate the following work skills when erecting and removing specialist access equipment: • Measuring. • Setting out. • Positioning. • Assembling. • Fixing. • Checking. • Securing. • Dismantling. • Removing.
		7.2	Use and maintain hand tools and ancillary equipment.

7 *Cont.*

7.3 Erect and remove specialist access equipment to given working instructions for one of the following occupational areas:

Steeplejacking:

- Steeplejack vertical ladders.
- Roof ladders.

Lightning Protection Engineer:

- Roof ladders.
- Fixed ladder.
- Tower scaffolds.

Rigging:

- Suspended Access Equipment.
- Suspended platforms.

7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:

- Identify the occupational environment.
- Confirm the type of access equipment (steeplejack vertical ladders, roof ladders, fixed ladders, tower scaffolds and suspended platforms).
- Check and prepare to erect specialist access equipment.
- Position, erect and secure the equipment.
- Dismantle and remove the equipment.
- Install and test anchors and ties.
- Identify the inspection criteria for completed specialist access equipment.
- Visually inspect fall protection equipment.
- Work with, around and in close proximity to plant and machinery.
- Use hand tools and ancillary equipment.
- Work at height.
- Use access equipment.

7.5 Describe the needs of other occupations and how to effectively communicate within a team when erecting and removing specialist access equipment.

7.6 Describe how to maintain the tools and equipment used when erecting and removing specialist access equipment.

Unit Endorsements

This unit has the following endorsement requirements:

Required endorsements depend on the pathway being completed. Please ensure you choose the correct endorsements for your specific pathway.

Steeplejacking (Pathway Two):

One of the following:

- Steeplejack Vertical Ladders.
- Roof Ladders.

Lightning Protection Engineer (Pathway Three):

One of the following

- Roof Ladders.
- Fixed Ladders.
- Tower Scaffolds.

Title:	Erecting and Removing Specialist Access Equipment in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	80
Assessment hours	10

Title:	Installing and Removing Temporary Lifting and Suspension Apparatus in the Workplace
Unit Number:	T/651/1788

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing and removing temporary lifting and suspension apparatus.	1.1	Interpret and extract relevant information from: • Drawings. • Method statements. • Risk assessments. • Specifications. • Schedules. • 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: • Drawings. • Specifications. • Schedules. • Method statements. • Risk assessments. • Manufacturers' information. • Standards. • Regulations and official guidance associated with temporary lifting and suspension work.
2	Know how to comply with relevant legislation and official guidance when installing and removing temporary lifting and suspension apparatus.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: • In the workplace. • Below ground level. • In confined spaces. • At height. • With tools and equipment. • With materials and substances. • With the movement and storage of materials by manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for tools, equipment, and personal belongings in relation to: • Site. • Workplace. • Company. • Operative. • 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 and describe how and when they are used for: • Water. • CO_2. • Foam. • Powder.
3	Maintain safe working practices when installing and removing temporary lifting and suspension apparatus.	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 temporary lifting and suspension apparatus.
		3.2	Demonstrate compliance with given information and relevant legislation installing temporary lifting and suspension apparatus in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.

3	*Cont.*	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 and remove temporary lifting and suspension apparatus.	4.1	Select resources associated with own work in relation to: • Materials. • Components. • Fixings. • Anchors. • Ties, tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability limitations and defects associated with the resources in relation to: • Wire and fibre ropes. • Chains and slings. • Winches and pulley blocks. • Counterbalance systems. • Decking, planks, rails, boards, bosun's seats • Associated securing materials (lashing, clamps, anchors, ties). • Hand tools and ancillary equipment.
		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 and how the organisational procedures are used.
		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 method of work.
		4.7	Describe how to calculate quantity and length associated with the method and procedure to install temporary lifting and suspension apparatus.

5	Minimise the risk of damage to the work and surrounding area when installing and removing temporary lifting and suspension apparatus.	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 workspace.
		5.3	Dispose of waste in accordance with legislation.
		5.4	Explain 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.
6	Complete the work within the allocated time when installing and removing temporary lifting and suspension apparatus.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install and remove temporary lifting and suspension apparatus to the required specification.	7.1	Demonstrate the following work skills when installing and removing temporary lifting and suspension apparatus: • Measuring. • Setting out. • Positioning. • Checking. • Operating. • Securing. • Dismantling. • Removing.
		7.2	Use and maintain hand tools, access and ancillary equipment.

7	*Cont.*	7.3	Install and remove temporary lifting and suspension apparatus to given working instructions, for **one** of the following specific occupational areas: **<u>Steeplejacking:</u>** At least **two** of the following: • Block and tackle material lifting gear (manual and mechanical). • Suspended platforms. • Rope access anchor systems. • Bosun's seats. • Winches. • Counterbalance suspension rigs. **<u>Lightning Protection Engineer:</u>** At least **two** of the following: • Block and tackle material lifting gear (manual and mechanical). • Rope access anchor systems. • Counterbalance suspension rigs. • Suspension rigs. **<u>Suspended Access:</u>** At least **three** of the following: • Suspended platforms. • Winches. • Counterbalance suspension rigs. • Rope access anchor systems. • Suspension rigs. **<u>Offshore:</u>** At least **two** of the following: • Block and tackle material lifting gear (manual and mechanical). • Rope access anchor systems. • Winches.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify and confirm the requirement to install temporary lifting and suspension apparatus. • Prepare types of lifting and suspension apparatus to conform with the method of installation (manual and mechanical). • Install and remove using: block and tackle material lifting gear (manual and mechanical), suspended platforms, rope access anchor systems, bosun's seats, winches, counterbalance suspension rigs, suspended rigs. • Position, install, secure, dismantle and remove temporary lifting and suspension apparatus. • Erect designed and un-designed scaffold (limitations and formula). • Conduct pre-use checks on manual, electrical and mechanical equipment. • Visually inspect fall protection equipment. • Install and test anchors and ties. • Identify the differences between man-riding and material lifting suspension apparatus. • Use hand tools and ancillary equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when installing and removing temporary lifting and suspension apparatus.
		7.6	Describe how to maintain the tools and equipment used when installing and removing temporary lifting and suspension apparatus.

Unit Endorsements

This unit has the following endorsement requirements:

Required endorsements depend on the pathway being completed. Please ensure you choose the correct endorsements for your specific pathway.

Steeplejacking (Pathway Two):

Two of the following:

- Block and tackle material lifting gear (manual and mechanical).
- Suspended platforms.
- Rope access anchor systems.
- Bosun's seats.
- Winches.
- Counterbalance suspension rigs.

Lightning Protection Engineer (Pathway Three):

Two of the following:

- Block and tackle material lifting gear (manual and mechanical).
- Rope access anchor systems.
- Counterbalance suspension rigs.
- Suspension rigs.

Title:	Installing and Removing Temporary Lifting and Suspension Apparatus in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment hours	10

Title:	Preparing and Operating Scissor-Type Mobile Elevating Work Platforms (MEWP) in the Workplace
Unit Number:	Y/651/1789

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the preparation and using scissor-type MEWPs to access areas to carry out the work.	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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations governing the operation of plant and machinery used as work platforms.
2	Organise with others the sequence and operation in which accessing operations using scissor-type MEWPs 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 accessing operations.
3	Know how to comply with relevant legislation and official guidance when carrying out accessing operations using scissor-type MEWPs.	3.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.

3	*Cont.*	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.
4	Maintain safe and healthy working practices when preparing for and carrying out accessing operations using scissor-type MEWPs.	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 accessing operations.
		4.2	Demonstrate compliance with given information and relevant legislation when carrying out accessing operations using scissor-type MEWPs in relation to two or more of the following: • Safe use and storage of plant or machinery. • Safe use and storage of tools and equipment. • Specific risks to health.
		4.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to accessing operations, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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, other task-related activities and rescue plans.
5	Request and select the required quantity and quality of resources to prepare for and carry out accessing operations using scissor-type MEWPs.	5.1	Request and select resources associated with scissor-type MEWPs in relation to consumables, materials, tools, ancillary equipment and/or accessories.

5	*Cont.*	5.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources, and how they should be used correctly, relating to: • Consumables, lubricants and fuels. • Attachments and accessing aids. • Hand tools, ancillary equipment and accessories.
		5.3	Describe how the resources should be used correctly, how problems associated with the resources are reported.
		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 operate scissor-type mobile elevating work platforms used for accessing operations.
6	Minimise the risk of damage to the work and surrounding area when preparing to and accessing work areas.	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.
		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 accessing work areas using scissor-type MEWPs.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
8	Comply with the given contract information to access areas to carry out work using scissor-type MEWPs to the required specification.	8.1	Demonstrate the following work skills when preparing for and accessing work areas using scissor-type MEWPs: • Checking, setting up, adjusting, communicating, manoeuvring, positioning, accessing and setting down.
		8.2	Use and maintain hand tools, ancillary equipment and/or accessories.
		8.3	Prepare for, position, set up and operate scissor-type MEWPs to access working areas, at various locations, to given working instructions.
		8.4	Shut down and secure scissor-type MEWPs.

8	*Cont.*	8.5	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish authority needed to rectify, to: • Identify the characteristics of the scissor-type MEWP used for accessing work. • Identify valid certification for maintenance, inspection and thorough examination. • Carry out function checks for accessing operation. • Prepare, set up and adjust for operational requirements. • Carry out pre-operational checks for obstructions, stability, and ground conditions affecting the work and surrounding area. • Identify and remain aware of the area of operation to include potential entrapment situations. • Use fall prevention equipment. • Check to avoid damage to structures and utilities service apparatus. • Position and secure MEWP for accessing operations. • Recognise and determine when specific skills and knowledge are required and report accordingly. • Operate, manoeuvre, position, set down and secure. • Operate and travel on the public highway. • Shut down and secure the MEWP. • Use hand tools, ancillary equipment and accessories.
		8.6	Describe the needs of other occupations and how to effectively communicate within a team when preparing to and carrying out accessing operations.
		8.7	Describe how to maintain the plant and machinery, hand tools, ancillary equipment used to access working areas.

Unit Endorsements

This unit has the following endorsement requirements:

One *of the following:*

- *Mobile Elevated Working Platform Scissor*
- *Mobile Elevated Working Platform Boom Vehicle Mounted*
- *Mobile Elevated Working Platform Boom Self Propelled*
- *Mobile Elevated Working Platform Mast Climber*

Title:	Preparing and Operating Scissor-Type Mobile Elevating Work Platforms (MEWP) in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	40
Assessment hours	10

Title:	Erecting and Dismantling Steeplejack Scaffolds for Multi-Faceted Surfaces in the Workplace
Unit Number:	D/651/2176

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.	1.1	Interpret and extract relevant information from plans, drawings and sketches, specifications, schedules, method statements, risk assessments, and manufacturers' information.
		1.2	Comply with information and/or instructions derived from risk assessments and method statement.
		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: • Plans, drawings and sketches, method statements, risk assessments, specifications, schedules, manufacturers' information, standards, regulations and official guidance associated with scaffolding work.
2	Know how to comply with relevant legislation and official guidance when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		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	*Cont.*	2.4	Describe the types of fire extinguishers and how and when they are used in relation to: • Water. • Co_2. • Foam. • Powder.
3	Maintain safe and healthy working practices when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.	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 and dismantling steeplejack scaffolds for multi-faceted surfaces.
		3.2	Demonstrate compliance with given information and relevant legislation when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces in relation to of the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to erecting and dismantling steeplejack scaffolds for multi-faceted surfaces, and the types, purpose and limitations of each type, the work situation and general work environment in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.

4	Select the required quantity and quality of resources for the methods of work to erect and dismantle steeplejack scaffolds for multi-faceted surfaces.	4.1	Select resources associated with own work in relation to materials, components, fixings, anchors and ties, tools and equipment, and access equipment.
		4.2	Describe the characteristics, quality, uses, sustainability limitations and defects associated with the resources in relation to: • Tube and fitting. • Systems scaffold. • Associated materials (props, ropes, anchors, ties, boards, plates, beams, ladders, proprietary components etc.). • Hand tools and ancillary equipment.
		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 and how the organisational procedures are used.
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
		4.6	Describe potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity, length and area associated with the method and procedure to erect and dismantle steeplejack scaffolds on multi-faceted surfaces.
5	Minimise the risk of damage to the work and surrounding area when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.	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 workspace.
		5.3	Dispose of waste in accordance with 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	*Cont.*	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 erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect and dismantle steeplejack scaffolds on multi-faceted surfaces to the required specification.	7.1	Demonstrate the following work skills when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces: • Measuring, setting out, assembling, fixing, positioning, securing and removing.
		7.2	Erect and dismantle steeplejack scaffolds for multi-faceted surfaces to given working instructions for one of the following: • 9.1 tube and fitting. • 9.2 systems scaffold.

7	*Cont.*	7.3	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify and confirm the area to erect the scaffold. • Confirm that the stability of the multi-faceted surface's foundation and structure on which the scaffold will be erected and secured has been considered. • Calculate weight distribution and load balance. • Confirm the materials and component make-up (tube and fitting, systems scaffold). • Set out and prepare for the scaffold structure on multi-faceted surfaces. • Erect and secure the scaffold for use by other occupations. • Dismantle and remove scaffold from multi-faceted surfaces. • Install and test anchors and ties. • Visually inspect fall protection equipment. • Work with, around and in close proximity to plant and machinery. • Use hand tools, power tools and ancillary equipment. • Work at height. • Use access equipment.
		7.4	Describe the needs of other occupations and how to communicate within a team when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.
		7.5	Describe how to maintain the tools and equipment used when erecting and dismantling steeplejack scaffolds for multi-faceted surfaces.

Unit Endorsements

This unit has the following endorsement requirements:

One *of the following:*

- *Tube and Fitting*
- *Systems Scaffold*

Title:	Erecting and Dismantling Steeplejack Scaffolds for Multi-Faceted Surfaces in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Erecting Metal Chimneys in the Workplace
Unit Number:	F/651/1790

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when erecting metal chimneys.	1.1	Interpret and extract information from drawings, specifications, method statements, risk assessments, schedules 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: • Drawings, specifications, method statements, risk assessments, schedules, manufacturers' information, regulations and official guidance associated with erecting chimneys.
2	Know how to comply with relevant legislation and official guidance when erecting metal chimneys.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: • 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.
		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 metal chimneys.	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 metal chimneys.
		3.2	Explain why and when personal protective equipment (PPE) should be used, relating to erecting metal chimneys, and the types, purpose and limitations of each type.

3	*Cont.*	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.
4	Select the required quantity and quality of resources for the methods of work to erect metal chimneys.	4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: • Metal chimney components, jointing materials, sealants, fixings, anchors, ties, fittings. • Hand and/or powered tools and equipment.
		4.2	Select resources associated with own work in relation to materials, components, fixings/anchors and ties, 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.
		4.5	Describe how to calculate quantity and length associated with the method/procedure to erect metal chimneys.
5	Minimise the risk of damage to the work and surrounding area when erecting metal chimneys.	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 safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.

6	Complete the work within the allocated time when erecting metal chimneys.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to erect metal chimneys to the required specification.	7.1	Demonstrate the following work skills when erecting metal chimneys: • Measuring, marking out, fitting, finishing, positioning and securing.
		7.2	Erect metal chimney structures, mechanically joined and/or welded, to the given working instructions.
		7.3	Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Erect and dismantle metal chimney structures mechanically joined and/or welded. • Provide temporary support. • Carry out remedial preparation and making good to the building structure. • Install and test anchors and ties. • Work with lifting equipment and accessories. • Use hand tools, power tools and equipment. • Work at height. • Use access equipment.
		7.4	Safely use and store materials, hand tools, portable power tools and ancillary equipment.
		7.5	State the needs of other occupations and how to communicate within a team when erecting metal chimneys.
		7.6	Describe how to maintain the tools and equipment used when erecting metal chimneys.

Title:	Erecting Metal Chimneys in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

Title:	Dismantling and/or Demolishing Masonry and/or Concrete Structures in the Workplace
Unit Number:	L/618/8485

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when dismantling and/or demolishing masonry and/or concrete structures.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, permits to work, manufacturers' information and organisational requirements.
		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: • Drawings, specifications, schedules, method statements, risk assessments, permits to work, site inductions, tool box talks, manufacturers' information, electronic data, current regulations and official guidance associated with dismantling and demolishing masonry and concrete structures.
2	Know how to comply with relevant legislation and official guidance when dismantling and/or demolishing masonry and/or concrete structures.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to project, site, workplace, company, operative, vehicles, tools and plant.
		2.3	Explain what the accident reporting procedures are and who is responsible for making reports.

2	*Cont.*	2.4	Describe the types of fire extinguishers available when dismantling and demolishing masonry and concrete structures and describe how and when they are used: • Water. • Co2. • Foam. • Powder.
3	Maintain safe and healthy working practices when dismantling and/or demolishing masonry and/or 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 dismantling and/or demolishing masonry and/or concrete structures.
		3.2	Demonstrate compliance with given information and relevant legislation when dismantling and/or demolishing masonry and/or concrete structures in relation to the following: • Safe use of access equipment. • Safe use, segregation, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to dismantling and demolishing masonry and concrete structures, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 for the methods of work to dismantle and/or demolish masonry and/or concrete structures.	4.1	Select resources associated with own work in relation to materials and components, demolition tools, equipment and consumables, plant and machinery, waste and/or recycling containers.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Demolition tools, equipment and consumables • Waste and recycling containers.
		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.
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to dismantle and demolish masonry and concrete structures.
5	Minimise the risk of damage to the work and surrounding area when dismantling and/or demolishing masonry and/or 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.

5	*Cont.*	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 relating to segregation and recycling procedures.
6	Complete the work within the allocated time when dismantling and/or demolishing masonry and/or concrete 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: • Types of productivity targets and time scales. • How times are estimated. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to dismantle and/or demolish masonry and/or concrete structures, to the required specification.	7.1	Demonstrate the following work skills when dismantling and/or demolishing masonry and/or concrete structures: • Releasing, handling, lowering, sorting, stacking, segregating, storing, breaking out and loading away.
		7.2	Use and maintain demolition tools, equipment and consumables.
		7.3	Maintain established exclusion zones, dismantle and/or demolish, remove and segregate masonry and/or concrete structures for disposal and/or recycling and/or recovery to given working instructions.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Erect barriers and warning notices. • Maintain established exclusion zones and designated areas. • Dismantle and demolish masonry and concrete structures. • Remove and segregate arisings for recycling, recovery and disposal. • Store and protect removed materials and components. • Provide information for building information modelling (BIM). • Recognise and determine when specialist skills and knowledge are required and report accordingly. • Determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance. • Work with, around and in close proximity to plant and machinery. • Direct and guide the operations and movement of plant and machinery. • Use demolition tools, equipment and consumables. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate effectively within a team when dismantling and demolishing masonry and concrete structures.
		7.6	Describe how to check and maintain demolition tools, equipment and consumables used when dismantling and demolishing masonry and concrete structures.

Title:	Dismantling and/or demolishing masonry and/or concrete Structures in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment hours	10

Title:	Installing Sheet Metal Cladding to Chimneys or Ducting in the Workplace
Unit Number:	F/651/2177

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing sheet metal cladding to chimneys or ducting.	1.1	Interpret and extract information from plans, drawings and sketches, method statements, risk assessments, 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: • Plans. • Drawings and sketches. • Specifications. • Schedules. • Method statements. • Risk assessments. • Manufacturers' information. • Standards. • Regulations governing buildings and official guidance.
2	Know how to comply with relevant legislation and official guidance when installing sheet metal cladding to chimneys or ducting.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: • 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.
		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	*Cont.*	2.4	Describe the types of fire extinguishers and how and when they are used in relation to: • Water. • $Co_{2.}$ • Foam. • Powder.
3	Maintain safe working practices when installing sheet metal cladding to chimneys or ducting.	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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment and all arrest equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why, when health and safety control equipment identified by the principles of prevention should be used, and the types, purpose and limitations of each type the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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. • Other task-related hazards.

4	Select the required quantity and quality of resources for the methods of work to install sheet metal cladding to chimneys or ducting.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings/anchors and ties. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: • Sheet metal cladding, joint sealants, adhesives, rivets, packing, insulation, self-tapping screws. • Anchors and ties. • Hand tools, portable power tools, ancillary equipment and access equipment.
		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.
		4.6	Describe any potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to install, remove and maintain sheet metal cladding components for chimneys and ducting.
5	Minimise the risk of damage to the work and surrounding area when installing sheet metal cladding to chimneys or ducting.	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 workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Describe how to protect work from damage and the purpose of protection in relation to: • General workplace activities. • Other occupations. • 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. • Official guidance.
6	Complete the work within the allocated time when installing sheet metal cladding to chimneys or ducting.	6.1	Demonstrate completion of the work within the estimated allocated time.
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install sheet metal cladding to chimneys or ducting to the required specification.	7.1	Demonstrate the following work skills when installing sheet metal cladding to chimneys or ducting: • Inspecting, checking, cutting, fitting, fixing, positioning, securing and removing.
		7.2	Use and maintain: • Hand tools. • Portable power tools. • Ancillary equipment.
		7.3	Install, dismantle and maintain components to the structural fabric to given working instructions, relating to the installation of sheet metal fabric to chimneys or ducting.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify the types of chimney structure and structural fabric. • Confirm means of access to carry out cladding. • Confirm the type of materials and components and how they can be installed. • Prepare and assemble materials and component parts for installation. • Position, fit and secure the materials and components according to given specification and official guidance for chimney structures. • Install and test anchors and ties. • Visually inspect fall protection equipment. • Work with lifting equipment and accessories. • Work with, around and in close proximity to plant and machinery. • Use hand tools, portable power tools and ancillary equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team.
		7.6	Describe how to maintain the hand tools, portable power tools ancillary equipment and access equipment.

Title:	Installing Sheet Metal Cladding to Chimneys or Ducting in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Installing Ducting and Flue Systems in the Workplace
Unit Number:	H/651/2178

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing ducting and flue systems.	1.1	Interpret and extract information from plans, drawings and sketches, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations governing buildings and official guidance.
		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: • Plans. • Drawings and sketches. • Specifications. • Method statements. • Risk assessments. • Schedules. • Manufacturers' information. • Standards. • Regulations governing buildings. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when installing ducting and flue systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.

2	*Cont.*	2.3	Explain what the accident reporting procedures are and who is responsible for making reports.
		2.4	Describe the types of fire extinguishers and how and when they are used in relation to: • Water. • $Co_{2.}$ • Foam. • Powder.
3	Maintain safe working practices when installing ducting and flue 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.
		3.2	Demonstrate compliance with given information and relevant legislation in relation to the following: • Safe use of access equipment and fall arrest equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.
		3.5	Explain how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with: • Fires, spillages, injuries. • Other task-related hazards.

4	Select the required quantity and quality of resources for the methods of work to install ducting and flue systems.	4.1	Select resources associated with own work in relation to: • Materials, components, fixings, anchors and ties. • Tools and equipment.
		4.2	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: • Duct sections, dampers, wall pates, roof plates, weather hoods, joint sealants, gaskets, support steelwork, expansion joints, shims, insulation, cladding, flange boxes, flange bonding units, supports and stays. • Fixings, anchors and ties. • Hand tools, portable power tools, ancillary equipment and access equipment.
		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.
		4.6	Describe any potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to install the structural components of steel ducting and flues.
5	Minimise the risk of damage to the work and surrounding area when installing ducting and flue systems.	5.1	Protect the work and its surrounding area from damage in accordance with the safe working practices and organisational procedures.
		5.2	Maintain a clear and tidy workspace.
		5.3	Dispose of waste in accordance with current legislation.

5	*Cont.*	5.4	Explain how to protect work from damage and the purpose of protection in relation: • To general workplace activities. • Other occupations. • 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. • Official guidance.
6	Complete the work within the allocated time when installing ducting and flue systems.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install ducting and flue systems to the required specification.	7.1	Demonstrate the following work skills when installing ducting and flue systems: • Checking, measuring, marking, cutting, drilling, guiding, positioning, fitting, assembling, levelling, aligning, fixing and securing.
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment.
		7.3	Install steel ducting or flue systems to given working instructions for the following: • Horizontal, inclined or vertical. • Plain and insulated.

7	*Cont.*	7.4	Describe how to apply safe work and healthy practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify and confirm steel ducting and flue structural components for installation. • Confirm means of access to carry out the work. • Evaluate and confirm the suitability of the backgrounds and surfaces. • Confirm and set out dimensional positioning • Prepare, position, assemble and install steel ducting and flue systems. • Install and test anchors and ties. • Work with, around and in close proximity to plant and machinery. • Visually inspect fall protection equipment. • Work with lifting equipment and accessories. • Use hand tools and ancillary equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when installing ducting and flue systems.
		7.6	Describe how to maintain the hand tools, portable power tools and ancillary equipment used.

Title:	Installing Ducting and Flue Systems in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Installing Lightning Conductor Systems in the Workplace
Unit Number:	H/651/1791

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing lightning conductor systems.	1.1	Interpret and extract relevant information from drawings, method statements, risk assessments, specifications, schedules and manufacturers' information.
		1.2	Comply with information and/or instructions derived from risk assessments and method statement.
		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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with lightning conductor work.
2	Know how to comply with relevant legislation and official guidance when installing lightning conductor systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, operative and vehicle.
		2.3	Describe what the accident reporting procedures are and who is responsible for making reports.
		2.4	Describe the types of fire extinguishers and how and when they are used in relation to: • Water. • $Co_{2.}$ • Foam. • Powder.

3	Maintain safe working practices when installing lightning conductor 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 lightning conductor systems.
		3.2	Demonstrate compliance with given information and relevant legislation when installing lightning conductor systems in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to installing lightning conductor systems, and the types, purpose and limitations of each type, the work situation and general work environment in relation to the following: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to install lightning conductor systems.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.

4	*Cont.*	4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: Air terminations: • Aluminium and copper tapes (plain, sheathed, coated) air finials, cables, clamps, bonds, fixings, suspended conductors. Earth terminations: • Copper lattice matts marconite, bentonite, rods, copper tapes, cables, clamps, bonds, fixings, welding materials, riveted joints, earth pits inhibiting pastes, adhesive tapes, screws, plugs, nuts, bolts, denso tape. Down conductors: • Aluminium, copper, plain, PVC, steel work columns, test clamps and fixings. • hand tools, portable power tools and ancillary equipment.
		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 method of work.
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to install lightning conductor systems.
5	Minimise the risk of damage to the work and surrounding area when installing lightning conductor 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 workspace.
		5.3	Dispose of waste in accordance with legislation.

5	*Cont.*	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	Dispose of waste in accordance with legislation.
		5.6	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 installing lightning conductor systems.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install lightning conductor systems to the required specification.	7.1	Demonstrate the following work skills when installing lightning conductor systems: • Cleaning, dressing, measuring, forming, cutting, drilling, plugging, driving, positioning, clamping, bonding, securing, welding and testing to the current standard.
		7.2	Use and maintain hand tools, power tools and ancillary equipment and access equipment.
		7.3	Install components to the structural fabric to given work instructions to the existing and current standards, to all the following: • Air terminations type of system. • Down conductor type of system. • Earthing type of system. • Bonding.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify types of structure and the structural fabric. • Confirm the means of access to carry out the work. • Confirm the type of lightning conductor components and how they are to be installed. • Prepare the component parts to be installed. • Measure, position, fit and secure the components to specification and requirements. • Work with, around and in close proximity to plant and machinery. • Direct and guide the operations and movement of plant and machinery • Use hand tools, powered tools, test instruments and ancillary equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when installing lightning conductor systems.
		7.6	Describe how to maintain the tools and equipment used when installing lightning conductor systems.

Title:	Installing Lightning Conductor Systems in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment hours	10

Title:	Commissioning Lightning Conductor Installation Systems in the Workplace
Unit Number:	J/651/1792

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when commissioning lightning conductor installation systems.	1.1	Interpret and extract relevant information from drawings, method statements, risk assessments, specifications, schedules and manufacturers' information.
		1.2	Comply with information and/or instructions derived from risk assessments and method statement.
		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: • Drawings, specifications, method statements, risk assessments, schedules, manufacturers' information, standards, regulations and official guidance associated with lightning conductor work.
2	Know how to comply with relevant legislation and official guidance when commissioning lightning conductor installation systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		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 commissioning lightning conductor installation 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 commissioning lightning conductor installation systems.

3	*Cont.*	3.2	Demonstrate compliance with given information and relevant legislation when commissioning lightning conductor installation systems in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to commissioning lightning conductor installation systems, and the types, purpose and limitations of each type, the work situation and general work environment in relation to: • Collective protective measures. • Personal protective equipment (PPE).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to commission lightning conductor installation systems.	4.1	Select resources associated with own work in relation to tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Test instruments and equipment. • Power tools. • Hand and ancillary equipment.
		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	*Cont.*	4.6	Describe potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity and length associated with the method and procedure to commission lightning conductor installation systems.
5	Minimise the risk of damage to the work and surrounding area when commissioning lightning conductor installation 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 workspace.
		5.3	Dispose of waste in accordance with 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.
6	Complete the work within the allocated time when commissioning lightning conductor installation systems.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to commission lightning conductor installation systems to the required specification.	7.1	Demonstrate the following work skills when commissioning lightning conductor installation systems: • Inspecting, testing, measuring and recording.
		7.2	Use and maintain hand tools, test instruments, powered tools and ancillary equipment.

7	*Cont.*	7.3	Commission lightning conductor installations to given working instructions for the following: • Air terminations type of system and current standard. • Down conductors' type of system and current standard. • Earthing type of system and current standard. • Bonding. • Surge protection device.
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify the lightning conductor installation system (including surge/transient protection). • Confirm the means of access to carry out the work. • Survey and carry out visual inspection of the lightning conductor system. • Use test instruments and ancillary equipment. • Carry out tests for continuity, resistances, impedance. • Provide information for Building Information Modelling (BIM). • Recognise and determine when specialist skills and knowledge are required and report accordingly. • Determine specific requirements for structures of special interest, traditional build (pre 1919) and historical significance. • Identify and follow the installation quality requirements. • Work with, around and in close proximity to plant and machinery. • Use hand tools and ancillary equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when commissioning lightning conductor installation systems.
		7.6	Describe how to maintain the tools and equipment used when commissioning lightning conductor installation systems.

Title:	Commissioning Lightning Conductor Installation Systems in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	130
Assessment hours	10

Title:	Identifying and Marking the Location of Utilities Apparatus and Sub-Structures in the Workplace
Unit Number:	K/650/8922

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when identifying and marking the location of utilities apparatus and sub-structures.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, risk assessments, method statements, survey and utility company information, 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: • Drawings, specifications, schedules, risk assessments, method statements, organisational and manufacturers' information, verbal, written and graphical instructions, current regulations and official guidance governing utilities.
2	Know how to comply with relevant legislation and official guidance when identifying and marking the location of utilities apparatus and sub-structures.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • 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.
		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.
		2.4	Describe the types of fire extinguishers available when identifying and marking the location of utilities apparatus and sub-structures and describe how and when they are used.

3	Maintain safe and healthy working practices when identifying and marking the location of utilities apparatus and sub-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 identifying and marking the location of utilities apparatus and sub-structures.
		3.2	Demonstrate compliance with given information and relevant legislation when identifying and marking the location of utilities apparatus and sub-structures in relation to the following: • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health. • Others affected by the work.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to identifying and marking the location of utilities apparatus and sub-structures, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE).
		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, damage to utilities apparatus and sub-structures and other task-related activities.
4	Select the required quantity and quality of resources for the methods of work to identify and mark the location of utilities apparatus and sub-structures.	4.1	Select resources associated with own work in relation to materials, components, tools, equipment and electronic location instruments.

4	*Cont.*	4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Electronic location instruments. • Marking materials and equipment. • Hand tools, power tools and equipment. • Ancillary equipment.
		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.
		4.7	Describe how to identify by calculation, quantity, length and area associated with the method and procedure to identify and mark the location of utilities apparatus and sub-structures.
5	Minimise the risk of damage to the work and surrounding area when identifying and marking the location of utilities apparatus and sub-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.

6	Complete the work within the allocated time when identifying and marking the location of utilities apparatus and sub-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: • Types of productivity targets and time scales. • How times are estimated. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to Identify and mark the location of utilities apparatus and sub-structures to the required specification.	7.1	Demonstrate the following work skills when identifying and marking the location of utilities apparatus and sub-structures: • Measuring, locating, identifying, marking out, positioning, protecting and securing.
		7.2	Use and maintain hand tools, power tools and ancillary equipment.
		7.3	Survey, identify and mark the location of utilities apparatus and sub-structures to given working instructions.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Confirm the area and location of work, the operations, safety and security requirements including temporary traffic management and immediate area protection. • Ensure electronic equipment is calibrated. • Conform to agreed specification and local utility providers requirements. • Identify utilities apparatus and sub-structures by electronic locators and visually. • Confirm the type of service including gas, fuel, electric, communication, water, sewage. • Work around street furniture and ironwork. • Recognise identification markers for utility types. • Confirm structures (foundations, inspection chambers, joint and junction boxes). • Confirm the impact of the natural environment (tree roots, watercourses). • Mark the position of the utilities apparatus and sub-structures. • Return infrastructure to operational status. • Recognise and determine when specialist skills and knowledge are required and report accordingly. • Use hand tools, power tools and equipment. • Work at height.
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when identifying and marking the location of utilities apparatus and sub-structures.
		7.6	Describe how to maintain the tools, equipment and electronic instruments used when identifying and marking the location of utilities apparatus and sub-structures.

Title:	Identifying and marking the location of utilities apparatus and sub-structures in the workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	65
Assessment hours	10

Title:	Installing Electrical Earthing Systems in the Workplace
Unit Number:	J/651/2179

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing electrical earthing systems.	1.1	Interpret and extract relevant information from plans, drawings and sketches, method statements, risk assessments, specifications, schedules and manufacturers' information.
		1.2	Comply with information and/or instructions derived from risk assessments and method statement.
		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: • Plans, drawings and sketches, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with earthing installation work.
2	Know how to comply with relevant legislation and official guidance when installing electrical earthing systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment under current legislation and official guidance whilst working: • 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.
		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 and how and when they are used in relation to: • Water. • CO_2. • Foam. • Powder.

3	Maintain safe working practices when installing electrical earthing 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 electrical earthing systems.
		3.2	Demonstrate compliance with given information and relevant legislation when installing electrical earthing systems in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to installing electrical earthing systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to install electrical earthing systems.	4.1	Select resources associated with own work in relation to materials, components, tools and equipment.

4	*Cont.*	4.2	Describe the characteristics, quality, uses, sustainability limitations and defects associated with the resources in relation to: • Tapes or cables (plain, sheathed, coated, copper). • Earth bars, earth rods, earth pits. • Earth enhancing additives, exothermic welds, clamps, bonds, lugs, clips, screws, plugs, nuts, bolts, rivets, inhibiting paste, petrolatum based anti-corrosion tape, cable ties, cable cleats, markers, labels, cable tiles, trunking and racking and marconite and bentonite cement. • Hand tools, portable powered tools, test instruments, ancillary equipment and access equipment.
		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 and how the organisational procedures are used.
		4.5	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
		4.6	Explain potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity, length, area and wastage associated with the method and procedure to install electrical earthing systems.
5	Minimise the risk of damage to the work and surrounding area when installing electrical earthing 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 workspace.
		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	*Cont.*	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 installing electrical earthing systems.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install electrical earthing systems to the required specification.	7.1	Demonstrate the following work skills when installing electrical earthing systems: • Cleaning, dressing, measuring, forming, levelling, cutting, drilling, driving, plugging, digging, positioning, clamping, bonding, filling, securing and testing.
		7.2	Use and maintain hand tools, test instruments, power tools, ancillary equipment and access equipment.
		7.3	Install electrical earthing and earthing cable systems to building structures and commission and test the system to given working instructions, relating to: • Earth bars. • Earth rods. • Earth pits. • Tapes and cables. • Lattice earth mats and earth plates. • Ground conditioning agents. • Exothermic welded joints.

7	*Cont.*	7.4	Describe how to apply safe work and healthy practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify various types of structure, the structural fabric and the installation location. • Confirm the means of access to carry out the work. • Identify and confirm the different types of components and how they are installed. • Prepare component parts for installation. • Position, fit and secure electrical earthing and earthing cable systems to a given specification and agreed requirements. • Commission the system to the relevant specification. • Visually inspect fall protection equipment. • Work with, around and in close proximity to plant and machinery. • Use hand tools, powered tools, test instruments and ancillary equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when installing electrical earthing systems to building structures.
		7.6	Describe how to maintain the tools and equipment used when installing electrical earthing systems.

Title:	Installing Electrical Earthing Systems in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	205
Assessment hours	10

Title:	Using Access Equipment up to Six Metres in the Workplace
Unit Number:	M/651/2180

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when using access equipment up to six metres.	1.1	Interpret and extract relevant information from plans, drawings and sketches, 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	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: • Plans. • Drawings and sketches. • Specifications. • Schedules. • Method statements. • Risk assessments. • Manufacturers' technical information. • Regulations. • Official guidance.
2	Know how to comply with relevant legislation and official guidance when using access equipment up to six metres.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment whilst working: • In the workplace. • Below ground level. • At height. • In confined areas. • With tools and equipment. • With movement and storage of materials. • Manual handling and mechanical lifting.

2	*Cont.*	2.2	Describe the organisational security procedures for tools, equipment, and personal belongings in relation to: • Site. • Workplace. • Company. • Operative. • 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 using access equipment up to six metres.	3.1	Use health and safety control and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when using access equipment up to six metres.
		3.2	Demonstrate compliance with given information and relevant legislation when using access equipment up to six metres in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to using access equipment up to six metres and the types, purpose and limitations of each type, the work situation and general work environment in relation to: • Collective protective measures. • Local exhaust ventilation (LEV). • Personal protective equipment (PPE). • Respiratory protective equipment (RPE).
		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 hazards.

4	Select the required quantity and quality of resources for the methods of work to use access equipment up to six metres.	4.1	Select resources associated with own work in relation to materials, components, tools and equipment.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Ladders. • Stepladders or platform steps. • Podiums. • Proprietary towers. • Mobile scaffold towers. • Protection equipment and notices. • Hand tools, portable power tools and ancillary equipment.
		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.
		4.6	Describe any potential hazards associated with the resources and method of work.
		4.7	Describe how to calculate quantity of equipment required associated with the method and procedure to using access equipment up to six metres.
5	Minimise the risk of damage to the work and surrounding area when using access equipment up to six metres.	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 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	*Cont.*	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 using access equipment up to six metres.	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: • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to using access equipment up to six metres to the required specification.	7.1	Demonstrate the following work skills when Using access equipment up to six metres: • Moving, positioning, erecting, securing, checking, and removing.
		7.2	Use and maintain hand tools and ancillary equipment.
		7.3	Erect, use, remove and store two of the following access equipment up to six metres: • Ladders. • Stepladders/platform steps. • Proprietary towers. • Podiums. • Mobile scaffold towers.

7	*Cont.*	7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Provide protection to the work area. • Establish a base for equipment. • Erect proprietary access equipment to manufacturer's instructions suitable for the work. • Erect non-proprietary access equipment suitable for the work. • Place protective screens and notices. • Check and monitor equipment during the period of use. • Remove and store access equipment. • Work with, around and in close proximity to plant and machinery. • Use tools and equipment. • Work at height. • Use access equipment.
		7.5	Describe the needs of other occupations and how to communicate within a team when using access equipment up to six metres.
		7.6	Describe how to maintain the hand tools, portable power tools, ancillary equipment and access equipment used when using access equipment up to six metres.

Unit Endorsements

This unit has the following endorsement requirements:

Two *of the following:*

- *Ladders*
- *Stepladders/Platform Steps*
- *Proprietary Towers*
- *Podiums*
- *Mobile Scaffold Towers*

Title:	Using Access Equipment up to Six Metres in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	27
Assessment hours	10

Title:	Inspecting and Testing Lightning Protection Systems in the Workplace
Unit Number:	R/651/2181

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when inspecting and testing lightning protection systems.	1.1	Interpret and extract relevant information from drawings, method statements, risk assessments, 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: • Lightning protection system layout drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, earth records, regulations and official guidance associated with lightning conductor work.
2	Know how to comply with relevant legislation and official guidance when inspecting and testing lightning protection systems.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement and storage of materials and by manual handling and mechanical lifting.
		2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company, test engineer 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 inspecting and testing lightning 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 inspecting and testing lightning protection systems.

3	*Cont.*	3.2	Demonstrate compliance with given information and relevant legislation when inspecting and testing lightning protection systems in relation to the following: • Safe use of access equipment. • Safe use, storage and handling of materials, tools and equipment. • Specific risks to health.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to inspecting and testing lightning protection systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to inspect and test lightning protection systems.	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: • Test instruments and equipment. • Measuring instruments. • Hand tools.
		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	*Cont.*	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 inspect and test lightning protection systems.
5	Minimise the risk of damage to the work and surrounding area when inspecting and testing lightning 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 workspace.
		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.
6	Complete the work within the allocated time when inspecting and testing lightning protection systems.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to inspect and test lightning protection systems to the required specification.	7.1	Demonstrate the following work skills when inspecting and testing lightning protection systems: • Inspecting, testing, measuring, calibrating, calculating, recording and reporting.
		7.2	Use, check and maintain hand tools and test instruments.

7	*Cont.*	7.3	Inspect the components of lightning protection systems in the following ways to given working instructions: • Visual. • Detailed.
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify the lightning protection systems (including surge protection device). • Confirm the means of access to carry out the work. • Survey and carry out visual inspection of the lightning protection system. • Identify the geology (nature of soil, special earthing arrangements). • Identify type and position of earth electrodes. • Use test instruments . • Carry out tests for continuity, resistances, impedance. • Measure earth resistance using the dead earth, fall of potential and continuity methods of tests. • Identify deterioration and damage. • Identify alterations, additions and repairs to the system. • Visually inspect fall protection equipment. • Ensure test instruments and measuring equipment is calibrated. • Work with, around and in close proximity to plant and machinery. • Use hand tools and test instruments. • Complete a detailed report including earth records and lightning protection system drawings.
		7.7	Describe the needs of other occupations and how to effectively communicate within a team when inspecting and testing lightning protection systems.
		7.8	Describe how to maintain the tools and equipment used when inspecting and testing lightning protection systems.

Title:	Inspecting and Testing Lightning Protection Systems in the Workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance with the CITB 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.** This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	140
Assessment hours	10

Title:	Operating Plant or Machinery for Non-Operational Activities in the Workplace
Unit Number:	F/616/4457

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when operating plant or machinery for non-operational activities.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, user manuals and manufacturers' information related to the plant or machinery operation and the activity to be completed.
		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: • Drawings, specifications, schedules, method statements, risk assessments, user manuals, manufacturers' information and current regulations governing the operation of plant and machinery.
2	Organise with others the sequence in which the work is to be carried out when operating plant or machinery for non-operational activities.	2.1	Organise the work in accordance with given information or instructions.
		2.2	Communicate with team members and other associated occupations about the plant or machinery operation and work to be carried out.
		2.3	Describe how to communicate ideas between team members and other associated occupations.
		2.4	Describe how to organise resources in conjunction with the progress of work.
3	Know how to comply with relevant, current legislation, special legal status documents, official guidance and organisational procedures when operating plant or machinery for non-operational activities.	3.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.

3	*Cont.*	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.
4	Maintain safe and healthy working practices when operating plant or machinery for non-operational activities.	4.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when operating plant or machinery for non-operational activities.
		4.2	Comply with information relating to specific risks to health when operating plant or machinery for non-operational activities.
		4.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to operating plant or machinery for non-operational activities and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		4.4	Describe how the relevant health and safety control equipment should be used in accordance with the given 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 hazards.
5	Request and select the required quantity and quality of resources to operate plant or machinery for non-operational activities.	5.1	Request and select resources associated with own work in relation to tools, ancillary equipment and/or accessories and consumables.
		5.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Consumables. • Hand tools, ancillary equipment and/or accessories.

5	*Cont.*	5.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.
		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.
6	Minimise the risk of damage to the work and surrounding area when operating plant or machinery for non-operational activities.	6.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
		6.2	Minimise 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.
		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 operating plant or machinery for non-operational activities.	7.1	Demonstrate completion of the work within the allocated time.
		7.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
8	Comply with the given contract information to operate plant or machinery for non-operational activities to the required specification.	8.1	Demonstrate the following work skills when operating plant or machinery for non-operational activities: • Preparing, setting up, configuring, starting, manoeuvring, running, supporting, parking, stopping and securing.

8	*Cont.*	8.2	Prepare, configure and operate plant or machinery for non-operational activities, (inspection, repair, maintenance, testing or travel), to given working instructions for two of the following: • Hand-operated power tools. • Static machinery. • Pedestrian controlled equipment. • Tracked plant. • Wheeled plant. • Rollers.
		8.3	Shut down and secure plant or machinery to given working instructions.
		8.4	Record and report findings using the appropriate method, in accordance with given working instructions.
		8.5	Safely use plant, machinery, hand tools, ancillary equipment and/or accessories.
		8.6	Safely store the plant, machinery, tools, equipment and/or accessories used when operating plant or machinery for non-operational activities.

8	*Cont.*	8.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify capabilities, characteristic and limitations of plant and machinery (ride on and remote control) including hand-operated power tools, static machinery, pedestrian controlled equipment, wheeled plant and tracked plant, rollers. • Consider the area available for the movements required (height restrictions, obstructions, overhead / underground obstructions, services, ventilation and point loading). • Complete pre-use, pre-start and pre-movement checks. • Prepare the plant and machine for operation. • Manoeuvre and position plant and machine. • Manoeuvre plant and machinery on slopes and inclines, uneven terrain, rough terrain, un-compacted ground, areas with restricted clearances, in inclement and extreme weather and areas where there is other vehicle and pedestrian traffic. • Operate plant and machinery within operational limitations. • Support plant and machinery for the activity (inspection, repair, maintenance, testing or travel). • Follow signals and instructions. • Shut down, park and secure plant and machine. • Immobilise plant and machinery. • Prepare plant and machinery for transportation. • Report findings and defects. • Use hand tools, ancillary equipment and accessories. • Work at height. • Use access equipment. • Complete and maintain records.
		8.8	Describe the needs of other occupations and how to effectively communicate within a team when operating plant or machinery for non-operational activities.

8	*Cont.*	8.9	Describe how to maintain the plant and machinery, hand tools, ancillary equipment and/or accessories used when operating plant or machinery for non-operational activities.

Unit Endorsements

This unit has the following endorsement requirements:

Two *of the following:*

- *Hand-operated power tools*
- *Static machinery*
- *Pedestrian controlled equipment*
- *Tracked plant*
- *Wheeled plant*
- *Rollers*

Title: Operating Plant or Machinery for Non-Operational Activities in the Workplace

Additional information about this unit

Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	33
Assessment hours	10

Title:	Diagnosing Faults in Plant or Machinery Systems or Components in the Workplace
Unit Number:	L/616/4462

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when diagnosing faults in plant or machinery systems or components.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations associated with diagnosing faults in plant or machinery systems or components.
2	Know how to comply with relevant legislation and official guidance when diagnosing faults in plant or machinery systems or components.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 diagnosing faults in plant or machinery systems or components.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when diagnosing faults in plant or machinery systems or components.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when diagnosing faults in plant or machinery systems or components.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to diagnosing faults in plant or machinery systems or components, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to diagnose faults in plant or machinery systems or components.	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: • Hand tools, portable powered tools, specialist diagnostic and testing tools and ancillary equipment.
		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	*Cont.*	4.6	Describe how to calculate quantity, length, area, volume and wastage associated with the method/procedure to diagnose faults in plant and machinery systems and components.
5	Minimise the risk of damage to the work and surrounding area when diagnosing faults in plant or machinery systems or components.	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.
6	Complete the work within the allocated time when diagnosing faults in plant or machinery systems or components.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to diagnose faults in plant or machinery systems or components to the required specification.	7.1	Demonstrate the following work skills when diagnosing faults in plant or machinery systems or components: • Selecting, investigating, interrogating, observing, listening, smelling, feeling, applying, identifying, collecting, analysing, interpreting, diagnosing and reporting.

7	*Cont.*	7.2	Identify and diagnose functional and operational faults in plant or machinery, systems or components to given working instructions for four of the following: • Power unit. • Transmission. • Steering. • Hydraulics. • Pump. • Brakes. • Pneumatics. • Electrical. • Electronic. • Operating ancillaries or attachments.
		7.3	Complete functional, operational and safety checks on plant or machinery systems or components, to given working instructions.
		7.4	Complete and maintain records when diagnosing faults in plant or machinery systems or components.
		7.5	Safely use and handle materials, hand tools, portable power tools, specialist diagnostic and testing tools and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when diagnosing faults in plant or machinery systems or components.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Collect and collate information from operators and users on symptoms and problems. • Consider information from existing records. • Analyse information to define the diagnosis start point. • Investigate and establish the most likely causes of the faults. • Observe the operational functions of plant and machinery components and systems. • Interpret sounds and smells. • Collect and analyse data from diagnostic aids; multi-meters, pressure and flow gauges, computers, test lamps, portable appliance testing equipment and other specialist tools and equipment. • Identify faults and determine the cause. • Determine and suggest repair requirements for faults in power units, transmissions, steering, hydraulic systems, pumps, brakes, pneumatic systems, electrical systems, electronic components and operating ancillaries and attachments. • Categorise faults by type (continual, intermittent or breakdown). • Apply situational awareness to select routine and non-routine fault diagnosis procedures. • Determine the implications of faults for other work and the operational safety of the plant or machinery. • Report, mark, tag and place notices on plant and machinery systems and components deemed hazardous. • Use hand tools, specialist diagnostic and testing tools, portable power tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when diagnosing faults in plant or machinery systems or components.

7	*Cont.*	7.9	Describe how to maintain the tools and equipment used when diagnosing faults in plant or machinery systems or components.

Unit Endorsements

This unit has the following endorsement requirements:

***Four** of the following:*

- *Power unit*
- *Transmission*
- *Steering*
- *Hydraulics*
- *Pump*
- *Brakes*
- *Pneumatics*
- *Electrics*
- *Electronics*
- *Operating ancillaries or attachments*

Title:	Diagnosing Faults in Plant or Machinery Systems or Components in the Workplace

Additional information about this unit

Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	80
Assessment hours	10

Title:	Determining and Completing Service to Maintain Plant or Machinery in The Workplace
Unit Number:	A/617/3724

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when determining and completing service to maintain plant or machinery.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, procedures, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals 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: • Drawings, specifications, schedules, procedures method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, manufacturers' information and current regulations associated with the service and maintenance of plant or machinery.
2	Know how to comply with relevant legislation and official guidance when determining and completing service to maintain plant or machinery.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 determining and completing service to maintain plant or machinery.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when determining and completing service to maintain plant or machinery.
		3.2	Comply with information relating to specific risks to health when determining and completing service to maintain plant or machinery.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to determining and completing service to maintain plant or machinery and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to determine and complete service to maintain plant or machinery.	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: • Fluids, fuels, lubricants and coolants. • Service items: filters, drive belts, brake components, bulbs, fuses, gaskets and seals. • Fastenings, nuts and bolts, pins and clips. • Hand tools, portable powered tools and equipment.
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.

4	*Cont.*	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 service and maintain plant and machinery.
5	Minimise the risk of damage to the work and surrounding area when determining and completing service to maintain plant or machinery.	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.
6	Complete the work within the allocated time when determining and completing service to maintain plant or machinery.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to determine and complete service to maintain plant or machinery to the required specification.	7.1	Demonstrate the following work skills when determining and completing service to maintain plant or machinery: • Replenishing, replacing, lubricating, unfastening, adjusting, aligning, assembling, positioning, fixing, fastening, securing and calibrating.

7	*Cont.*	7.2	Determine and complete service to maintain plant or machinery to given working instructions: • Replenish or replace fluids, fuels, lubricants, coolants. • Replace service items (filters, drive belts, brake components, bulbs, fuses, gaskets, seals). • Lubricate parts, components, linkages, cables. • Flush through cooling, lubrication and fluid systems. • Clean parts and components. • Secure fastenings (nuts, bolts, caps, plugs etc.). • Replace components. • Carry out adjustments to specification.
		7.3	Complete functional, operational and safety checks on plant or machinery, to given working instructions.
		7.4	Complete and maintain records when determining and completing service to maintain plant or machinery.
		7.5	Safely use and handle materials, hand tools, portable power tools and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when determining and completing service to maintain plant or machinery.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Refer to workshop and parts manuals, guides and technical service bulletins, electronic data and cross reference information. • Apply routine and non-routine maintenance service methods and procedures. • Identify requirements of periodic, scheduled and event based servicing methods. • Replenish or replace fluids, fuels, lubricants, coolants. • Replace service items (filters, drive belts, brake components, bulbs, fuses, gaskets, seals). • Lubricate parts, components, linkages, cables. • Flush through cooling, lubrication and fluid systems. • Clean parts and components. • Secure fastenings (nuts, bolts, caps, plugs etc.). • Replace components. • Make adjustments and adaptions to maintain operational effectiveness, efficiency and economy. • Work systems and components with high and low temperature surfaces. • Work on pressurised systems and components. • Check for defects by sight, touch, smell and sound. • Complete functional operational and safety checks. • Inform others in accordance with operational requirements. • Use hand tools, portable power tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when determining and completing service to maintain plant or machinery.
		7.9	Describe how to maintain the tools and equipment used when determining and completing service to maintain plant or machinery.

Title:	Determining and Completing Service to Maintain Plant or Machinery in The Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

Title:	Determining and Advising on the Viability of Repair or Replacement for Returning Plant or Machinery to Service in the Workplace
Unit Number:	J/617/3726

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when determining and advising on the viability of repair or replacement for returning plant or machinery to service.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, procedures, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, price lists 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: • Drawings, specifications, schedules, procedures, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, price lists, manufacturers' information and current regulations associated with construction plant or machinery maintenance.
2	Know how to comply with relevant legislation and official guidance when determining and advising on the viability of repair or replacement for returning plant or machinery to service.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 determining and advising	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and

	on the viability of repair or replacement for returning plant or machinery to service.		organisational requirements when determining and advising on the viability of repair or replacement for returning plant or machinery to service.
		3.2	Comply with information relating to specific risks to health when determining and advising on the viability of repair or replacement for returning plant or machinery to service.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to determining and advising on the viability of repair or replacement for returning plant or machinery to service, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to determine and advise on the viability of repair or replacement for returning plant or machinery to service.	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: • Hand tools, portable powered tools, specialist measuring and inspection instruments and ancillary equipment. • Fixings/fittings.

		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 determine the work required and the value of returning plant or machinery to service.
5	Minimise the risk of damage to the work and surrounding area when determining and advising on the viability of repair or replacement for returning plant or machinery to service.	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.
6	Complete the work within the allocated time when determining and advising on the viability of repair or replacement for returning plant or machinery to service.	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:

			• Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to determine and advise on the viability of repair or replacement for returning plant or machinery to service to the required specification.	7.1	Demonstrate the following work skills when determining and advising on the viability of repair or replacement for returning plant or machinery to service: • Inspecting, measuring, checking, collecting, collating, analysing, recording and reporting.
		7.2	Determine and advise on the viability of repair or replacement by inspecting and assessing plant or machinery to given working instructions, with consideration of five of the following: • Time. • Labour costs. • Cost of component, sub-assemblies and parts. • Cost of consumables. • Cost of overheads (transport, delivery, operational down time, power consumption, specialist tools and services). • Cost of replacement, like for like. • Cost of replacement, alternative item of plant or machinery. • Benefits of replacement. • Availability of resources and capability. • Report findings.
		7.3	Complete and maintain records when determining and advising on the viability of repair or replacement for returning plant or machinery to service.
		7.4	Safely use and handle materials, hand tools, portable power tools, specialist measuring and inspection instruments and ancillary equipment.
		7.5	Safely store the materials, tools and equipment used when determining and advising on the viability of repair or replacement for returning plant or machinery to service.
		7.6	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:

- Inspect plant or machinery to determine the work requirements.
- Estimate costs: time and labour, component, sub-assemblies, parts, consumables, overheads (transport, delivery, operational down time, power consumption, specialist tools and services).
- Identify the cost of like for like replacement.
- Identify different items of plant and machinery that will provide the same and improved operational service.
- Consider the benefits of replacement.
- Report findings.
- Use hand tools, portable power tools, specialist measuring and inspection instruments and ancillary equipment.
- Work at height.
- Use access equipment.
- Complete and maintain records.

7.7 Describe the needs of other occupations and how to effectively communicate within a team when determining and advising on the viability of repair or replacement for returning plant or machinery to service.

7.8 Describe how to maintain the tools and equipment used when determining and advising on the viability of repair or replacement for returning plant or machinery to service.

Unit Endorsements

This unit has the following endorsement requirements:

Five *of the following:*

- *Time*
- *Labour Costs*
- *Cost of Component*
- *Sub-Assemblies and Parts*
- *Cost of Consumables*
- *Cost of Overheads (Transport, Delivery, Operational Downtime, Power Consumption, Specialist Tools and Services)*
- *Cost of Replacement, Like for Like*
- *Cost of Replacement Alternative Item of Plant or Machinery*
- *Benefits of Replacement*
- *Availability of Resources and Capability*
- *Report Findings*

Title:	Determining and Advising on the Viability of Repair or Replacement for Returning Plant or Machinery to Service in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	93
Assessment hours	10

Title:	Inspecting Plant or Machinery for Operational Serviceability in the Workplace
Unit Number:	J/616/4461

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when inspecting plant or machinery for operational serviceability.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, manufacturers' information and current regulations associated with the inspection, examination and test of plant and machinery.
2	Know how to comply with relevant legislation and official guidance when inspecting plant or machinery for operational serviceability.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 inspecting plant or machinery for operational serviceability.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when inspecting plant or machinery for operational serviceability.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when inspecting plant or machinery for operational serviceability.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating inspecting plant or machinery for operational serviceability and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to inspect plant or machinery for operational serviceability.	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: • Consumables. • Inspection equipment. • Fixings. • Hand tools, portable powered tools, specialist tools and equipment.
		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	*Cont.*	4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to inspect plant and machinery for operational serviceability.
5	Minimise the risk of damage to the work and surrounding area when inspecting plant or machinery for operational serviceability.	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.
6	Complete the work within the allocated time when inspecting plant or machinery for operational serviceability.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to inspect plant or machinery for operational serviceability to the required specification.	7.1	Demonstrate the following work skills when inspecting plant or machinery for operational serviceability: • Inspecting, checking, recording and reporting.
		7.2	Complete the following inspections to given working instructions: • Routine checks, daily, weekly. • Periodic e.g. Monthly, annual, number, hours run. • Pre-use, delivery. • Post-use, return, off hire.

7	*Cont.*	7.3	Record and report results and findings of inspection using the appropriate method, in accordance with given working instructions.
		7.4	Safely use and handle materials, hand tools, specialist tools, portable power tools and ancillary equipment.
		7.5	Safely store the materials, tools and equipment used when inspecting plant or machinery for operational serviceability.
		7.6	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Identify inspection criteria. • Conduct inspections, daily/weekly, periodic (monthly, annual, number and hours run), pre-use and post-use and returned items. • Identify the difference between test, inspection and thorough examination. • Check the calibration of inspection tools and equipment. • Use specialist inspection equipment and test and diagnostic aids. • Identify deterioration, damage, excess wear and leaks. • Identify non-critical defects. • Identify critical defects. • Classify the serviceability of plant and machinery. • Consider plant and machinery life expectancy. • Report findings. • Use hand tools, portable power tools, specialist tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.7	Describe the needs of other occupations and how to effectively communicate within a team inspecting plant or machinery for operational serviceability.
		7.8	Describe how to maintain the tools and equipment used when inspecting plant or machinery for operational serviceability.

Title:	Inspecting Plant or Machinery for Operational Serviceability in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant Rule of Combination (RoC). Please refer to the RoC applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	87
Assessment hours	20

Title:	Installing, Repairing or Modifying Construction Resources by Heating, Welding, Brazing, Soldering and Thermal Cutting in the Workplace
Unit Number:	R/616/4463

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations associated with heating, welding, brazing, soldering and thermal cutting.
2	Know how to comply with relevant legislation and official guidance when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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.
		2.4	Describe the types of fire extinguishers available when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting and describe how and when they are used.

3	Maintain safe and healthy working practices when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.
		3.2	Comply with information relating to specific risks to health when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to install, repair or modify construction resources by heating, welding, brazing, soldering and thermal cutting.	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: • Jigs and fixings. • Consumables, gases, welding rods/wires. • Solders and fluxes. • Hand tools, portable powered tools, heating, welding and cutting equipment.

4	*Cont.*	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 heat, weld, braze, solder and thermal cut construction resources.
5	Minimise the risk of damage to the work and surrounding area when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.	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.
6	Complete the work within the allocated time when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to install, repair or modify construction resources by heating, welding, brazing, soldering and thermal cutting.	7.1	Demonstrate the following work skills when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting: • Measuring, marking out, fitting, heating, preparing, positioning, securing, joining, cutting and finishing.
		7.2	Heat components to given working instructions to achieve two of the following: • Free components (thermal shock). • Heat treat. • Reduce or remove corrosion. • Adjust (localised/spot). • Expansion and contraction fit.
		7.3	Join ferrous and non-ferrous metals to given working instructions using two of the following welding techniques: • Oxygen and fuel gas. • Manual metal arc. • Metal inert gas shielded or metal active gas shielded. • Tungsten inert gas shielded.
		7.4	Join metals to given working instructions by brazing using oxygen and fuel gas.
		7.5	Join metals by soldering to given working instructions using one of the following techniques: • Oxygen and fuel gas. • Iron and flux. • Electrical soldering iron.
		7.6	Create two of the following joints in metals: • Butt. • Lap. • Fillet. • Corner.

7	*Cont.*	7.7	Carry out joint work to given working instructions for two of the following positions: • Flat. • Vertical/horizontal. • Vertical. • Overhead.
		7.8	Cut materials by thermal cutting using one of the following: • Oxy fuel gas arc. • Plasma arc.
		7.9	Safely use and handle materials, hand tools, portable power tools, welding, heating and cutting equipment, ancillaries and gases.
		7.10	Safely move gases when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.
		7.11	Safely store the materials, tools, equipment and gases used when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.

7	*Cont.*	7.12	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Assess requirements for the repair or maintenance of metal by joining, heating and cutting. • Validate appropriate ways in which the work should be carried out. • Maintain the principles of minimum intervention and reversible alterations. • Protect surrounding components. • Identify metal properties. • Relate equilibrium diagrams to metal types/properties. • Purge and vent tanks and containers (gas free certification). • Work with hot materials and components. • Identify the advantages and disadvantages of welding processes; oxygen and fuel gas, manual metal arc, metal inert gas or metal active gas and tungsten inert gas shielded. • Apply principles and methods of preparing, joining, cutting and heating ferrous and non-ferrous metals (type of joint, material thickness, gaps, measuring, cleaning, position, tacks, pre-treatment, parameters, nozzle, voltage, amperes, wire speed, flow rates, restarts, post-treatment). • Join metals by welding, soldering and brazing. • Recognise joint types (butt, lap, fillet, corner). • Inspect joints by non-destructive testing (visual, x-ray and dye penetrates, ultraviolet and ultrasonic) and destructive testing (bend test, tensile, nick break and weld etch). • Finish and dress joints. • Cut materials using thermal cutting methods, oxy fuel gas, plasma arc. • Recognise the effects of applying heat to metal (distortion, heat effected zone). • Use and store fuel gases. • Recognise and determine when specialist skills and knowledge are required and report accordingly. • Use hand tools, portable power tools and equipment. • Work at height. • Use access equipment.

7	*Cont.*	7.13	Describe the needs of other occupations associated with heating, welding, brazing, soldering and thermal cutting and how to effectively communicate within a team when installing, repairing or modifying construction resources.
		7.14	Describe how to maintain the tools and equipment used when installing, repairing or modifying construction resources by heating, welding, brazing, soldering and thermal cutting.

Unit Endorsements

This unit has the following endorsement requirements:

*Heating: **Two** of the following:*

- *Free Components (Thermal Shock)*
- *Heat Treatment*
- *Corrosion Reduction/Removal*
- *Adjustment*
- *Expansion and Contraction Fit*

*Welding: **Two** of the following:*

- *Oxygen and Fuel Gas*
- *Manual Metal Arc*
- *MIG or MAG*
- *Tungsten Inert Gas*

*Soldering: **One** of the following:*

- *Oxygen and Fuel Gas*
- *Iron and Flux*
- *Electric Soldering Iron*

*Joints: **Two** of the following:*

- *Butt*
- *Lap*
- *Fillet*

*Corner Positions: **Two** of the following:*

- *Flat*
- *Vertical/Horizontal*
- *Vertical*
- *Overhead*

*Thermal Cutting: **One** of the following:*

- *Oxy Fuel Gas*
- *Plasma*

Title:	Installing, Repairing or Modifying Construction Resources by Heating, Welding, Brazing, Soldering and Thermal Cutting in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment hours	10

Title:	Producing One-Off Components to Restore or Maintain the Operational Functions of Plant or Machinery in the Workplace
Unit Number:	Y/616/4464

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when producing one-off components to restore or maintain the operational functions of plant or machinery.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals, parts manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, workshop manuals, parts manuals, manufacturers' information and current regulations governing and associated with plant and machinery maintenance.
2	Know how to comply with relevant legislation and official guidance when producing one-off components to restore or maintain the operational functions of plant or machinery.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 producing one-off components to restore or maintain the operational functions of plant or machinery	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when producing one-off components to restore or maintain the operational functions of plant or machinery.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when producing one-off components to restore or maintain the operational functions of plant or machinery.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to producing one-off components to restore or maintain the operational functions of plant or machinery and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to produce one-off components to restore or maintain the operational functions of plant or machinery.	4.1	Select resources associated with own work in relation to materials, components, fixings, fittings, tools, equipment and consumables.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Plant and machinery components. • Fixings and fittings. • Consumables. • Hand tools, portable power tools, powered tools and equipment.
		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	*Cont.*	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 produce one–off components to restore or maintain the operational function of plant and machinery.
5	Minimise the risk of damage to the work and surrounding area when producing one-off components to restore or maintain the operational functions of plant or machinery.	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.
6	Complete the work within the allocated time when producing one-off components to restore or maintain the operational functions of plant or machinery.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to produce one-off components to restore or maintain the operational functions of plant or machinery to the required specification.	7.1	Demonstrate the following work skills when produce one-off components to restore or maintain the operational functions of plant or machinery: • Measuring, marking out, disassembling, cutting, drilling, filing, shaping, joining, assembling, fitting, fixing and securing.

7	*Cont.*	7.2	Produce two one-off components by modification and/or replacement to given working instructions (e.g. for emergency or temporary repair (safety or operational), to counter operational time delays, when manufacturers component(s) are unavailable or obsolete, when it is cost effective or specialist tools).
		7.3	Complete functional, operational and safety checks on one-off components produced, to given working instructions.
		7.4	Complete and maintain records when producing one-off components to restore or maintain the operational functions of plant or machinery.
		7.5	Safely use and handle materials, hand tools, portable power tools, power tools and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when producing one-off components to restore or maintain the operational functions of plant or machinery.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Assess requirements for repair or maintenance. • Validate appropriate ways in which the work should be carried out. • Maintain the principles of minimum intervention and reversible alteration. • Determine the durability of the one off component, temporary or permanent. • Transfer dimensions and measurements (hole location and spacing). • Produce templates. • Work from patterns, representative work pieces and components. • Produce one-off components for emergency and temporary repair (safety and operational), to counter operational time delays, when it is cost effective and to make specialist tools. • Apply manufacturers' criteria for the production of specialist tools. • Determine the characteristics of materials and differing mating surfaces (cast iron, steel, alloy, plastic). • Select and modify existing components by shaping, cutting, drilling, filing, threading (internal and external), fabrication, welding and machining. • Select methods of securing one off components, bolts, screws, clamps, rivets, joints (thermal and adhesive) and specialist retaining devices (circlips, cotter pins, woodruff keys). • Recover and store reusable materials and components. • Use hand tools, portable power tools, power tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when producing one-off components to restore or maintain the operational functions of plant or machinery.

7	*Cont.*	7.9	Describe how to maintain the tools and equipment used when producing one-off components to restore or maintain the operational functions of plant or machinery.

Title:	Producing One-off Components to Restore or Maintain the Operational Functions of Plant or Machinery in the Workplace
Additional information about this unit	
Assessment Guidance	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.**
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

Title:	Installing Plant or Machinery for Operational Activities in the Workplace
Unit Number:	D/616/4465

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when installing plant or machinery for operational activities.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, installation manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, installation manuals manufacturers' information and current regulations associated with the installation of plant and machinery.
2	Know how to comply with relevant legislation and official guidance when installing plant or machinery for operational activities.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 installing plant or machinery for operational activities.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when installing plant or machinery for operational activities.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when installing plant or machinery for operational activities.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing plant or machinery for operational activities and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to install plant or machinery for operational activities.	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: • Lifting accessories. • Fastening, ties, anchors and fixings. • Consumables. • Measuring and levelling equipment. • Hand tools, portable powered tools and equipment.
		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	*Cont.*	4.6	Describe how to calculate quantity, length, volume, area and wastage associated with the method/procedure to install plant or machinery for operational activities.
5	Minimise the risk of damage to the work and surrounding area when installing plant or machinery for operational activities.	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.
6	Complete the work within the allocated time when installing plant or machinery for operational activities.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to install plant or machinery for operational activities to the required specification.	7.1	Demonstrate the following work skills when installing plant or machinery for operational activities: • Measuring, marking, aligning, laying, levelling, plumbing, adjusting, fitting, connecting, fixing, fastening and securing.

7	*Cont.*	7.2	Install plant or machinery to given working instructions for one of the following types: • Crane (mobile or ringer). • Tower crane. • Hoist (passenger, goods or building maintenance units). • Rig (demolition, piling or drilling). • Excavation or vacuum plant or machinery. • Batching, mixing or blending plants. • Crushing or screening plants. • Power generation equipment. • Pump. • Climate management machines. • Concrete placing boom.
		7.3	Complete functional, operational and safety checks on plant or machinery, to given working instructions.
		7.4	Complete and maintain records when installing plant or machinery for operational activities.
		7.5	Safely use and handle materials, hand tools, portable power tools, measuring instruments and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when installing plant or machinery for operational activities.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Install plant and machinery; mobile and ringer cranes, tower cranes, passenger and goods hoists, piling and drilling rigs, excavation plant or machinery, batching plants, crushing and screening plants, power generation equipment, pumps, climate management machines. • Assess suitability of conditions for installation requirements (site layout, location, availability of space, levels, prevailing weather conditions). • Operate and control lifting equipment and lifting aids. • Confirm the integrity of lifting accessories. • Consider the resources required for the installation of plant and machinery. • Confirm parts, components, attachments, accessories are available to complete the installation. • Secure plant and machinery parts and components for movement and lifting into position. • Align, attach and secure plant and machinery parts and components (tied in, pinned, clamped, bolted and screwed). • Fixing plant or machinery to load bearing structures. • Install and test anchors and ties. • Route, lay, connect and secure cables, pipes and hoses. • Connect power supplies. • Make adjustments to ensure optimum operational function. • Liaise with client, customer or their representatives. • Deal with damages and defects that can occur during installation, misaligned components, cracked casings and housings, leaks, scoring and marking of parts and components and breakages. • Confirm installation functionality meets quality expectations. • Complete functional operational and safety checks. • Use hand tools, portable power tools and equipment.

7	*Cont.*	7.7	• Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when installing plant or machinery for operational activities.
		7.9	Describe how to maintain the tools and equipment used when installing plant or machinery for operational activities.

Title:	Installing Plant or Machinery for Operational Activities in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	120
Assessment hours	10

Title:	Carrying Out Specific Tests on Plant or Machinery to Determine Operational Serviceability in the Workplace
Unit Number:	H/616/4466

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when carrying out specific tests on plant or machinery to determine operational serviceability.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, manufacturers' information and current regulations associated with the specific testing of plant or machinery.
2	Know how to comply with relevant legislation and official guidance when carrying out specific tests on plant or machinery to determine operational serviceability.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 specific tests on plant or machinery to determine operational serviceability.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when carrying out specific tests on plant or machinery to determine operational serviceability.
		3.2	Comply with information relating to specific risks to health when carrying out specific tests on plant or machinery to determine operational serviceability.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to carrying out specific tests on plant or machinery to determine operational serviceability and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to carry out specific tests on plant or machinery to determine operational serviceability.	4.1	Select resources associated with own work in relation to materials, components, fixings/fittings, tools, equipment and consumables.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Consumables. • Fixings and fittings. • Hand tools, portable power tools, specialist test equipment and ancillary equipment.
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.

4	*Cont.*	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, volume, area and wastage associated with the method/procedure to conduct specific tests on plant or machinery to determine operational serviceability.
5	Minimise the risk of damage to the work and surrounding area when carrying out specific tests on plant or machinery to determine operational serviceability.	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.
6	Complete the work within the allocated time when carrying out specific tests on plant or machinery to determine operational serviceability.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out specific tests on plant or machinery to determine operational serviceability to the required specification.	7.1	Demonstrate the following work skills when carrying out specific tests on plant or machinery to determine operational serviceability: • Measuring, testing and comparing.
		7.2	Complete specific tests to given working instructions on four of the following: • Electric systems. • Cooling systems. • Lubrication systems. • Emission control. • Hydraulic systems. • Hydrostatic drive. • Transmission systems. • Pneumatic systems. • Braking systems. • Vibration management. • Steering/suspension systems. • Generator output control. • Electronic management. • Powered access equipment. • Material handling equipment. • Water pumps. • Craneage. • Lifting equipment. • Load testing (cranes, hoists, MEWPs, MHE).
		7.3	Complete fests to given working instructions for the following: • Statutory requirement. • Compliance with policy and procedures. • Operational efficiency (speeds, flow rates, consumption, emissions, outputs).
		7.4	Complete functional, operational and safety checks on plant or machinery, to given working instructions.
		7.5	Complete and maintain records when carrying out specific tests on plant or machinery to determine operational serviceability.
		7.6	Safely use and handle materials, hand tools, portable power tools, specialist test equipment and ancillary equipment.

7	*Cont.*	7.7	Safely store the materials, tools and equipment used when carrying out specific tests on plant or machinery to determine operational serviceability.
		7.8	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Isolate plant, machinery and components. • Confirm calibration of test equipment. • Test electric systems, cooling systems, lubrication systems, hydraulic systems, hydrostatic drive, transmission systems, pneumatic systems, braking systems, vibration management, steering/suspension systems, generator output control, electronic management, powered access equipment, material handling equipment, water pumps, craneage, lifting equipment and load testing (cranes, hoists, MEWPs, MHE). • Conduct tests for statutory requirements, compliance with policy and procedures and operational efficiency (speeds, flow rates, consumption, emissions, output). • Collect measurements, readings, input and output data, working cycle times and tolerances. • Identify and assess the relevance of inconsistent data. • Make allowances for situation, environment, atmospheric conditions. • Operate pressure gauge, flow gauge, multi-meter, portable appliance testing equipment, computer aided diagnostic software, test lamp, compression measurement equipment and timing devices. • Analyse information collected; make comparisons with other plant and machinery, consider previous knowledge, apply sensory abilities (visual, audible, touch and smell) consult manufacturers' information and results of other tests. • Compare and confirm test outcome with given specifications. • Report findings. • Use hand tools, portable power tools and equipment. • Work at height. • Use access equipment.

7	*Cont.*	7.8	• Complete and maintain records.
		7.9	Describe the needs of other occupations and how to communicate effectively within a team when carrying out specific tests on plant or machinery to determine operational serviceability.
		7.10	Describe how to maintain the tools and equipment used when carrying out specific tests on plant or machinery to determine operational serviceability.

Unit Endorsements

This unit has the following endorsement requirements:

Four *of the following:*

- *Electric Systems*
- *Cooling Systems*
- *Lubrication Systems*
- *Emission Control*
- *Hydraulic Systems*
- *Hydrostatic Drive*
- *Transmission Systems*
- *Pneumatic Systems*
- *Braking Systems*
- *Vibration Management*
- *Steering/Suspension Systems*
- *Generator Output Control*
- *Electronic Management*
- *Powered Access Equipment*
- *Material Handling Equipment*
- *Water Pumps*
- *Craneage*
- *Lifting Equipment Load Testing (Cranes, Hoists, MEWPs, MHE9)*

Title:	Carrying Out Specific Tests on Plant or Machinery to Determine Operational Serviceability in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment hours	10

Title:	Configuring Plant or Machinery for Specific Operational Activities in the Workplace
Unit Number:	K/616/4467

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when configuring plant or machinery for specific operational activities.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals 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: • Drawings, specifications, schedules, method statements, risk assessments, workshop manuals, technical service bulletins, parts manuals, manufacturers' information and current regulations associated with the configuration of plant and machinery.
2	Know how to comply with relevant legislation and official guidance when configuring plant or machinery for specific operational activities.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 configuring plant or machinery for specific operational activities.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when configuring plant or machinery for specific operational activities.
		3.2	Comply with information relating to specific risks to health when configuring plant or machinery for specific operational activities.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to configuring plant or machinery for specific operational activities and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to configure plant or machinery for specific operational activities.	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: • Consumables. • Fixings and fittings. • Hand tools, portable powered tools and ancillary equipment.
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.

4	*Cont.*	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, volume, area and wastage associated with the method/procedure to configure plant or machinery for specific operational activities.
5	Minimise the risk of damage to the work and surrounding area when configuring plant or machinery for specific operational activities.	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.
6	Complete the work within the allocated time when configuring plant or machinery for specific operational activities.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to configure plant or machinery for specific operational activities to the required specification.	7.1	Demonstrate the following work skills when configuring plant or machinery for specific operational activities: • Measuring, marking, aligning, fitting, adjusting, fixing, fastening and securing.

7	*Cont.*	7.2	Configure plant or machinery for specific operational activities to given working instructions for two of the following: • Attachments. • Ancillaries. • Fire prevention (spark arrestors). • Structural support (anchors and ties). • Safety (restricted movement, passage or access, warning alarms, notices, lights or governors). • Contaminant reduction (noise, gases, fluids). • Carriage of ancillaries or additional equipment. • Rail and trackside. • Cutting equipment (blade or teeth angles and aspects). • Additions (publicity boards, notices, lights). • Machine control (laser measurement or guidance, global positioning system). • Productivity measurement (weigh load sensors, compaction sensors).
		7.3	Complete functional, operational and safety checks on plant or machinery, to given working instructions.
		7.4	Complete and maintain records when configuring plant or machinery for specific operational activities.
		7.5	Safely use materials, hand tools, portable power tools and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when configuring plant or machinery for specific operational activities.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Assess requirements for configuration. • Validate appropriate ways in which the work should be carried out. • Configure plant and machinery for the following: attachments, ancillaries, fire prevention (spark arrestors), structural support (anchors and ties), safety (restricted movement, passage or access, warning alarms, notices, lights or governors), contaminant reduction (noise, gases, fluids), carriage of ancillaries or additional equipment, rail and trackside work, cutting equipment (blade or teeth angles, coatings, dressings and aspects), additions (publicity boards, notices, lights), machine control (laser measurement and guidance, global positioning system), productivity measurement (weigh load sensors, compaction sensors). • Ensure the required parameters are achieved for the specific operational activity. • Liaise with operators, customers, clients and their representatives. • Use hand tools, portable power tools and ancillary equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when configuring plant or machinery for specific operational activities.
		7.9	Describe how to maintain the tools and equipment used when configuring plant or machinery for specific operational activities.

Unit Endorsements

This unit has the following endorsement requirements:

Two *of the following:*

- *Attachments*
- *Ancillaries*
- *Fire Prevention (Spark Arrestors)*
- *Structural Support (Anchors and Ties)*
- *Safety Measures (Restricted Movement Passage or Access, Warning Alarms, Notices, Lights or Governors)*
- *Contaminant Reduction (Noises, Gases, Fluids)*
- *Carriage of Ancillaries/Additional Equipment*
- *Rail and Trackside*
- *Cutting Equipment (Blade or Teeth Angles and Aspects)*
- *Additions (e.g. Publicity Boards, Notices, Lights)*
- *Machine Control (Laser Measurement or Guidance, Global Positioning System)*
- *Productivity Measurement (Weigh Load Sensors, Compaction Sensors)*

Title:	Configuring Plant or Machinery for Specific Operational Activities in the Workplace

Additional information about this unit

Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	70
Assessment hours	10

Title:	Handing Over Plant or Machinery to the Control of Others in the Workplace
Unit Number:	M/616/4468

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when handing over plant or machinery to the control of others.	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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations associated with the operation and use of plant and machinery.
2	Know how to comply with relevant legislation and official guidance when handing over plant or machinery to the control of others.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 handing over plant or machinery to the control of others.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when handing over plant or machinery to the control of others.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when handing over plant or machinery to the control of others.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to handing over plant or machinery to the control of others and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to hand over plant or machinery to the control of others.	4.1	Select resources associated with own work in relation to tools, equipment and consumables.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Consumables. • Literature, forms and documents. • Hand tools, portable powered tools and equipment.
		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	*Cont.*	4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to hand over plant and machinery to others.
5	Minimise the risk of damage to the work and surrounding area when handing over plant or machinery to the control of others.	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.
6	Complete the work within the allocated time when handing over plant or machinery to the control of others.	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: • Types of progress charts, timetables and estimated times • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to hand over plant or machinery to the control of others to the required specification.	7.1	Demonstrate the following work skills when handing over plant or machinery to the control of others: • Liaising, explaining, presenting, demonstrating, instructing, confirming, communicating and assessing.
		7.2	Explain and demonstrate the operation of plant or machinery to given working instructions in order to hand over control to others.
		7.3	Complete and maintain records when handing over plant or machinery to the control of others.

7	*Cont.*	7.4	Safely use and handle materials, hand tools, portable power tools and ancillary equipment.
		7.5	Safely store the materials, tools and equipment used when handing over plant or machinery to the control of others.
		7.6	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Liaise with customers, hirers, colleagues and end users. • Clearly define the moment of transferred responsibility. • Assess and confirm the condition of plant and machinery. • Confirm the suitability of the handover environment. • Prepare plant or machinery for explanation and demonstration. • Instruct users and operators in the operation, safety and emergency requirements. • Demonstrate the operation of plant and machinery. • Explain statutory requirements, inspection, maintenance, report of thorough examination, tests and certification. • Present and explain documentation: safety literature, operating instructions and operator forms. • Complete and register the handover: forms, checklists, confirmation, acceptance and receipt forms. • Explain the availability of technical support, guidance, information, advice, breakdown, call out, guarantees, warranties and replacement. • Communicate in a way that maintains goodwill. • Use hand tools, portable power tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.

7	*Cont.*	7.7	Describe the needs of other occupations and how to effectively communicate within a team when handing over plant or machinery to the control of others.
		7.8	Describe how to maintain the tools and equipment used when handing over plant or machinery to the control of others.

Title:	Handing Over Plant or Machinery to the Control of Others in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

Title:	Providing Technical Information, Advice and Guidance to Users of Plant or Machinery in the Workplace
Unit Number:	Y/615/1987

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Interpret the given information relating to the work and resources when providing technical information, advice and guidance to users of plant or machinery.	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: • Drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and current regulations associated with the operation and use of plant and machinery.
2	Know how to comply with relevant legislation and official guidance when providing technical information, advice and guidance to users of plant or machinery.	2.1	Describe their responsibilities regarding potential accidents and health hazards, whilst working: • In the workplace, below ground level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
		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 providing technical information, advice and guidance to users of plant or machinery.	3.1	Use health and safety control equipment and access equipment (if applicable) safely to carry out the activity in accordance with current legislation and organisational requirements when providing technical information, advice and guidance to users of plant or machinery.

3	*Cont.*	3.2	Comply with information relating to specific risks to health when providing technical information, advice and guidance to users of plant or machinery.
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to providing technical information, advice and guidance to users of plant or machinery, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: • Collective protective measures. • Personal protective equipment (PPE). • Respiratory protective equipment (RPE). • Local exhaust ventilation (LEV).
		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 hazards.
4	Select the required quantity and quality of resources for the methods of work to provide technical information, advice and guidance to users of plant or machinery.	4.1	Select resources associated with own work in relation to materials, components, tools, equipment and consumables.
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: • Consumables. • Literature, forms and documents. • Hand and/or portable powered tools and equipment.
		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	*Cont.*	4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to provide technical information, advice and guidance to users of plant and machinery.
5	Minimise the risk of damage to the work and surrounding area when providing technical information, advice and guidance to users of plant or machinery.	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.
6	Complete the work within the allocated time when providing technical information, advice and guidance to users of plant or machinery.	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: • Types of progress charts, timetables and estimated times. • Organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract information to provide technical information, advice and guidance to users of plant or machinery to the required specification.	7.1	Demonstrate the following work skills when providing technical information, advice and guidance to users of plant or machinery: • Interpreting, analysing, explaining, advising, confirming, answering, replacing, referring and informing.

7	*Cont.*	7.2	Provide technical information and advice to given working instructions for operators of plant or machinery for two of the following: • At breakdown. • On handover. • On request. • Under terms of contract, guarantee, warranty or hire agreement. • On recall. • Modification or alteration.
		7.3	Complete and maintain records when providing technical information, advice and guidance to users of plant or machinery.
		7.4	Safely use and handle materials, hand tools, portable power tools and ancillary equipment.
		7.6	Safely store the materials, tools and equipment used when providing technical information, advice and guidance to users of plant or machinery.

7	*Cont.*	7.7	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: • Provide information advice and guidance to users and operators: on handover, at breakdowns, on request, under terms of contract, guarantee, warranty or hire agreement and for manufacturers' recall. • Explain the information, advice and guidance available. • Use situational awareness to interpret the information and advice required. • Analyse the information available to provide answers. • Refer to other sources of information: colleagues, multimedia. • Source and supply replacement literature and documentation. • Inform on progress. • Provide information, advice and guidance in a manner that maintains goodwill. • Confirm the information, advice and guidance given is appropriate. • Use hand tools, portable power tools and equipment. • Work at height. • Use access equipment. • Complete and maintain records.
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when providing technical information, advice and guidance to users of plant or machinery.
		7.9	Describe how to maintain the tools and equipment used when providing technical information, advice and guidance to users of plant or machinery.

Unit Endorsements

This unit has the following endorsement requirements:

Two *of the following:*

- *Breakdown*
- *Handover*
- *Request*
- *Contract/Guarantee/Warranty/Hire Agreement*
- *Recall*
- *Modification/Alteration*

Title:	Providing Technical Information, Advice and Guidance to Users of Plant or Machinery in the Workplace
Additional information about this unit	
Assessment Guidance	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.** This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	63
Assessment hours	10

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