

Level 2 NVQ Diploma in Post Tensioning Operations (Construction)

Qualification Specification

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Introduction

The Level 2 NVQ Diploma in Post Tensioning Operations is aimed at those who are involved in assembling and installing post tensioning component. The qualification offers two pathways:

Pathway 1 Un-bonded Pathway 2 Bonded

The awarding organisation for this qualification is ProQual Awarding Body and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual). This qualification has been accredited onto the Regulated Qualifications Framework (RQF).

Qualification Profile

Qualification title ProQual Level 2 NVQ Diploma in Post Tensioning

Operations (Construction)

Ofqual qualification number 603/3280/2

Level 2

Total qualification time 1500 hours

Guided learning hours 582

Pass or fail

Assessment Internally assessed and verified by centre staff

External quality assurance by ProQual verifiers

Qualification start date 23/5/2018

Qualification end date 31/7/2026

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 Mandatory units for one of the Pathways.

Unit Endorsement information is included in the qualification structure information below.

Pathway 1 Unbonded

Mandatory Units					
Unit Reference Number	Unit Title	Unit Level	GLH		
J/616/7103	Installing, maintaining and removing work area protection and safety equipment in the workplace <u>Unit Endorsements:</u> The following endorsement required (i.e. own area of work): Post tensioning	2	55		
M/508/6537	M/508/6537 Conforming to general health, safety and welfare in the workplace				
T/508/6538	Conforming to productive working practices in the workplace	2	10		
Y/508/6533	Moving, handling and storing resources in the workplace	2	17		
R/617/0733	Installing and assembling post tensioning components in the workplace <u>Unit Endorsements:</u>				
D/617/0735	Carrying out stressing operations for post tensioning systems in the workplace <u>Unit Endorsements:</u> Two of the following endorsements required: Mono strand system Multi strand system Post tensioning bars	2	233		

Pathway 2 Bonded

Mandatory Units					
Unit Reference Number	Unit Title	Unit Level	GLH		
J/616/7103	Installing, maintaining and removing work area protection and safety equipment in the workplace	2	55		
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	7		
T/508/6538	Conforming to productive working practices in the workplace	2	10		
Y/508/6533	Moving, handling and storing resources in the workplace	2	17		
R/617/0733	Installing and assembling post tensioning components in the workplace <u>Unit Endorsements:</u> Two of the following endorsements required: Mono strand system Multi strand system Post tensioning bars	2	200		
D/617/0735	2	233			
K/617/0737	Grouting or waxing post tensioned tendons and/or bars in the workplace	2	233		

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 occupationally competent.

Assessors/Internal Quality Assurance

For each competence-based unit centres must be able to provide at least one assessor and one internal quality assurance verifier who are suitably qualified for the specific occupational area. Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or verifier qualifications, such as:

- Award in Assessing Competence in the Work Environment
- Award in Assessing Vocationally Related Achievement
- Certificate in Assessing Vocational Achievement
- Award in the Internal Quality Assurance of Assessment Processes and Practices
- Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practices

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

Candidates must demonstrate the level of knowledge described in the unit. Assessment is the process of measuring a candidate's knowledge and understanding against the standards set in the qualification.

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

Evidence can include: - assignments/projects/reports

worksheets

portfolio of evidence

record of oral and/or written questioning

candidate test papers

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 for this qualification can be found from page 9.

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 Assessment

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 qualifications will be awarded:

- A certificate listing the unit 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 requirements for a qualification. All certificates will be issued to the centre for successful candidates.

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.

Title:	Installing, maintaining and removing work area protection and safety equipment in the workplace
Unit Number:	J/616/7103

Unit Number:	J/616/7103	516/7103		
Learning outcomes The learner will be able to:		Assessment criteria The learner can:		
Interpret the given information relating to the work and resources when installing, maintaining and		1.1 Interpret and extract relevant information from drawings, plans, risk assessments, method statements, specifications, schedules and manufacturers' information.		
removing w protection a equipment.	and safety	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.		
		 Describe different types of information, their source and how they are interpreted in relation to: drawings, plans, risk assessments, method statements, specifications, schedules, site inspection reports, manufacturers' information, verbal and written instructions, current regulations and official guidance associated with protecting work areas. 		
2 Know how to comply with relevant legislation and official guidance when establishing work area protection and safety.		 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.		
working pra	and safety	3.1 Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing, maintaining and removing work area protection and safety equipment.		

	Installing, maintaining and removing work area protection and safety equipment in the workplace		
Learning outcomes The learner will be able to:	Assessment criteria The learner can:		
3 continued	 3.2 Demonstrate compliance with given information and relevant legislation when installing, maintaining and removing work area protection and safety equipment in relation to at least two of the following: safe use of access equipment safe use, storage and handling of materials, tools and equipment specific risks to health 		
	 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to installing, maintaining and removing work area protection and safety equipment, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: 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 quanti and quality of resources for the methods of work to install, maintain and remo	materials, components and fixings, and tools and equipment.		
work area protection and safety equipment.	 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: safety and security equipment (cones, tapes, fences, barriers, hoarding, doors, gates) protection and safety notices signs and lighting hand tools, power tools and equipment. 		
	4.3 Describe how to confirm that the resources and materials conform to the specification.		

Tit	le:	Installing, maintaining and removing work area protection and safety equipment in the workplace			
Learning outcomes The learner will be able to:			Assessment criteria The learner can:		
4	4 continued		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 and area associated with the method and procedure to install, maintain and remove work area protection and safety equipment.	
5	to the work and surrounding area when		5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.	
	installing, mai	k area	5.2	Maintain a clear and tidy work space.	
	protection and safety equipment.		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	the allocated time when	time when	6.1	Demonstrate completion of the work within the allocated time.	
	installing, maintaining and removing work area protection and safety equipment.		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.	

	Installing, maintaining and removing work area protection and safety equipment in the workplace		
Learning outcomes The learner will be able to:	Assessment criteria The learner can:		
7 Comply with the given contract information to install, maintain and rem work area protection and safety equipment to the	,		
required specification.	7.2 Use and maintain hand tools, power tools and ancillary equipment.		
	 7.3 Install, maintain and remove temporary protection and safety arrangements for the work area, to given working instructions, relating to protection equipment, barriers, fences and at least one of the following: protection and safety notices safety lighting. 		
	7.4 Report work undertaken		
	7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: - plan for the protection and the safety of the work and surrounding environment - conform to agreed specification - confirm the location of utility services and ensure they are protected - prepare and set out area protection equipment to required dimensions - install, check and maintain the protection and safety equipment - dismantle and remove protection and safety equipment - install safety notices - install lighting systems - monitor and check accuracy during progress and on completion of work - install, maintain and remove work area protection equipment in public areas - transport, load and off load work area protection equipment - recognise and determine when specialist skills and knowledge are required and report accordingly - use hand tools, power tools and equipment - work at height - use access equipment.		

Title:	Installing, maintaining and removing work area protection and safety equipment in the workplace		
Learning outcomes The learner will be able to:			earner can:
7 continued		7.6	Describe the needs of other occupations and how to communicate effectively within a team when installing, maintaining and removing work area protection and safety equipment in the workplace.
		7.7	Describe how to maintain the tools and equipment used when installing, maintaining and removing work area protection and safety equipment in the workplace.

Title:	Installing, maintaining and removing work area protection and safety equipment in the workplace				
Additional inform	ation 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.				
	ProQual Level 2 NVQ Diploma in Post Tensioning Operations (Construction)				
	The following endorsement required:				
	Own area of work – Post tensioning				
Sector Subject Are	eas 05.2 Building and Construction				
Availability for use	Shared unit				
Unit guided learni hours	ng 55				

Title:	Conforming to general health, safety and welfare in the workplace.
Unit Number:	M/508/6537

Unit Number: M/508/6537					
Learning outcomes The learner will be able to:			Assessment criteria The learner can:		
1	Comply with all health, safety an legislation requi	nd welfare	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	2 Recognise hazards associated with the workplace that have not been previously controlled and report them in accordance with organisational procedures.	ace that have usly controlled	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.	

Title:	Conforming to general health, safety and welfare in the workplace.		
Learning outcomes			ssment criteria arner can:
2 continued	The learner will be able to: 2 continued		List the current Health and Safety Executive top five health risks.
		2.5	State how changing circumstances within the workplace could cause hazards.
			State the methods used for reporting changed circumstances, hazards and incidents in the workplace.
policies and pr	policies and procedures to		Interpret and comply with given instructions to maintain safe systems of work and quality working practices.
contribute to hand welfare.	learth, Safety	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.
			Dispose of waste and/or consumable items in accordance with legislation.
		3.6	State the organisational policies and procedures for health, safety and welfare, in relation to: - 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.

Tit	le:	Conforming to general health, safety and welfare in the workplace.		
	Learning outcomes The learner will be able to:			sment criteria arner can:
4 Work responsibly to contribute to workplace health, safety and welfare		4.1	Demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare.	
	whilst carrying out work in the relevant occupational area.	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	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.
			5.2	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 inform	ation about this	unit	
Assessment Guida	ance	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 Are	ea	05.2 Building and Construction	
Availability for use	9	Shared unit	
Unit guided learning hours		7	

Title:	Conforming to productive working practices in the workplace			
Unit Number:	T/508/6538			

Unit Number: T/508/6538			
Learning outcome			sment criteria arner can:
1 Communicate with others to establish productive work practices.		1.1	Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively.
		1.2	Describe the different methods of communicating with line management, colleagues and customers.
		1.3	Describe how to use different methods of communication to ensure that the work carried out is productive.
2 Follow organis procedures to	plan the	2.1	Interpret relevant information from organisational procedures in order to plan the sequence of work.
sequence of v	VOTK.	2.2	Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively.
		2.3	Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: - using resources for own and other's work requirements - allocating appropriate work to employees - organising the work sequence - reducing carbon emissions.
		2.4	Describe how to contribute to zero/low carbon work outcomes within the built environment.
3 Maintain relevant records in accordance with the		3.1	Complete relevant documentation according to the occupation as required by the organisation.
organisationa	i procedures.	3.2	Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: – job cards – worksheets – material/resource lists – time sheets.
		3.3	Explain the reasons for ensuring documentation is completed clearly and within given timescales.
4 Maintain good relationships conforming to working pract	when productive	4.1	Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships.

Title:	Conforming to productive working practices in the workplace		
Learning outcomes The learner will be able to:		1 100 000	sment criteria urner can:
		4.2	Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others.
		4.3	Describe how to maintain good working relationships, in relation to: - individuals - customer and operative - operative and line management - own and other occupations.
		4.4	Describe why it is important to work effectively with line management, colleagues and customers.
		4.5	Describe how working relationships could have an effect on productive working.
		4.6	Describe how to apply principles of equality and diversity when communicating and working with others.

Title:	Conforming to Productive Working Practices in the Workplace			
Additional inform	Additional information about this unit			
Assessment Guida	ance	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 Are	eas	05.2 Building and Construction		
Availability for use		Shared unit		
Unit guided learning hours		10		

Title:	Moving, handling and storing resources in the workplace			
Unit Number	Y/508/6533			

Unit Number Y/508/6533				
Learning outcomes The learner will be able to:			sment criteria arner can:	
1 Comply with given information when moving handling and/or storing	hen moving,	1.1	Interpret the given information relating to moving, handling and/or storing resources, relevant to the given occupation.	
	resources.		1.2	Interpret the given information relating to the use and storage of lifting aids and equipment.
			1.3	Describe the different types of technical, product and regulatory information, their source and how they are interpreted.
			1.4	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
			1.5	Describe how to obtain information relating to using and storing lifting aids and equipment.
2	2 Know how to comply with relevant legislation and official guidance when moving, handling and/or storing resources.		2.1	Describe their responsibilities under current legislation and official guidance whilst working: — in the workplace, in confined spaces, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
			2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
			2.3	Explain what the accident reporting procedures are and who is responsible for making the reports.
			2.4	State the appropriate types of fire extinguishers relevant to the work.
			2.5	Describe how and when the different types of fire extinguishers, relevant to the given occupation, are used in accordance with legislation and official guidance.
3	Maintain safe practices whe handling and/resources.	n moving,	3.1	Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when moving, handling and/or storing resources.
			3.2	Use lifting aids safely as appropriate to the work.

Title: Moving, handl		ling and storing resources in the workplace
Learning outcomes		Assessment criteria
The learner will be a	able to:	The learner can:
3 continued		3.3 Protect the environment in accordance with safe working practices as appropriate to the work.
		 3.4 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to moving, handling and/or storing resources, and the 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).
		3.5 Describe how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.
		3.6 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
4 Select the requ	resources for	4.1 Select the relevant resources to be moved, handled and/or stored, associated with own work.
the methods of wo handle and/or stor occupational resou	store	 4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the occupational resources in relation to: lifting and handling aids container(s) fixing, holding and securing systems.
		4.3 Describe how the resources should be handled and how any problems associated with the resources are reported.
		4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
		4.5 Describe any potential hazards associated with the resources and methods of work.
occupational re surrounding er	nvironment	5.1 Protect occupational resources and their surrounding area from damage in accordance with safe working practices and organisational procedures.
when moving, and/or storing		5.2 Dispose of waste and packaging in accordance with legislation.

Title:	Moving, handling and storing resources in the workplace	
Learning outcomes The learner will be able to:		Assessment criteria The learner can:
5 continued	d	5.3 Maintain a clean work space when moving, handling or storing resources.
		5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
		5.5 Explain why the disposal of waste should be carried safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
6 Complete the	time when	6.1 Demonstrate completion of the work within the allocated time.
moving, handling and/or storing resources.		6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to: - progress charts, timetables and estimated times - organisational procedures for reporting circumstances which will affect the work programme.
7 Comply with occupational information thandle and/c	resource o move, or store	 7.1 Demonstrate the following work skills when moving, handling and/or storing occupational resources: moving, positioning, storing, securing and/or using lifting aids and kinetic lifting techniques.
resources to the required guidance.	tne requirea	 7.2 Move, handle and/or store occupational resources to meet product information and organisational requirements relating to three of the following: sheet material loose material bagged or wrapped material fragile material tools and equipment components liquids.
		7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them when moving, handling and/or storing occupational resources.
		7.4 Describe the needs of other occupations when moving, handling and/or storing resources.

Title:	Moving, handling and storing resources in the workplace		
Additional inform	nation about this	unit	
Assessment Guida	ance	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 Are	eas	05.2 Building and Construction	
Availability for use	9	Shared unit	
Unit guided learning hours		17	

Title:	Installing and	assem	bling post tensioning components in the workplace
Unit Number:	R/617/0733		
Learning outcomes The learner will be able to:			ssment criteria earner can:
Interpret the given information relating to the		1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.
work and reso installing and post tensionii	assembling	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
components.	ig	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, schedules, manufacturers' information and associated.
relevant legis official guidar installing and	relevant legislation and official guidance when installing and assembling post tensioning		Describe their responsibilities under current legislation and official guidance 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	State what the accident reporting procedures are and who is responsible for making reports.
		2.4	State the types of fire extinguishers available when installing and assembling post tensioning components and describe how and when they are used.
practices whe	3 Maintain safe working practices when installing and assembling post tensioning components.		Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when installing and assembling post tensioning components.
			Explain why, when and how personal protective equipment (PPE) should be used, relating to installing and assembling post tensioning components, and the types, purpose and limitations of each type.
		3.3	State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
			Demonstrate the safe use of a fire extinguisher relevant to a typical fire associated with installing and assembling post tensioning components as relevant to the operations.

Titl	Title: Installing and as		assemb	oling post tensioning components in the workplace		
Lea	Learning outcomes		Asses	sment criteria		
The	The learner will be able to:		The le	The learner can:		
4 Select the required quantity and quality of resources for the methods of work to install and assemble post tensioning components.		4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: - setting out equipment - ducts, chairs, couplers, vents, strands and post tensioning bars - void formers, anchorages, wedges and nuts/washers - testing equipment - specialist post tensioning equipment - hand and/or powered tools and equipment.			
			4.2	Select resources associated with own work in relation to materials, components, fixings, 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, length, area and wastage associated with the method/procedure to install and assemble post tensioning components.		
5	Minimise the r	_	5.1	Protect the work and its surrounding area from damage.		
	surrounding ar	ea when	5.2	Minimise damage and maintain a clean work space.		
	installing and assembling post tensioning components.	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	6 Complete the work within the allocated time when installing and assembling post tensioning components.		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.		

Title:	Installing and	assemb	ling post tensioning components in the workplace
Learning outcomes The learner will be able to:		Assessment criteria The learner can:	
7 Comply with the given contract information to install and assemble post tensioning components to the required specification.		7.1	Demonstrate the following work skills when installing and assembling post tensioning components: – measuring, marking out, fitting, finishing, positioning and securing.
		7.2	Install, assemble and prepare for post tensioning operations to given working instructions for two of the following: — multi-strand systems — mono strand systems — post tensioning bars.
		7.3	Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: - set out position of tendons and/or post tensioning bars from drawings - drill holes for anchorages at the live end - locate, secure and fix anchorages to void former - install ducting system and couplers - install strands - install post tensioning bars - install dead-end anchorages - profile duct system and fix - seal ducts and position vents - carry out pressure test - locate strands and/or post tensioning bars and secure - confirm that tendon is complete - record and communicate data - use specialist post tensioning equipment - use hand tools, power tools and equipment - work at height - use access equipment as required.
			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 installing and assembling post tensioning components.
		7.6	Describe how to maintain the tools and equipment used when installing and assembling post tensioning components.

Title:	Installing and assembling post tensioning components in the workplace				
Additional information about this unit					
Assessment Guidance	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. 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 except for assessment criteria 3.4. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. ProQual Level 2 NVQ Diploma in Post Tensioning Operations (Construction):				
	Two of the following endorsements required: Mono strand system Multi strand system Post tensioning bars				
Sector Subject Are	5.2 Building and Construction				
Availability for use	Shared unit				
Unit guided learning hours	200				

Title:	Carrying out s	tressin	g operations for post tensioning systems in the workplace	
Unit Number: D/617/0735				
Learning outcomes The learner will be able to:		Assessment criteria The learner can:		
Interpret the given information relating to the work and resources when		1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.	
carrying out s operations fo	r post	1.2	Comply with information and/or instructions derived from risk assessments and method statements.	
tensioning sys	stems.	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, schedules, manufacturers' information and associated regulations.	
relevant legis official guidar carrying out s operations fo	2 Know how to comply with relevant legislation and official guidance when carrying out stressing operations for post tensioning systems.		Describe their responsibilities under current legislation and official guidance 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.	
0,7			Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.	
			State what the accident reporting procedures are and who is responsible for making reports.	
			State the types of fire extinguishers available when carrying out stressing operations for post tensioning systems and describe how and when they are used.	
practices whe stressing open	3 Maintain safe working practices when carrying out stressing operations for post tensioning systems.		Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when carrying out stressing operations for post tensioning systems.	
P			Explain why, when and how personal protective equipment (PPE) should be used, relating to carrying out stressing operations for post tensioning systems, and the types, purpose and limitations of each type.	
			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.	
		3.4	Demonstrate the safe use of a fire extinguisher relevant to a typical fire associated with carrying out stressing_operations for post tensioning systems as relevant to the operations.	

Tit	le:	Carrying Out Stressing O Workplace		g Operations for Post Tensioning Systems in the
	Learning outcomes The learner will be able to:			ssment criteria arner can:
4 Select the required quantity and quality of resources for the methods of work to carry out stressing operations for post tensioning systems.		4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: - specified anchor assembly, wedges, nuts, washers and caps - stressing equipment, pumps, pressure gauges, hoses - calibration certificates - specialist stressing equipment - hand and/or powered tools and equipment.	
			4.2	Select resources associated with own work in relation to materials, components, fixings, 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, length, area and wastage associated with the method/procedure to carry out stressing operations for post tensioning systems.
5	5 Minimise the risk of damage to the work and		5.1	Protect the work and its surrounding area from damage.
	surrounding a	rea when	5.2	Minimise damage and maintain a clean work space.
	carrying out stressing operations for post tensioning systems.	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 the allocated	time when	6.1	Demonstrate completion of the work within the allocated time.
	carrying out stressing operations for post tensioning systems.	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.	

Title:	Carrying Out Stressing Operations for Post Tensioning Systems in the Workplace	
Learning outcomes The learner will be able to:		Assessment criteria The learner can:
7 Comply with the given contract information to carry out stressing operations for post tensioning systems to the required specification.		 7.1 Demonstrate the following work skills when carrying out stressing operations for post tensioning systems: measuring, stressing, locking off and recording 7.2 Carry out stressing operations to two of the following to given working instructions: mono tendons multi strand tendons post tensioning bars.
		 7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: remove void formers install anchor blocks, wedges and/or post tensioning bar nuts and washers confirm measuring regime confirm specified concrete strength has been achieved stress tendons and/or post tensioning bars to required load carry out second stage stressing operation, if specified measure and record extensions cut and seal tendons lock and cap post tensioning bars record and communicate data use specialist stressing equipment use hand tools, power tools and equipment work at height use access equipment as required.
		7.4 Safely use and store materials, hand tools, portable power tools, ancillary and stressing equipment.
		7.5 State the needs of other occupations and how to communicate within a team when carrying out stressing operations for post tensioning systems.
		7.6 Describe how to maintain the tools and equipment used when carrying out stressing operations for post tensioning systems.

Title:	Carrying Out Stressing Operations for Post Tensioning Systems in the Workplace		
Additional inform	ation	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 except for assessment criteria 3.4.	
		This unit must be assessed against the endorsements detailed within the relevant NVQ Structure.	
		ProQual Level 2 NVQW Diploma in Post Tensioning Operations (Construction):	
		Two of the following endorsements required:	
		Mono strand system	
		Multi strand system	
		Post tensioning bars	
Sector Subject Area		05.2 Building and Construction	
Availability for use	9	Shared unit	
Unit guided learni hours	ng	233	

Title: Grouting or v		axing p	ost tensioned tendons and/or bars in the workplace	
Unit Number:	Unit Number: K/617/0737			
Learning outcomes The learner will be able to:		Assessment criteria The learner can:		
Interpret the given information relating to the		1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.	
work and reso grouting or w tensioned ten	axing post	1.2	Comply with information and/or instructions derived from risk assessments and method statements.	
bars.	and/or	1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.	
			Describe different types of information, their source and how they are interpreted in relation to: - drawings, specifications, schedules, manufacturers' information and associated regulations.	
2 Know how to comply with relevant legislation and official guidance when grouting or waxing post tensioned tendons and/or bars.		2.1	Describe their responsibilities under current legislation and official guidance 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.	
			Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.	
			State what the accident reporting procedures are and who is responsible for making reports.	
			State the types of fire extinguishers available when grouting or waxing post tensioned tendons and/or bars and describe how and when they are used.	
practices whe waxing post to	3 Maintain safe working practices when grouting or waxing post tensioned tendons and/or bars.		Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when grouting or waxing post tensioned tendons and/or bars.	
			Explain why, when and how personal protective equipment (PPE) should be used, relating to grouting or waxing post tensioned tendons and/or bars, and the types, purpose and limitations of each type.	
			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.	
			Demonstrate the safe use of a fire extinguisher relevant to a typical fire associated with grouting or waxing post tensioned tendons and/or bars as relevant to the operations.	

Title: Grouting or wa		axing p	ost tensioned tendons and/or bars in the workplace	
	arning outcome			sment criteria arner can:
4 Select the required quantity and quality of resources for the methods of work to grout or wax post tensioned tendons and/or bars.		4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: - vents and connectors - mixers, grout or wax - grout, grease or wax pump and gauges - testing equipment - pre-bagged grout - waxes and grease - hand and/or powered tools and equipment.	
			4.2	Select resources associated with own work in relation to materials, components, fixings, 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, length, area and wastage associated with the method/procedure to grout or wax post tensioned tendons and/or bars.
5	Minimise the i	_	5.1	Protect the work and its surrounding area from damage.
	surrounding a	rea when	5.2	Minimise damage and maintain a clean work space.
	grouting or waxing post tensioned tendons and/or bars.	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	6 Complete the work within the allocated time when	ime when	6.1	Demonstrate completion of the work within the allocated time.
	grouting or waxing post tensioned tendons and/or bars.		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.

Title: Grouting o	waxing post tensioned tendons and/or bars in the workplace
Learning outcomes The learner will be able to:	Assessment criteria The learner can:
7 Comply with the given contract information to grout or wax post tension tendons and/or bars to th	
required specification.	7.2 Test duct integrity and grout or wax post tensioned tendons and/or bars and/or post tensioned bars to given working instructions.
	7.3 Seal and protect the post tensioned tendons and/or post tensioned bars to given working instructions.
	7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: - blow out ducts - prepare equipment - check for leakage/blockages; rectify if necessary - mix pre-bagged grout or prepare waxes or grease - carry out tests and/or facilitate tests by others - pump grout, waxes or grease to tendons - bleed and seal vents - remove vents and seal at both ends after specified curing period, if applicable - top up if necessary - clean and clear work area - complete records - use grouting, greasing or waxing testing equipment - use hand tools, power tools and equipment - work at height - use access equipment as required.
	7.5 Safely use and store materials, hand tools, portable power tools, ancillary equipment and grouting/waxing equipment.
	7.6 State the needs of other occupations and how to communicate within a team when grouting or waxing post tensioned tendons and/or bars.
	7.7 Describe how to maintain the tools and equipment used when grouting or waxing post tensioned tendons and/or bars.

Title:	Grouting or waxing post tensioned tendons and/or bars in the workplace			
Additional inform	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 except for assessment criteria 3.4.		
Unit review date		5.2 Building and Construction		
Credit value		Shared unit		
Unit guided learning hours		233		



www.proqualab.com

enquiries@proqualab.com

Tel: +44 (0)1430 423822