



## **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	<b>ProQual Level 2 NVQ Diploma in Post Tensioning Operations (Construction)</b>
Ofqual qualification number	603/3280/2
Level	Level 2
Total qualification time	1500 hours
Guided learning hours	582
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	23/5/2018
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 Mandatory units for one of the Pathways.

### 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	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	2	200
D/617/0735	Carrying out stressing operations for post tensioning systems in the workplace	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	2	200
D/617/0735	Carrying out stressing operations for post tensioning systems in the workplace	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 8.*

## 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.

<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Unit Number:</b>	J/616/7103	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
1 Interpret the given information relating to the work and resources when installing, maintaining and removing work area protection and safety equipment.	1.1	Interpret and extract relevant information from drawings, plans, risk assessments, method statements, specifications, schedules and manufacturers' information.
	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
	1.3	Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>– drawings, plans, risk assessments, method statements, specifications, schedules, site inspection reports, manufacturers' information, verbal and written instructions, current regulations and official guidance associated with protecting work areas.</li> </ul>
2 Know how to comply with relevant legislation and official guidance when establishing work area protection and safety.	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> <li>– in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement and storage of materials by manual handling and mechanical lifting.</li> </ul>
	2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
	2.3	Explain what the accident reporting procedures are and who is responsible for making reports.
3 Maintain safe and healthy working practices when installing, maintaining and removing work area protection and safety equipment.	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing, maintaining and removing work area protection and safety equipment.



<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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: <ul style="list-style-type: none"> <li>– safe use of access equipment</li> <li>– safe use, storage and handling of materials, tools and equipment</li> <li>– specific risks to health</li> </ul>	
	3.3 Explain why and when health and safety control equipment, identified by the principles of prevention, should be used, relating to installing, maintaining and removing work area protection and safety equipment, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE)</li> <li>– local exhaust ventilation (LEV).</li> </ul>	
	3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions.	
	3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities.	
4 Select the required quantity and quality of resources for the methods of work to install, maintain and remove work area protection and safety equipment.	4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.	
	4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>– safety and security equipment (cones, tapes, fences, barriers, hoarding, doors, gates)</li> <li>– protection and safety notices</li> <li>– signs and lighting</li> <li>– hand tools, power tools and equipment.</li> </ul>	
	4.3 Describe how to confirm that the resources and materials conform to the specification.	

<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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 Minimise the risk of damage to the work and surrounding area when installing, maintaining and removing work area protection and safety equipment.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2	Maintain a clear and tidy work space.
	5.3	Dispose of waste in accordance with current legislation.
	5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
	5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.
6 Complete the work within the allocated time when installing, maintaining and removing work area protection and safety equipment.	6.1	Demonstrate completion of the work within the allocated time.
	6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>– types of productivity targets and time scales</li> <li>– how times are estimated</li> <li>– organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>

<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
7 Comply with the given contract information to install, maintain and remove work area protection and safety equipment to the required specification.	7.1 Demonstrate the following work skills when installing, maintaining and removing work area protection and safety equipment: – measuring, setting out, positioning, assembling, constructing, securing, dismantling and removing.	
	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.	

<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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.

<b>Title:</b>	Installing, maintaining and removing work area protection and safety equipment in the workplace	
<b>Additional information about this unit</b>		
Assessment Guidance	<p>This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>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.</p> <p>Workplace evidence of skills cannot be simulated.</p> <p>This unit must be assessed against the endorsements detailed within the relevant NVQ Structure.</p> <p><u>ProQual Level 2 NVQ Diploma in Post Tensioning Operations (Construction)</u></p> <p>The following endorsement required: Own area of work – Post tensioning</p>	
Sector Subject Areas	05.2 Building and Construction	
Availability for use	Shared unit	
Unit guided learning hours	55	

<b>Title:</b>	Conforming to general health, safety and welfare in the workplace.	
<b>Unit Number:</b>	M/508/6537	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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: <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE)</li> <li>– local exhaust ventilation (LEV).</li> </ul>
	1.5	State how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.
	1.6	State which types of health, safety and welfare legislation, notices and warning signs are relevant to the occupational area and associated equipment.
	1.7	State why health, safety and welfare legislation, notices and warning signs are relevant to the occupational area.
	1.8	State how to comply with control measures that have been identified by risk assessments and safe systems of work.
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.

<b>Title:</b>	Conforming to general health, safety and welfare in the workplace.	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
2 continued	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.
	3.6	State the organisational policies and procedures for health, safety and welfare, in relation to: <ul style="list-style-type: none"> <li>– dealing with accidents and emergencies associated with the work and environment</li> <li>– methods of receiving or sourcing information</li> <li>– reporting</li> <li>– stopping work</li> <li>– evacuation</li> <li>– fire risks and safe exit procedures</li> <li>– consultation and feedback.</li> </ul>
	3.7	State the appropriate types of fire extinguishers relevant to the work.
	3.8	State how and when the different types of fire extinguishers are used in accordance with legislation and official guidance.

<b>Title:</b>	Conforming to general health, safety and welfare in the workplace.	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
4 Work responsibly to contribute to workplace health, safety and welfare whilst carrying out work in the relevant occupational area.	4.1	Demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare.
	4.2	State how personal behaviour demonstrates responsibility for general workplace health, safety and welfare, in relation to: <ul style="list-style-type: none"> <li>– recognising when to stop work in the face of serious and imminent danger to self and/or others</li> <li>– contributing to discussions and providing feedback</li> <li>– reporting changed circumstances and incidents in the workplace</li> <li>– complying with the environmental requirements of the workplace.</li> </ul>
	4.3	Give examples of how the behaviour and actions of individuals could affect others within the workplace.
5 Comply with and support all organisational security arrangements and approved procedures.	5.1	Provide appropriate support for security arrangements in accordance with approved procedures: <ul style="list-style-type: none"> <li>– during the working day</li> <li>– on completion of the day's work</li> <li>– for unauthorised personnel (other operatives and the general public)</li> <li>– for theft.</li> </ul>
	5.2	State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.

<b>Title:</b>	Conforming to general health, safety and welfare in the workplace.
<b>Additional information about this unit</b>	
Assessment Guidance	<p>This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>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.</p> <p>Workplace evidence of skills cannot be simulated.</p>
Sector Subject Area	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	7



<b>Title:</b>	Conforming to productive working practices in the workplace	
<b>Unit Number:</b>	T/508/6538	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
1 Communicate with others to establish productive work practices.	1.1	Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively.
	1.2	Describe the different methods of communicating with line management, colleagues and customers.
	1.3	Describe how to use different methods of communication to ensure that the work carried out is productive.
2 Follow organisational procedures to plan the sequence of work.	2.1	Interpret relevant information from organisational procedures in order to plan the sequence of work.
	2.2	Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively.
	2.3	Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: <ul style="list-style-type: none"> <li>– using resources for own and other’s work requirements</li> <li>– allocating appropriate work to employees</li> <li>– organising the work sequence</li> <li>– reducing carbon emissions.</li> </ul>
	2.4	Describe how to contribute to zero/low carbon work outcomes within the built environment.
3 Maintain relevant records in accordance with the organisational procedures.	3.1	Complete relevant documentation according to the occupation as required by the organisation.
	3.2	Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: <ul style="list-style-type: none"> <li>– job cards</li> <li>– worksheets</li> <li>– material/resource lists</li> <li>– time sheets.</li> </ul>
	3.3	Explain the reasons for ensuring documentation is completed clearly and within given timescales.
4 Maintain good working relationships when conforming to productive working practices.	4.1	Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships.

<b>Title:</b>	Conforming to productive working practices in the workplace
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
	4.2 Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others.
	4.3 Describe how to maintain good working relationships, in relation to: <ul style="list-style-type: none"> <li>– individuals</li> <li>– customer and operative</li> <li>– operative and line management</li> <li>– own and other occupations.</li> </ul>
	4.4 Describe why it is important to work effectively with line management, colleagues and customers.
	4.5 Describe how working relationships could have an effect on productive working.
	4.6 Describe how to apply principles of equality and diversity when communicating and working with others.

<b>Title:</b>	Conforming to Productive Working Practices in the Workplace
<b>Additional information about this unit</b>	
Assessment Guidance	<p>This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>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.</p> <p>Workplace evidence of skills cannot be simulated.</p>
Sector Subject Areas	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	10

<b>Title:</b>	Moving, handling and storing resources in the workplace
<b>Unit Number</b>	Y/508/6533
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
1 Comply with given information when moving, handling and/or storing resources.	1.1 Interpret the given information relating to moving, handling and/or storing resources, relevant to the given occupation.
	1.2 Interpret the given information relating to the use and storage of lifting aids and equipment.
	1.3 Describe the different types of technical, product and regulatory information, their source and how they are interpreted.
	1.4 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.5 Describe how to obtain information relating to using and storing lifting aids and equipment.
2 Know how to comply with relevant legislation and official guidance when moving, handling and/or storing resources.	2.1 Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> <li>– in the workplace, in confined spaces, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
	2.3 Explain what the accident reporting procedures are and who is responsible for making the reports.
	2.4 State the appropriate types of fire extinguishers relevant to the work.
	2.5 Describe how and when the different types of fire extinguishers, relevant to the given occupation, are used in accordance with legislation and official guidance.
3 Maintain safe working practices when moving, handling and/or storing resources.	3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when moving, handling and/or storing resources.
	3.2 Use lifting aids safely as appropriate to the work.

<b>Title:</b>	Moving, handling and storing resources in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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 <b>and/or</b> storing resources, and the types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to: <ul style="list-style-type: none"> <li>– collective protective measures</li> <li>– personal protective equipment (PPE)</li> <li>– respiratory protective equipment (RPE)</li> <li>– local exhaust ventilation (LEV).</li> </ul>
	3.5	Describe how the health and safety control equipment relevant to the work should be used in accordance with the given instructions.
	3.6	State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
4 Select the required quantity and quality of resources for the methods of work to move, handle and/or store occupational resources.	4.1	Select the relevant resources to be moved, handled and/or stored, associated with own work.
	4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the occupational resources in relation to: <ul style="list-style-type: none"> <li>– lifting and handling aids</li> <li>– container(s)</li> <li>– fixing, holding and securing systems.</li> </ul>
	4.3	Describe how the resources should be handled and how any problems associated with the resources are reported.
	4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.5	Describe any potential hazards associated with the resources and methods of work.
5 Prevent the risk of damage to occupational resources and surrounding environment when moving, handling and/or storing resources.	5.1	Protect occupational resources and their surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2	Dispose of waste and packaging in accordance with legislation.

<b>Title:</b>	Moving, handling and storing resources in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
5 continued	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 work within the allocated time when moving, handling and/or storing resources.	6.1	Demonstrate completion of the work within the allocated time.
	6.2	State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>– progress charts, timetables and estimated times</li> <li>– organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>
7 Comply with the given occupational resource information to move, handle <b>and/or</b> store resources to the required guidance.	7.1	Demonstrate the following work skills when moving, handling and/or storing occupational resources: <ul style="list-style-type: none"> <li>– moving, positioning, storing, securing and/or using lifting aids and kinetic lifting techniques.</li> </ul>
	7.2	Move, handle and/or store occupational resources to meet product information and organisational requirements relating to three of the following: <ul style="list-style-type: none"> <li>– sheet material</li> <li>– loose material</li> <li>– bagged or wrapped material</li> <li>– fragile material</li> <li>– tools and equipment</li> <li>– components</li> <li>– liquids.</li> </ul>
	7.3	Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them when moving, handling <b>and/or</b> storing occupational resources.
	7.4	Describe the needs of other occupations when moving, handling <b>and/or</b> storing resources.

<b>Title:</b>	Moving, handling and storing resources in the workplace
<b>Additional information about this unit</b>	
Assessment Guidance	<p>This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.</p> <p>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.</p> <p>Workplace evidence of skills cannot be simulated.</p>
Sector Subject Areas	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	17

<b>Title:</b>	Installing and assembling post tensioning components in the workplace	
<b>Unit Number:</b>	R/617/0733	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
1 Interpret the given information relating to the work and resources when installing and assembling post tensioning components.	1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.
	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
	1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>– drawings, specifications, schedules, manufacturers' information and associated.</li> </ul>
2 Know how to comply with relevant legislation and official guidance when installing and assembling post tensioning components.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> <li>– 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.</li> </ul>
	2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
	2.3	State what the accident reporting procedures are and who is responsible for making reports.
	2.4	State the types of fire extinguishers available when installing and assembling post tensioning components and describe how and when they are used.
3 Maintain safe working practices when installing and assembling post tensioning components.	3.1	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.
	3.2	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.
	3.4	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.

<b>Title:</b>	Installing and assembling post tensioning components in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
<p>4 Select the required quantity and quality of resources for the methods of work to install and assemble post tensioning components.</p>	<p>4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> <li>– setting out equipment</li> <li>– ducts, chairs, couplers, vents, strands and post tensioning bars</li> <li>– void formers, anchorages, wedges and nuts/washers</li> <li>– testing equipment</li> <li>– specialist post tensioning equipment</li> <li>– hand and/or powered tools and equipment.</li> </ul>	
	<p>4.2 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.</p>	
	<p>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.</p>	
	<p>4.4 Outline potential hazards associated with the resources and method of work.</p>	
	<p>4.5 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install and assemble post tensioning components.</p>	
<p>5 Minimise the risk of damage to the work and surrounding area when installing and assembling post tensioning components.</p>	<p>5.1 Protect the work and its surrounding area from damage.</p>	
	<p>5.2 Minimise damage and maintain a clean work space.</p>	
	<p>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.</p>	
	<p>5.4 Dispose of waste in accordance with legislation.</p>	
	<p>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.</p>	
<p>6 Complete the work within the allocated time when installing and assembling post tensioning components.</p>	<p>6.1 Demonstrate completion of the work within the allocated time.</p>	
	<p>6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> <li>– types of progress charts, timetables and estimated times</li> <li>– organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>	



<b>Title:</b>	Installing and assembling post tensioning components in the workplace
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>
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: <ul style="list-style-type: none"> <li>– measuring, marking out, fitting, finishing, positioning and securing.</li> </ul>
	7.2 Install, assemble and prepare for post tensioning operations to given working instructions for two of the following: <ul style="list-style-type: none"> <li>– multi-strand systems</li> <li>– mono strand systems</li> <li>– post tensioning bars.</li> </ul>
	7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>– set out position of tendons and/or post tensioning bars from drawings</li> <li>– drill holes for anchorages at the live end</li> <li>– locate, secure and fix anchorages to void former</li> <li>– install ducting system and couplers</li> <li>– install strands</li> <li>– install post tensioning bars</li> <li>– install dead-end anchorages</li> <li>– profile duct system and fix</li> <li>– seal ducts and position vents</li> <li>– carry out pressure test</li> <li>– locate strands and/or post tensioning bars and secure</li> <li>– confirm that tendon is complete</li> <li>– record and communicate data</li> <li>– use specialist post tensioning equipment</li> <li>– use hand tools, power tools and equipment</li> <li>– work at height</li> <li>– use access equipment as required.</li> </ul>
	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 installing and assembling post tensioning components.
	7.6 Describe how to maintain the tools and equipment used when installing and assembling post tensioning components.

<b>Title:</b>	Installing and assembling post tensioning components in the workplace
<b>Additional information about this unit</b>	
Assessment Guidance	<p>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.</p> <p>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.</p> <p>Workplace evidence of skills cannot be simulated except for assessment criteria 3.4.</p> <p>This unit must be assessed against the endorsements detailed within the relevant NVQ Structure.</p> <p><u>ProQual Level 2 NVQ Diploma in Post Tensioning Operations (Construction):</u></p> <p><b>Two</b> of the following endorsements required:</p> <ul style="list-style-type: none"> <li>Mono strand system</li> <li>Multi strand system</li> <li>Post tensioning bars</li> </ul>
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	200

<b>Title:</b>	Carrying out stressing operations for post tensioning systems in the workplace	
<b>Unit Number:</b>	D/617/0735	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
1 Interpret the given information relating to the work and resources when carrying out stressing operations for post tensioning systems.	1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.
	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
	1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>– drawings, specifications, schedules, manufacturers' information and associated regulations.</li> </ul>
2 Know how to comply with relevant legislation and official guidance when carrying out stressing operations for post tensioning systems.	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> <li>– 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.</li> </ul>
	2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
	2.3	State what the accident reporting procedures are and who is responsible for making reports.
	2.4	State the types of fire extinguishers available when carrying out stressing operations for post tensioning systems and describe how and when they are used.
3 Maintain safe working practices when carrying out stressing operations for post tensioning systems.	3.1	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.
	3.2	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.
	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.
	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.

<b>Title:</b>	Carrying Out Stressing Operations for Post Tensioning Systems in the Workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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: <ul style="list-style-type: none"> <li>– specified anchor assembly, wedges, nuts, washers and caps</li> <li>– stressing equipment, pumps, pressure gauges, hoses</li> <li>– calibration certificates</li> <li>– specialist stressing equipment</li> <li>– hand and/or powered tools and equipment.</li> </ul>	
	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 Minimise the risk of damage to the work and surrounding area when carrying out stressing operations for post tensioning systems.	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 carrying out stressing operations for post tensioning systems.	6.1 Demonstrate completion of the work within the allocated time.	
	6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>– types of progress charts, timetables and estimated times</li> <li>– organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>	

<b>Title:</b>	Carrying Out Stressing Operations for Post Tensioning Systems in the Workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
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.	

<b>Title:</b>	Carrying Out Stressing Operations for Post Tensioning Systems in the Workplace
<b>Additional information about this unit</b>	
Assessment Guidance	<p>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.</p> <p>Workplace evidence of skills cannot be simulated except for assessment criteria 3.4.</p> <p>This unit must be assessed against the endorsements detailed within the relevant NVQ Structure.</p> <p><u>ProQual Level 2 NVQW Diploma in Post Tensioning Operations (Construction):</u></p> <p><b>Two</b> of the following endorsements required:</p> <p>Mono strand system</p> <p>Multi strand system</p> <p>Post tensioning bars</p>
Sector Subject Area	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	233

<b>Title:</b>	Grouting or waxing post tensioned tendons and/or bars in the workplace	
<b>Unit Number:</b>	K/617/0737	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
1 Interpret the given information relating to the work and resources when grouting or waxing post tensioned tendons and/or bars.	1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.
	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
	1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>– drawings, specifications, schedules, manufacturers' information and associated regulations.</li> </ul>
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: <ul style="list-style-type: none"> <li>– 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.</li> </ul>
	2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
	2.3	State what the accident reporting procedures are and who is responsible for making reports.
	2.4	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.
3 Maintain safe working practices when grouting or waxing post tensioned tendons and/or bars.	3.1	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.
	3.2	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.
	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.
	3.4	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.

<b>Title:</b>	Grouting or waxing post tensioned tendons and/or bars in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
<p>4 Select the required quantity and quality of resources for the methods of work to grout or wax post tensioned tendons and/or bars.</p>	<p>4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> <li>– vents and connectors</li> <li>– mixers, grout or wax</li> <li>– grout, grease or wax pump and gauges</li> <li>– testing equipment</li> <li>– pre-bagged grout</li> <li>– waxes and grease</li> <li>– hand and/or powered tools and equipment.</li> </ul>	
	<p>4.2 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.</p>	
	<p>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.</p>	
	<p>4.4 Outline potential hazards associated with the resources and method of work.</p>	
	<p>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.</p>	
<p>5 Minimise the risk of damage to the work and surrounding area when grouting or waxing post tensioned tendons and/or bars.</p>	<p>5.1 Protect the work and its surrounding area from damage.</p>	
	<p>5.2 Minimise damage and maintain a clean work space.</p>	
	<p>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.</p>	
	<p>5.4 Dispose of waste in accordance with legislation.</p>	
	<p>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.</p>	
<p>6 Complete the work within the allocated time when grouting or waxing post tensioned tendons and/or bars.</p>	<p>6.1 Demonstrate completion of the work within the allocated time.</p>	
	<p>6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> <li>– types of progress charts, timetables and estimated times</li> <li>– organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>	



<b>Title:</b>	Grouting or waxing post tensioned tendons and/or bars in the workplace	
<b>Learning outcomes</b> <i>The learner will be able to:</i>	<b>Assessment criteria</b> <i>The learner can:</i>	
7 Comply with the given contract information to grout or wax post tensioned tendons and/or bars to the required specification.	7.1	Demonstrate the following work skills when grouting or waxing post tensioned tendons and/or bars: <ul style="list-style-type: none"> <li>– mixing, testing, capping, sealing and curing.</li> </ul>
	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: <ul style="list-style-type: none"> <li>– blow out ducts</li> <li>– prepare equipment</li> <li>– check for leakage/blockages; rectify if necessary</li> <li>– mix pre-bagged grout or prepare waxes or grease</li> <li>– carry out tests and/or facilitate tests by others</li> <li>– pump grout, waxes or grease to tendons</li> <li>– bleed and seal vents</li> <li>– remove vents and seal at both ends after specified curing period, if applicable</li> <li>– top up if necessary</li> <li>– clean and clear work area</li> <li>– complete records</li> <li>– use grouting, greasing or waxing testing equipment</li> <li>– use hand tools, power tools and equipment</li> <li>– work at height</li> <li>– use access equipment as required.</li> </ul>
	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.

<b>Title:</b>	Grouting or waxing post tensioned tendons and/or bars in the workplace
<b>Additional information about this unit</b>	
Assessment Guidance	<p>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.</p> <p>Workplace evidence of skills cannot be simulated except for assessment criteria 3.4.</p>
Unit review date	5.2 Building and Construction
Credit value	Shared unit
Unit guided learning hours	233



ProQual Awarding Body  
ProQual House  
Westbridge Court  
Annie Med Lane  
South Cave  
HU15 2HG

Tel: 01430 423822

[www.proqualab.com](http://www.proqualab.com)

[enquiries@proqualab.com](mailto:enquiries@proqualab.com)