



Level 3 Diploma in Shoring and Pipe Laying Operations

Qualification Specification

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Introduction

The ProQual Level 3 Diploma in Shoring and Pipe Laying Operations qualification provides a nationally recognised qualification for existing workers and new entrants to the Civil Construction Industry working in the specialised area of ground works operations. Candidates will utilise practical and technical skills needed to work as a pipe layer.

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

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

Qualification Profile

Level 3 Diploma in Shoring and Pipe Laying Operations

Qualification title	ProQual Level 3 Diploma in Shoring and Pipe Laying Operations
Ofqual qualification number	603/0725/0
Level	3
Total Qualification Time	200 hours (150 GLH)
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	7/11/16
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

To achieve the qualification candidates must complete the three Mandatory units.

Mandatory Units – complete ALL units			
Unit Ref.	Title	Level	GLH
D/615/3370	Health and Safety in a Construction Environment	1	40
R/615/3379	Providing Shoring Support in the Workplace	3	50
J/615/3380	Installing Pipelines in the Workplace	3	60

Centre Requirements

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

Staff

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

Assessors/Internal Quality Assurance

Assessors for each unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

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

Support for Candidates

Materials produced by centres to support candidates should:

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

Assessment

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

The qualification must be assessed in a work environment, and it must be internally assessed by an appropriately experienced and qualified assessor.

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

- Evidence can include:
- observation report by assessor
 - assignments/projects/reports
 - professional discussion
 - witness testimony
 - candidate product
 - worksheets
 - record of oral and written questioning
 - Recognition of Prior Learning

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

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

Learning outcomes and assessment criteria can be found from page 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 this qualification will be awarded:

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

ProQual Level 3 Diploma in Shoring and Pipe Laying Operations

Claiming certificates

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

Unit certificates

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

Replacement certificates

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

Learning Outcomes and Assessment Criteria

Unit D/615/3370

Health and Safety in a Construction Environment

Learning Outcome - The learner will:	Assessment Criterion - The learner can:	
1 Know the principles of risk assessment for maintaining and improving health and safety at work.	1.1 State the purpose of risk assessments and method statements.	
	1.2 State the legal requirements of risk assessments and method statements.	
	1.3 State common causes of work-related: <ul style="list-style-type: none">• fatalities• injuries.	
	1.4 State the implications of not preventing accidents and ill health at work.	
	1.5 State the meaning of the following in relation to health and safety at work: <ul style="list-style-type: none">• accident• near miss• hazard• risk• competence.	
	1.6 List typical hazards/risks associated with the following: <ul style="list-style-type: none">• resources• equipment• obstructions• storage• services• wastes• work activities.	
	1.7 State the importance of reporting accidents and near misses.	
	1.8 State typical accident reporting procedures.	
	1.9 State who is responsible for making accident reports.	
	2 Know the importance of safe manual handling in the workplace.	2.1 State the reasons for ensuring safe manual handling in the workplace.
		2.2 State potential injuries and ill health that may occur from incorrect manual handling.
		2.3 State the employee's responsibilities under current legislation and official guidance for: <ul style="list-style-type: none">• moving and storing materials• manual handling• mechanical lifting.
		2.4 State the procedures for safe lifting in accordance with official guidance.
		2.5 State the importance of using site safety equipment when handling materials and equipment.

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
3 Know the importance of working safely at height in the workplace.	2.6 List aids available to assist manual handling in the workplace. 2.7 State how to apply safe work practices, follow procedures and report problems when carrying out safe manual handling in the workplace. 3.1 Define the term 'working at height'. 3.2 State the employee's responsibilities under current legislation and official guidance whilst working at height. 3.3 List hazards/risks associated with the following: dropping tools and debris <ul style="list-style-type: none"> • stability of ladders • overhead cables • fragile roofs • scaffolds • internal voids • equipment • the working area • other people. 3.4 State how hazards/risks associated with working at height can be controlled. 3.5 State the regulation that controls the use of suitable equipment for working at height.
4 Know risks to health within a construction environment.	4.1 List substances hazardous to health under current regulations. 4.2 List common risks to health within a construction environment. 4.3 State the types of hazards/risks that may occur in the workplace linked with use of drugs and alcohol. 4.4 State the importance of the correct storage of combustibles and chemicals on site. 4.5 State the importance of personal hygiene within a construction environment. 4.6 State the potential hazards/risks to the health of workers exposed to asbestos. 4.7 State types of asbestos waste. 4.8 State types of personal protective equipment (PPE) used when dealing with hazardous materials. 4.9 State the correct procedures and demonstrate the selection of correct PPE when carrying out Hot Works Operations
5 Know the importance of working around plant and equipment safely.	5.1 List ways in which moving machinery can cause injuries. 5.2 State hazards/risks relating to the use of plant and equipment.

Learning Outcome - The learner will:**Assessment Criterion - The learner can:**

- 5.3 State the importance of keeping a safe distance away from plant/machinery and equipment until clear contact is made with the operator.
- 5.4 Outline how method statements can assist in ensuring the safety of workers where moving plant is in use.
- 5.5 State ways to eliminate or control hazards/risks relating to working around plant and equipment.
- 5.6 Demonstrate the identification of hazard warning signs and symbols used around the use of plant and equipment.

Assessment

There must be valid, authentic and sufficient for all the assessment criteria. However, one piece of evidence may be used to meet the requirements of more than one learning outcome or assessment criterion.

One piece of evidence must be completed whilst in the workplace / practical environment to underpin the practice elements.

Unit R/615/3379

Providing shoring support in the workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to the work and resources when providing shoring support.	1.1 Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statements. 1.3 Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> • drawings, specifications, schedules, risk assessments, method statements, manufacturers' information and regulations governing construction works and support of excavations.
2 Know how to comply with relevant legislation and official guidance when providing shoring support.	2.1 Describe their responsibilities regarding potential accidents and health hazards, whilst working: <ul style="list-style-type: none"> • in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting. 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative. 2.3 Explain what the accident reporting procedures are and who is responsible for making reports.
3 Maintain safe and healthy working practices when providing shoring support.	3.1 Use health and safety control equipment and access equipment/working platforms safely to carry out the activity in accordance with current legislation and organisational requirements when providing shoring support. 3.2 Comply with information relating to specific risks to health when providing shoring support. 3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to providing shoring support, 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"> – collective protective measures – personal protective equipment (PPE) – respiratory protective equipment (RPE) – local exhaust ventilation (LEV). 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
4 Select the required quantity and quality of resources for the methods of work to provide shoring support.	<p>3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.</p> <p>4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.</p> <p>4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> • poling boards, walings, struts, wedges, soldiers, steel struts and trench sheets • proprietary systems • ancillary fixing devices • hand and/or powered tools and ancillary equipment. <p>4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.</p> <p>4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.</p> <p>4.5 Describe any potential hazards associated with the resources and methods of work.</p> <p>4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to provide shoring support.</p>
5 Minimise the risk of damage to the work and surrounding area when providing shoring support.	<p>5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.</p> <p>5.2 Minimise damage and maintain a clean work space.</p> <p>5.3 Dispose of waste in accordance with current legislation.</p> <p>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.</p> <p>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.</p>
6 Complete the work within the allocated time when providing shoring support.	<p>6.1 Demonstrate completion of the work within the allocated time.</p> <p>6.2 Describe the purpose of the work programme and explain why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> • types of progress charts, timetables and estimated • times • organisational procedures for reporting circumstances which will affect the work programme.

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
7 Comply with the given contract information to provide shoring support to the required specification.	<p>7.1 Demonstrate the following work skills when providing shoring support:</p> <ul style="list-style-type: none"> • measuring, marking out, preparing, positioning, fitting, supporting, fixing, securing, dismantling and removing. <p>7.2 Provide and remove shoring support to given working instructions, relating to two of the following support frameworks:</p> <ul style="list-style-type: none"> • skeleton • open and close boarding • drag box • trench box • coffer dam • diaphragm wall • secant support. <p>7.3 Safely use materials, hand tools, portable power tools and ancillary equipment.</p> <p>7.4 Safely store the materials, tools and equipment used when providing shoring support.</p> <p>7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • assess the excavated area and select suitable temporary support for the excavation • provide for safe access and egress around the shoring support • construct/erect/install shoring support • work with and around plant and machinery • inspect and maintain the integrity and safety of the temporary support structure • dismantle and remove the excavation support structure • use hand tools, power tools and equipment • work at height and in confined spaces • use access equipment. <p>7.6 Describe the needs of other occupations and how to effectively communicate within a team when providing shoring support.</p> <p>7.7 Describe how to maintain the tools and equipment used when providing shoring support.</p>

Assessment

There must be valid, authentic and sufficient for all the assessment criteria. However, one piece of evidence may be used to meet the requirements of more than one learning outcome or assessment criterion.

One piece of evidence must be completed whilst in the workplace / practical environment to underpin the practice elements.

Unit J/615/3380 Installing Pipelines in the Workplace

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Interpret the given information relating to the work and resources when installing pipelines.	1.1 Interpret and extract relevant information from drawings, risk assessments, method statements, specifications, schedules and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statements. 1.3 Describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> • drawings, risk assessments, method statements, specifications, schedules, manufacturers' information and regulations governing the installation of pipelines.
2 Know how to comply with relevant legislation and official guidance when installing pipelines.	2.1 Describe their responsibilities regarding potential accidents and health hazards, whilst working: <ul style="list-style-type: none"> • in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting. 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative. 2.3 Explain what the accident reporting procedures are and who is responsible for making reports.
3 Maintain safe and healthy working practices when installing pipelines.	3.1 Use health and safety control equipment and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when installing pipelines. 3.2 Comply with information relating to specific risks to health when installing pipelines. 3.3 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing pipelines, 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"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV). 3.4 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
4 Select the required quantity and quality of resources for the methods of work to install pipelines.	<p>3.5 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.</p> <p>4.1 Select resources associated with own work in relation to materials, components and fixings, and tools and equipment.</p> <p>4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> • pipes, fittings and ancillary components • pre-cast (metal, concrete, clay or plastic) components • bricks, blocks and sandbags • granular materials, aggregates, cement, concrete, mortars and sand • sealant materials (adhesives, compounds, solvents) • hand and/or powered tools and equipment. <p>4.3 Describe how the resources should be used correctly and how problems associated with the resources are reported.</p> <p>4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.</p> <p>4.5 Describe any potential hazards associated with the resources and methods of work.</p> <p>4.6 Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install pipelines.</p>
5 Minimise the risk of damage to the work and surrounding area when installing pipelines.	<p>5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.</p> <p>5.2 Minimise damage and maintain a clean work space.</p> <p>5.3 Dispose of waste in accordance with current legislation.</p> <p>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.</p> <p>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.</p>
6 Complete the work within the allocated time when installing pipelines.	<p>6.1 Demonstrate completion of the work within the allocated time.</p> <p>6.2 Describe the purpose of the work programme and explain why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme.
7 Comply with the given contract information to install pipelines to the required specification.	<p>7.1 Demonstrate the following work skills when installing pipelines:</p> <ul style="list-style-type: none"> • measuring, marking out, laying, positioning, fitting, levelling, plumbing, aligning, securing and testing.

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
	7.2 Install and compact sub base materials
	7.3 Install and test new and/or replacement pipelines for the following to given working instructions: <ul style="list-style-type: none"> • pipework (e.g. clay, concrete, metal, or plastic) • inspection chambers (e.g. brick, concrete, metal or plastic)
	7.4 Safely use materials, hand tools, portable power tools and ancillary equipment.
	7.5 Safely store the materials, tools and equipment used when installing pipelines.
	7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> • excavate trenches and provide trench support • confirm ground conditions, site and excavations are suitable for the pipeline installation work • prepare bedding for pipework • determine levels and gradients • identify the differences between surface and foul water pipelines • lay, position, level, plumb, align, fit, fix and secure new and replacement pipelines systems • construct associated structures of a pipework system (inspection chambers etc)
	7.7 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> • assemble pre-cast components (metal, concrete, clay and plastic) of a pipeline system structure • work with plant and machinery • use hand tools, power tools and equipment • work at height and below ground level • use access equipment.
	7.8 Describe the needs of other occupations and how to effectively communicate within a team when installing pipelines.
	7.9 Describe how to maintain the tools and equipment used when installing pipelines.

Assessment

There must be valid, authentic and sufficient for all the assessment criteria. However, one piece of evidence may be used to meet the requirements of more than one learning outcome or assessment criterion.

One piece of evidence must be completed whilst in the workplace / practical environment to underpin the practice elements.



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