



## **Level 5 Award in Understanding Water Networks**

### **Qualification Specification**

# Contents

	<b>Page</b>
Introduction	3
Qualification profile	3
Qualification structure	4
Centre requirements	4
Support for candidates	5
Assessment	5
Internal quality assurance	6
Adjustments to assessment	6
Results enquiries and appeals	6
Certification	6
Learning Outcomes and Assessment Criteria	7

## Introduction

The **Level 5 Award in Understanding Water Networks** is aimed at candidates who wish to demonstrate their knowledge and understanding of Water Networks regulatory compliance requirements.

The Regulated Qualifications Framework (RQF) is the single framework for regulated qualifications, the regulatory body for this qualification is the Office of Qualifications and Examinations Regulation (Ofqual). This qualification is accredited onto the RQF.

## Qualification Profile

Qualification title	<b>ProQual Level 5 Award in Understanding Water Networks</b>
Ofqual qualification number	603/3729/1
Level	Level 5
Total qualification time	120 hours
Credits	12 credits
Guided learning hours	120
Assessment	Pass or fail Assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	29/10/2018
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

To achieve the qualification candidates must complete ONE Mandatory unit.

Unit Reference Number	Unit Title	Credits	Unit Level	GLH
Y/617/2838	Understanding Water Networks	12	5	120

## 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 quality assurance verifier qualifications, such as:

- ProQual Level 3 Certificate in Teaching, Training and Assessing
- 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 and/or skills described in the units. 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 could include:

- observation report by assessor
- assignments/projects/reports
- professional discussion
- witness testimony
- 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 for this qualification can be found from page 7 onwards.*

To achieve this qualification all candidates must produce evidence which demonstrates their achievement of all of the assessment criteria.

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.

Simulations are permitted where candidates, during the course of their qualification, are not able to provide evidence from naturally occurring events.

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

### **ProQual Level 5 Award in Understanding Water Networks**

#### **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.

#### **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 Understanding Water Networks

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1. Understand the regulatory and legislative framework in which the water industry operates, with particular emphasis on the impact of the framework on the operation and maintenance of the water network	1.1 List the main legislation which pertains to the water industry and demonstrate understanding of the key aspects and how they impact the operation of the water network
	1.2 Discuss possible future legislation and describe how the water industry can prepare, react and influence legislators and key opinion formers
	1.3 Contribute to the management of the expectations of the various stakeholder groups which influence the water industry, including regulators
	1.4 Explain the regulatory and economic impact of over and under achieving regulatory performance outcomes and contribute to the prioritisation of business activities to maximise the company's regulatory position in relation to the water network
	1.5 Describe the latest regulatory developments in relation to competition for water services and explain how the industry is adapting
2. Understand the implications of water treatment on the water quality aspects of water networks	2.1 Explain the impact of water source on water quality networks with particular reference to the water cycle
	2.2 Explain the impact of water treatment processes on network operations
	2.3 Demonstrate understanding of the link between water treatment and public health by an understanding of waterborne diseases and their prevention
	2.4 Carry out critical analysis of the causes of water quality deterioration within the network and the controls available to prevent it, particularly microbiological discolouration and acceptability
3. Understand the impact of major components of water network on water quality and resilience of the water network	3.1 Explain how the major components of the networks from WTW to customers' taps impact on function, selection and maintenance requirements

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
4 Understand the water company's clean water delivery systems for effective operational management of the water network	3.2 Explain what data is required to inform the effective management of water network 3.3 Demonstrate an awareness of the regulatory and legislative framework for the adoption of new assets to the new water network 4.1 Explain the water company's strategy for the coordination of across functional boundaries to ensure effective operational delivery of clean water 4.2 Explain how specific systems and processes ensure effective operational management of water network to meet regulatory and customer requirements 4.3 Explain the water company's strategy on the evaluation of risk and its impact on operational management 4.4 Explain the types of actions appropriate in the event of a failure or problem
5 Understand hydraulic principles in relation to the water network	5.1 Explain the application and importance of hydraulics for water networks 5.2 Apply and convert SI units and perform essential arithmetical operations for hydraulic calculations 5.3 Explain fundamental Hydraulic principles including the Continuity Equation, hydraulic forces, Bernoulli energy conservation and energy friction losses 5.4 Explain Pump Curves and System Curves 5.5 Demonstrate the appropriate application of hydraulic principles across a range of water network applications and uses, including a scenario exercise
6 Understand best practice for leakage and demand management	6.1 Explain why demand management is critical to the water company's sustainability and the role leakage plays in the whole demand management strategy 6.2 Critically evaluate the range of demand management operations available including leakage management, metering and water efficiency promotion 6.3 Develop a leakage management strategy with regard to short and long run economic levels of leakage and external influences on the strategy



Learning Outcome - The learner will:	Assessment Criterion - The learner can:
	<p>6.4 Analyse data and define data requirements to be able to carry out leakage calculations in accordance with current best practice</p> <p>6.5 Critically evaluate the main methods of leakage control and describe their relative effectiveness as part of an overall leakage reduction strategy</p> <p>6.6 Explain and critically evaluate the appropriate methods of network repair and maintenance and the options for managing this activity through contractors or direct labour</p>
<p>7 Understand best practice for management of water network assets</p>	<p>7.1 Explain the principles of whole life asset management, investment appraisal, and the application of water safety plans and maintenance strategies in the management of network assets</p> <p>7.2 Describe, evaluate and appraise options for water network investment projects to address risks and deficiencies in the water network asset base</p> <p>7.3 Describe and critically evaluate the Smart Network technology and innovations which are available and becoming available to proactively manage network assets, with emphasis on predict and prevention of asset failure</p> <p>7.4 Describe some of the origins of events and incidents – how they can occur – both self-inflicted and otherwise</p> <p>7.5 Identify processes that can be used to avoid and minimise the occurrence of operational network failures that affect customers and network operation</p> <p>7.6 Describe the legislation pertaining to working in the Highway and its impact on operational activity</p>
<p>8 Understand the importance and application of innovation within the Water Sector</p>	<p>8.1 Explain the importance and application of innovation within the Water Sector</p> <p>8.2 Describe how they can use the innovation process within their organisation to deliver tangible benefits</p>
<p>9 Understand the importance and application of resilience within the Water Sector</p>	<p>9.1 Explain how resilience can be applied to the operation of the water network of their organisation, including through the use of scenario planning</p>

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
10 Understand the management of the customer experience within water networks	9.2 Explain how innovation can enhance resilience and the management of the water network of their organisation 10.1 Describe how compliance with all customer legislative standards is achieved 10.2 Explain how the customer experience within the water network can be monitored and how it is reported 10.3 Describe factors to consider in managing and recovering from an incident 10.4 Identify some of the factors to consider when reviewing and learning from an incident 10.5 Describe all the external stakeholders involved in the customer experience and the structure needed to manage engagement with these bodies

## 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.



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

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

Tel: +44 (0)1430 423822

ProQual AB Limited, ProQual House, Westbridge Court, Annie Med Lane, South Cave HU15 2HG  
Company Registration Number: 07464445