



**Level 5 Award in the Management of Risk and Resilience  
in the Water and Environmental Industries**

**Qualification Specification**

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## Introduction

The **Level 5 Award in the Management of Risk and Resilience in the Water and Environmental Industries** is aimed at candidates who wish to demonstrate their knowledge and understanding of Risk and Resilience Management within the Water and Environmental Industries.

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 the Management of Risk and Resilience in the Water and Environmental Industries</b>
Ofqual qualification number	603/4175/0
Level	Level 5
Total qualification time	40 hours
Credits	4 credits
Guided learning hours	32
Assessment	Pass or fail Assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	25/2/2019
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
D/617/4770	The Management of Risk and Resilience in the Water and Environmental Industries	4	5	32

## 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 -

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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.

#### **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/617/4770

## The Management of Risk and Resilience in the Water and Environmental Industries

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Understand the principles and objectives of risk and resilience management	<ul style="list-style-type: none"><li>1.1 Identify the principles, essential features and objectives of risk and resilience management</li><li>1.2 Critically analyse the principle of resilience in the ability of assets, networks and systems to anticipate, absorb, adapt to and rapidly recover from a disruptive event</li><li>1.3 Critically analyse the principle of resilience in the concept of asset redundancy and the avoidance of dependencies on single assets</li><li>1.4 Critically analyse the principle of resilience in the concept of proofing assets so that they are resistant to known risks</li><li>1.5 Critically analyse the principle of resilience in the concept reliability in design standards</li></ul>
2 Understand the legal and regulatory requirements and the role of the regulators in respect of risk and resilience	<ul style="list-style-type: none"><li>2.1 Explain the regulatory framework pertaining to risk and resilience</li><li>2.2 Explain the needs and expectations of relevant regulators in respect of risk and resilience</li><li>2.3 Explain how Corporate Governance needs to operate to ensure compliance with regulatory requirements for risk and resilience</li><li>2.4 Explain the process of compliance reporting in respect of risk and resilience</li></ul>
3 Understand the interconnected impacts that changes in risk and resilience make	<ul style="list-style-type: none"><li>3.1 Evaluate the changing nature of disaster risk and its interconnected impacts on the water and environmental industry business</li></ul>
4 Understand the effect of climate change on risk and resilience strategy	<ul style="list-style-type: none"><li>4.1 Critically analyse the nature of climate change and its impact on the water and environmental industries</li><li>4.2 Critically analyse how the sector must consider all of the risks of climate change and recommend action to deal with those which are significant</li><li>4.3 Explain how planning for incremental impacts on performance in a changing climate will improve resilience</li></ul>
5 Understand the objective and purposes of a Company's risk and resilience strategy and management structure	<ul style="list-style-type: none"><li>5.1 Critically analyse the objective and purposes of a company's risk and resilience strategy and management philosophy, policy and procedures</li></ul>

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
6 Understand where risk and resilience management sits in the company organisational structure	6.1 Critically analyse and propose the location and structure of risk and resilience management systems within the company organisational structure
7 Understand the decision-making process in terms of risk and resilience management	7.1 Explain the decision-making process in terms of risk and resilience management
8 Understand the role of risk financing and the nature of risk financing and the variables that influence the process	8.1 Demonstrate an understanding of risk financing in the risk management process 8.2 Demonstrate an understanding of the variables which determine the nature of risk financing techniques, including loss experience and cash flows 8.3 Demonstrate an understanding of risk financing techniques, including transfer to a self-insure, retention of risk and insurance 8.4 Critically analyse the sources of data on the recording of an organisations' loss experience 8.5 Demonstrate an understanding of adjustments and normalisation to data recorded, for inflation and changes in underlying exposure 8.6 Undertake a calculation of the future value and net present value of a single cash flow or series of cash flows
9 Understand the benefits and practical problems of insuring assets	9.1 Demonstrate the benefits of insurance and the practical problems associated with insurance 9.2 Explain the transfer of risk by self-insurance means, including the use of contractual terms and conditions
10 Understand the principles of risk and resilience and its relationship to contingency planning	10.1 Demonstrate an understanding of the principles of effective risk and resilience assessment and contingency planning
11 Understand the use and merits of quantitative and qualitative techniques in risk and resilience management	11.1 Explain the use of quantitative and qualitative techniques to identify and assess potential risks to an organisation and consider the advantages and disadvantages of each technique
12 Understand how to reduce risks to business continuity in the emergency planning and business continuity process	12.1 Demonstrate an understanding of emergency planning and business continuity, by identifying risks to a business and steps that can be made to reduce such risks
13 Understand how to measure individuals' behaviour to risk	13.1 Assess risk in terms of human behaviour, including the measurement of individuals' attitude to risk
14 Understand factors which influence group attitudes to risk-taking	14.1 Identify, assess and measure the factors which influence group attitudes to risk-taking

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
15 Understand the practical meaning of business resilience and its role in disaster recovery	15.1 Explain the practical meaning of business resilience and its position in disaster response and recovery 15.2 Explain the principles of effective risk and resilience in relation to the ability to recover quickly to ensure service is not unduly impacted
16 Understand the range of technologies and the techniques for gathering data available to assist the management of risk and resilience	16.1 Critically evaluate the range of technologies, their appropriate applications and how they relate to risk and resilience management 16.2 Critically analyse the various techniques for gathering data in order to manage risk and resilience 16.3 Critically analyse the methods of measuring, representing and comparing data for analysis and the relative advantages of each method
17 Understand the use of probability theory and the use of normal and binomial distribution numerical methods in risk and resilience management	17.1 Demonstrate the ability to use the probability theory, the ways in which probabilities are derived and their appropriate applications 17.2 Demonstrate the practical use of combining of probabilities, including alternative events, joint events and probability trees 17.3 Demonstrate the application of probability distribution relative to risk and resilience management 17.4 Demonstrate the normal and binomial distribution formulae methods to risk and show their practical applications
18 Understand the principles of scenario planning in relation to risk and resilience	18.1 Explain the principles of scenario planning and its importance to risk and resilience strategy 18.2 Critically analyse the effect of and impact from a failure of other's assets
19 Understand the principles of risk, resilience and contingency planning in commissioning assets	19.1 Demonstrate an understanding of the principles of effective risk assessment and contingency planning in the commissioning of assets
20 Understand the principles of inventory management in relation to risk and resilience	20.1 Explain the principles of inventory management and its relationship to the supply chain in relation to risk and resilience management 20.2 Demonstrate the importance of the management of the supply chain, including the role of human and physical resources in relation to risk and resilience management 20.3 Critically evaluate the different procurement approaches in relation to risk and resilience management
21 Understand the role of logistics in relation to risk & resilience	21.1 Demonstrate an understanding of the important role of logistics in risk and resilience management

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
	21.2 Demonstrate the ability to manage logistics in simulated incidents
22 Understand how to reduce risks to business continuity in the emergency planning and business continuity process	22.1 Demonstrate an understanding of emergency planning and business continuity, by identifying risks to a business and steps that can be made to reduce such risks
23 Understand how to prepare the business for pre and post emergency situations	23.1 Prepare the business for emergencies and post disaster recovery, including business continuity systems and emergency planning

## 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.



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