Qualification Specification

ProQual Level 5 Award in Understanding Wastewater Networks

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This qualification is part of ProQual's broad offer of qualifications in the Water Industry Sector.

To find out more about other qualifications in this, or any other sector, or for our latest fees; check our Fees Schedule via the QR code below

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Introduction

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

The awarding body for this qualification is ProQual AB. This qualification has been approved for delivery in England and Northern Ireland. The regulatory body for this qualification is Ofqual, and this qualification has been accredited onto the Regulated Qualification Framework (RQF), and has been published in Ofqual's Register of Qualifications.

Qualification Profile

Qualification Title:	ProQual Level 5 Award in Understanding Wastewater Networks
Qualification Number:	610/5749/6
Level:	Level 5
Total Qualification Time (TQT):	130 Hours
Guided Learning Hours (GLH):	130 Hours
Credit Value:	13 Credits
Assessment:	Pass/Fail
	Internally assessed and verified by centre staff
	External quality assured by ProQual Verifiers
Qualification Start Date:	13/05/2025
Qualification Review Date:	13/05/2028

Learner Profile

There are no formal academic entry requirements for this qualification. Centres should carry out their own initial assessment of a candidate's initial knowledge and skills.

Qualification Structure

This qualification consists of **one** mandatory unit. Candidates must complete the mandatory unit to achieve this qualification.

Unit Number	Unit Title	Level	TQT	GLH
Mandatory Units – Candidates must complete **all** units in this group.				
H/651/6084	Understanding Wastewater Networks	5	130	130

Centre Requirements

Centres must be approved to deliver this qualification. If your centre is not approved to deliver this qualification, please complete and submit the **ProQual Additional Qualification Approval Form.**

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.

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 5 Award in Understanding Wastewater Networks

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.

Assessment Requirements

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.

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.

Centre staff assessing this qualification must be **occupationally competent** and qualified to make assessment decisions. Assessors who are suitably qualified may hold a qualification such as, but not limited to:

- ProQual Level 3 Certificate in Teaching, Training and Assessment.
- ProQual Level 3 Award in Education and Training.
- ProQual Level 3 Award in Assessing Competence in the Work Environment. *(Suitable for assessment in the workplace only.)*
- ProQual Level 3 Award in Assessing Vocational Achievement. *(Suitable for assessment taking place in a simulated training environment only.)*

Candidate portfolios must be internally verified by centre staff who are **occupationally knowledgeable** and qualified to make quality assurance decisions. Internal verifiers who are suitably qualified may hold a qualification such as:

- ProQual Level 4 Award in the Internal QA of Assessment Processes and Practice.
- ProQual Level 4 Certificate in Leading the Internal QA of Assessment Processes and Practice.

Occupationally competent means capable of carrying out the full requirements contained within a unit. **Occupationally knowledgeable** means possessing relevant knowledge and understanding.

Enquiries, Appeals and Adjustments

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.

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Units – Learning Outcomes and Assessment Criteria

Title:	Understanding Wastewater Networks			**Level:**	5
Unit Number:	H/651/6084	**TQT:**	130	**GLH:**	130

Learning Outcomes *The learner will be able to:*		**Assessment Criteria** *The learner can:*	
1	Understand regulatory compliance with respect to wastewater networks.	1.1	Explain the regulatory framework with regards to the water industry.
		1.2	Identify legislation and regulations pertaining to the performance of the wastewater network.
		1.3	Discuss the implementation of AMP8 with respect to the performance of the wastewater network.
		1.4	Explain how regulatory performance of the wastewater network is monitored, measured, rewarded and penalised.
		1.5	Describe the overall impact of achieving and not achieving good customer service.
		1.6	Explain the regulatory framework pertaining to the trade effluent.
		1.7	Explain legislation relating to nuisance control.
		1.8	Describe the safety legislation and regulation relating to working safely on the network.

2	Understand the design requirements of the wastewater network.	2.1	Describe the impact on people and the environment of uncontrolled wastewater network discharges.
		2.2	Explain the purpose of the following components of the wastewater network and their importance, including: • Manholes. • Sewers. • Retention tasks. • Pumping stations. • Combined sewer overflows (CSOs). • Flow control devices.
		2.3	Carry out basic hydraulic calculations relating to the design of wastewater networks, including: • Flow. • Gradient. • Self-cleaning velocity. • Friction loss in a pumping system. • Surcharge. • Pump efficiency. • Pump curves. • System curves.
		2.4	State the purpose of Sustainable Urban Drainage Systems (SUDS).
		2.6	Analyse how SUDS can be incorporated into existing networks to improve performance.
		2.7	Critically compare the different methods of flow measurement in the sewers.
		2.8	Identify the causes of routine flooding and pollution and describe potential solutions for such issues.
		2.9	Describe potential solutions for the causes of routine flooding.

3	Understand the impact of new developments on the wastewater network.	3.1	Explain the sewer adoption process including an awareness of the legislative framework.
		3.2	Identify key components of legislative framework for work carried out by third parties on existing assets e.g. diversion, build-over, new connection.
		3.3	Describe the software used to model the impact of a new development.
		3.4	Discuss the limitations or assumptions that have to be made when using software to model the impact of new development.
4	Understand the principles of and best practice associated with the successful operation of the wastewater network.	4.1	Explain what data is required to inform the effective management of the wastewater network, including evaluation of risk to determine how to prioritise work.
		4.2	Briefly describe the maintenance requirements of the wastewater network including the following: • Gravity sewers. • Pumping stations. • CSO. • Mechanical screens. • Monitoring instruments. • Interceptors.
		4.3	Describe the techniques for carrying out maintenance activities on the wastewater network, including: • Using drain rods. • Cleansing, including high pressure water jetting. • Inspection, including CCTV.
		4.4	Identify the main categories of types of trade effluent.
		4.5	Describe the impact that each type of trade effluent can have on the wastewater network if not managed adequately.

4	*Continued*	4.6	Analyse how conditions in the wastewater network can affect the operation and performance of the wastewater treatment works including flow compliance and infiltration.
		4.7	Identify the key safe procedures required to be followed when carrying out maintenance of the wastewater network.
5	Understand the causes of failure and customer complaint relating to the performance of the wastewater network and the techniques used to determine the cause.	5.1	State the causes of poor performance of the wastewater network.
		5.2	Describe the resulting impact of poor performance relating to the public or environment, including: • Internal flooding. • External flooding. • Odour. • Pests. • Noise.
		5.3	Describe the techniques used to investigate the cause of the failure and action required to restore the performance of the wastewater network, to include: • CCTV. • High pressure water jetting. • Sonde. • Dye testing.
		5.4	State the key steps in managing a flooding or pollution incident including regulatory reporting and mitigation actions.
		5.5	Analyse the cause and impact of Fat, Oil, Grease (FOG) in the network.
		5.6	Describe procedures to be followed to identify and prevent FOG offenders from continuing to dispose of FOG to the sewer.
		5.7	Discuss the education of the public in safe disposal of sanitary items and other regular causes of blockages.

6	Understand the repair techniques used to restore the performance to the wastewater network.	6.1	Describe the techniques used to repair the wastewater network, to include: • Patch. • CIP. • Relining.
		6.2	Compare trench and trenchless techniques for repairing or replacing sewers.
		6.3	Explain the commonly adopted procedures required to be followed when repairing and/or replacing components of the network.
7	Understand the need for the Water Industry to become more resilient.	7.1	Explain the customer and regulatory drivers for increased resilience of the wastewater network.
		7.2	Discuss the potential impacts of climate change on the wastewater network.
		7.3	Analyse own organisation's capability in carrying out adaption to climate change.
		7.4	Describe the effect of climate change on a risk and resilience strategy.
		7.5	Describe **two** options available to achieve a reduction in flows through the sewers to essentially increase capacity in terms of population.
		7.6	Discuss how the options identified in assessment criteria 7.4 could be implemented.
		7.7	Discuss the 'smart network' technology and innovations which are available to proactively manage network assets with emphasis on prediction and prevention of asset failure.
		7.8	Describe how to evaluate and appraise options for wastewater network investment projects to address risks and deficiencies in the wastewater network asset base.

Additional Assessment Information

This unit is **knowledge based.** This means that evidence is expected to take the form of candidate's written work and/or records of appropriate professional discussions.

Appendix One – Command Verb Definitions

The table below explains what is expected from each **command verb** used in an assessment objective. Not all verbs are used in this specification

Apply	Use existing knowledge or skills in a new or different context.
Analyse	Break a larger subject into smaller parts, examine them in detail and show how these parts are related to each other. This may be supported by reference to current research or theories.
Classify	Organise information according to specific criteria.
Compare	Examine subjects in detail, giving the similarities and differences.
Critically Compare	As with compare, but extended to include pros and cons of the subject. There may or may not be a conclusion or recommendation as appropriate.
Describe	Provide detailed, factual information about a subject.
Discuss	Give a detailed account of a subject, including a range of contrasting views and opinions.
Explain	As with describe, but extended to include causation and reasoning.
Identify	Select or ascertain appropriate information and details from a broader range of information or data.
Interpret	Use information or data to clarify or explain something.
Produce	Make or create something.
State	Give short, factual information about something.
Specify	State a fact or requirement clearly and in precise detail.

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