



ENERGY &
UTILITY SKILLS

Skills for a greener world

EUIAS Level 3 End-point Assessment Apprentice Guide for

Water Industry Network Technician
(Water distribution network technician; Water leakage
technician; Wastewater network technician)

QAN 610/1604/4



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Updates to this Guide

Since the first publication of the EUIAS Water Industry Network Technician Apprentice Guide, the following updates have been made.

Version	Date first published	Section updated	Page(s)
V1.0	July 2023	First published	All



At A Glance Component 1: Observation with Questions

Date(s):	
Time:	
Location:	
Examination Conditions:	With an EUIAS assessor in your place of work
Additional Requirements:	
Assessed and marked by:	Independent assessor/EUIAS



At A Glance Component 2: Interview based on a portfolio of evidence

Date(s):	
Time:	
Location:	
Examination Conditions:	With an EUIAS assessor in your place of work or training environment
Additional Requirements:	
Assessed and marked by:	Independent assessor/EUIAS



At A Glance Component 3: Multiple-choice Test

Date(s):	
Time:	
Location:	
Examination Conditions:	Controlled by an invigilator
Additional Requirements:	
Assessed and marked by:	EUIAS

Introduction



EUIAS has been selected by your employer to carry out end-point assessment (EPA) and it is our job to ensure that you are assessed fairly.

How This Apprenticeship Guide Is Organised

- ✓ Section 1:
What is in the Apprenticeship Guide?
- ✓ Section 2:
An Apprentice's End-point Assessment Journey
- ✓ Section 3:
End-point Assessment Components

How to Use This Guide



This guide has been split into 3 sections. You can dip into each section that you are working on where you will find useful information, practical advice, tips you need and useful dates to successfully complete your EPA.

Throughout we have used headings and cross referenced to our EPA Water Industry Network Technician (WINT) Specification and/or Supporting Documents which provides details of the EPA components.

Section 1: The Basics

What is an Apprenticeship Standard?



An apprenticeship standard is a description of your apprenticeship and it is based on the Water Industry Network Technician standard, which was written by employers. It contains the Water Industry Network Technician's job profile, and describes the knowledge, skills and behaviours (KSBs):

- Knowledge: (as part of KSBs) – specific information, technical detail, and 'know-how' identified as part of the apprenticeship standard that must be evidenced during your end-point assessment
- Skills: (as part of KSBs) – the practical application of knowledge identified as part of the apprenticeship standard that must be evidenced during end-point assessment
- Behaviours (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

The standard can be accessed via the link below:

[Water industry network technician / Institute for Apprenticeships and Technical Education](#)

What is an Assessment Plan?

An Assessment Plan is also written by employers and provides details of what is required for you to pass your end-point assessment. It includes details of what you will be assessed on, how each assessment will take place, what methods will be used and who will assess you.

EUIAS designed the end-point assessment (EPA) to meet the requirements of the Assessment Plan. The Assessment Plan can be accessed via the link below:

[Water industry network technician / Institute for Apprenticeships and Technical Education](#)

What is an end-point assessment (EPA)?

The end-point assessment is the assessments you take at the end of your apprenticeship. You will typically spend 30 months on-programme working towards your standard with a minimum of 20% off-the-job training. You are required to spend a minimum of 12 months on-programme. After this you have a Gateway meeting with your employer or training provider to confirm you are ready for the end-point assessments. The words end-point means that you will be assessed at the end of your on-programme (training) to confirm you have met the standard. Your EPA period will typically last 4 months. The end-point assessments consist of 3 components:

- Observation with Questions
- Interview based on your portfolio of evidence
- Multiple-choice Test

Each component has a provisional grade and each grade is carried forward to award a final grade. You must pass all 3 components to pass your apprenticeship.

The final grade can be a Fail, Pass, Merit or Distinction.

What are the Gateway Requirements?

Gateway is a meeting where your employer, training provider and you ensure that you are confident that you can demonstrate all the KSBs defined in the apprenticeship standard and you are ready for EPA. After the meeting, your training provider will confirm the outcomes of the Gateway meeting by sending a signed document to EUIAS. The document confirms that you have met the following Gateway requirements:

- achieved English and maths at level 2
- compiled a portfolio of evidence, which will support you in your interview

Your training provider will send copies of these documents to EUIAS.

What is the EPA Specification?

EUIAS End-point Assessment Specification for

Level 3 Water Industry Network Technician
(Water distribution network technician; Water leakage
technician; Wastewater network technician)
QAN 610/1604/4

The end-point assessment specification provides details of the assessment methods used in your EPA, which:

- KSBs that are covered by each assessment
- KSBs amplification and guidance

The Specification can be accessed via the link below:

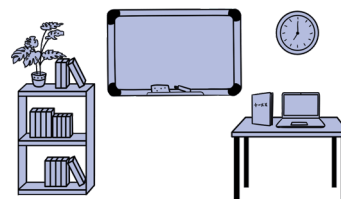
[WINT-EPA-Specification-V2.0.pdf \(euias.co.uk\)](https://euias.co.uk/WINT-EPA-Specification-V2.0.pdf)



Section 2: Apprentice EPA Journey

Let us Begin Your EPA Journey.

Find a quiet place and read on....



Water Industry Network Technician is a core and options apprenticeship standard. You must be trained and assessed against the core and one of the following specialisms:

- Water distribution network technician
- Water leakage technician
- Wastewater network technician

Your EPA journey consists of 3 elements:

- A training programme with on the job, off the job elements, typically 30 months
- Gateway meeting window
- End-point Assessment (EPA) typically 4 months

Your journey begins with the training program. Your employer and training provider are responsible for this part. This is where you will gain the required Knowledge, Skills and Behaviours (KSBs).

How will you be assessed in the end-point assessment?

You will be assessed on the following components, which can be taken in any order:

- 1. Observation with questions**
- 2. Interview based on your portfolio of evidence**
- 3. Multiple-choice test**

It is important for you to keep a record of when your 3 components are scheduled. We suggest you use the 'At a Glance' tables on page 5.

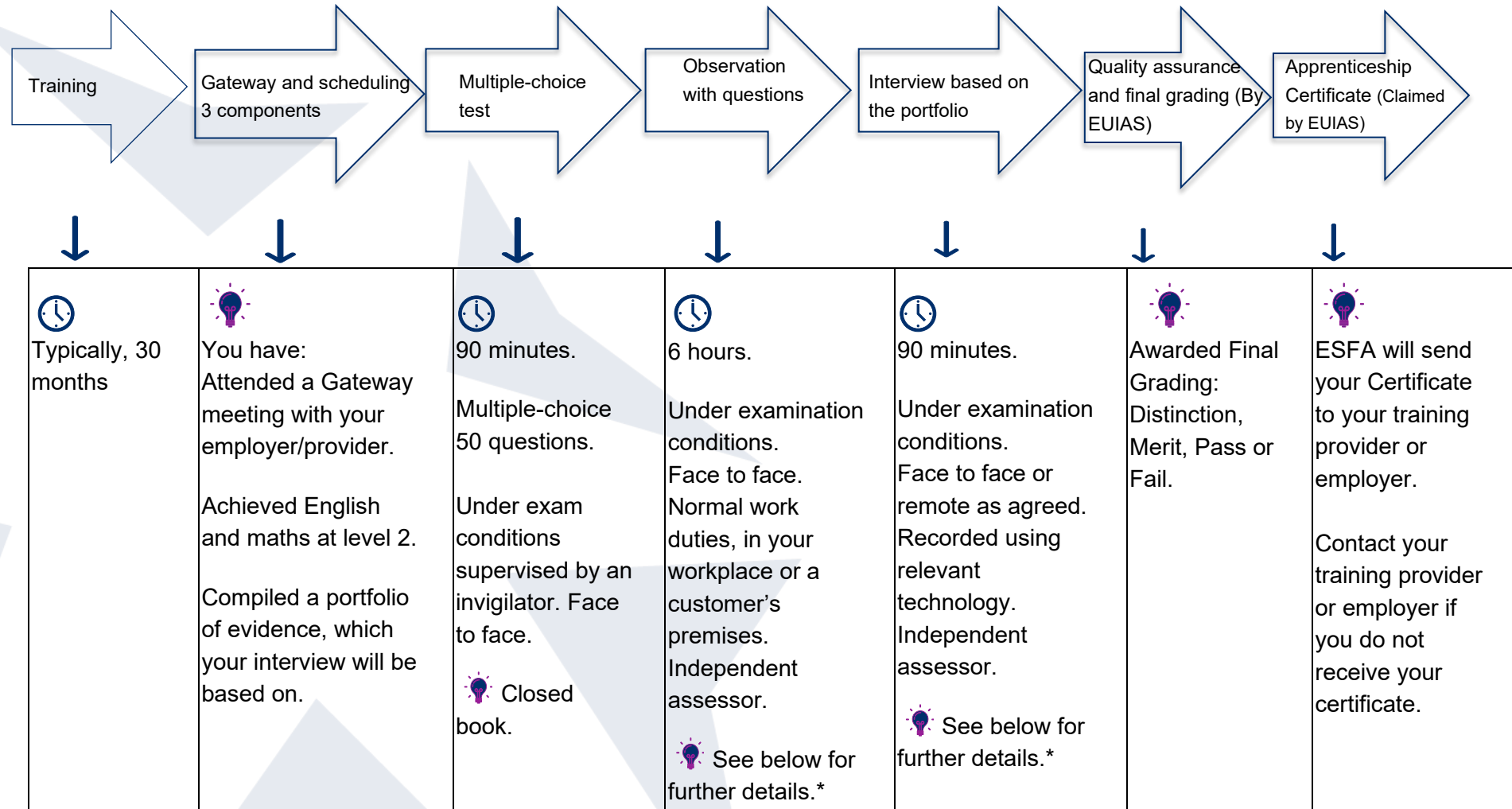
You must pass all 3 components to achieve this qualification. For further guidance refer to Section 3 End-point Assessment Components.

Reasonable adjustments

A reasonable adjustment is any action that helps to reduce the effect of a disability or difficulty that places you at a substantial disadvantage during assessments. If this applies to you make sure you tell your training provider who can make an application for a reasonable adjustment to EUIAS on your behalf.

Your EPA Journey in a Diagram

The diagram below illustrates the order of your EPA **journey** from the day you register to your final certification:



*For further details refer to Section 3 of this Apprentice Guide Section or 2 of the Specification

Section 3: End-point Assessment Components

Now let us continue your journey through EPA. There are 3 components that you must pass to be awarded a certificate.

Component 1: Observation with Questions


Overview

An observation with questions involves an independent assessor, appointed by EUIAS observing and questioning you undertaking work as part of your normal duties, in your workplace. The task(s) must be capable of being completed by a competent Water Industry Network Technician.

Step-by-Step Guide



The table below provides a step-by-step guide on how the Observation with Questions will be carried out:

<p>Structure of your practical assessment</p>	 <p>The total assessment time is 6 hours for completing work as part of your normal duties, in your workplace or a customer's premises.</p> <ul style="list-style-type: none"> • The observation may be split into discrete sections held on the same working day • Where breaks occur, the clock will be paused. The assessment time is not reduced
<p>Where will the assessment take place?</p>	<ul style="list-style-type: none"> • Your employer's premises or a customer's premises • The questioning must take place in a quiet room
<p>What knowledge, skills and behaviours (KSBs) do I have to demonstrate during the Observation</p>	<p>Knowledge, Skills and Behaviours:</p> <p>Core</p> <p>K4 Operational and quality systems and procedures. Escalation procedures. What they are and how to use them</p> <p>K5 Digital documentation requirements (data logging) for example, maintenance records, and asset check records</p>

with
Questions?

- K8** New Roads and Street Works Act (NRSWA) - signing, lighting, and guarding
- K12** Asset security requirements and procedures
- K16** Communication techniques: verbal, written and electronic. Adapting style to audience
- K17** Customer service techniques. Priority customers
- K18** Documentation requirements for example maintenance records, asset check records
- S1** Comply with (water or wastewater) industry regulations and procedures
- S2** Complete risk assessments: identify and document risks and hazards in the workplace. Apply control measures
- S3** Comply with health and safety regulations, and safe working and security practices and procedures
- S4** Set out and remove signing, lighting, and guarding.
- S5** Conduct vehicle checks
- S9** Trace and locate network services
- S11** Check technician tools and equipment. Conduct maintenance for example, calibration
- S15** Interpret digital mapping systems and update
- S16** Complete work documentation: enter and record data and information using digital technology for example, hand-held devices
- S17** Read and interpret written information. For example, work instructions, and service level agreements
- S20** Communicate verbally and in writing. For example, with colleagues, customers, and stakeholders. Use water industry terminology where appropriate
- S21** Identify and escalate issues

S22 Core Provide advice and guidance to customers

B1 Prioritise and promote public health, workplace health and safety, and security

B3 Apply a professional approach

B4 Take ownership for work and responsibility for the quality of work and impact on others

Water distribution network technician specialism

K30 Valve and hydrant operations. Interruption to supply (DG3)

S28 Identify different valve types. Operate multiple valves, hydrants and washouts including isolation and recharging of mains

S29 Follow hygiene practices for example, disinfect equipment

S30 Select and use water quality testing equipment to test for water quality for example, chlorine, turbidity, taste, odour, and clarity

S35 Inspect and check network assets for example, air values, PRV, critical values, fire hydrant. Identify action

Wastewater network technician specialism

K54 Fat, oil, grease, and un-flushables procedures

S37 Install pressure gauges

S39 Follow hygiene practices for example, disinfect equipment

S40 Set up temporary loggers (flow and pressure)

S41 Select and use initial leakage detection equipment and methods. For example, acoustic and electronic, data logging, ground microphones, and correlators

S42 Use specific leakage detection equipment and methods to identify leakage pin-point for example, network or customer side

S44 Read and interpret technical data for example, flows and pressures

	<p>Wastewater network technician specialism</p> <p>K56 Investigatory equipment operations for example, CCTV operations</p> <p>S48 Trace or locate drain or sewer</p> <p>S49 Complete visual inspection to check assets for example, combined sewer overflow, non-return valves, flow control devices, and storage tanks. Identify action</p> <p>S51 Use digital inspection equipment for example, CCTV to check assets. Identify action</p> <p>S53 Select and use blockage removal equipment for example, rods and jetting equipment</p> <p>S54 Select and use equipment to apply first line maintenance techniques for example, replace seals, lubricate, de-silt, and de-scale</p> <p>For amplification and guidance refer to the WINT Specification: WINT-EPA-Specification-V2.0.pdf (euias.co.uk)</p>
<p>What tasks will I have to cover?</p>	<p>The task(s) must allow you to undertake the activities required for a practical observation. For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage' in the specification, refer to link on page 9.</p>
<p>What resources can I use?</p>	<p>Equipment and resources needed for the observation will be:</p> <ul style="list-style-type: none"> • provided by your employer • the tools, equipment and PPE required for the job • in good and safe working condition <p>Relevant work instructions/manuals must be available in hard copy or electronically.</p>
<p>How many questions will I be asked?</p>	<p>The independent assessor:</p> <ul style="list-style-type: none"> • will ask questions in relation to underpinning knowledge or where an opportunity to observe you completing an activity has not naturally occurred • may ask questions to follow up to seek clarification from you

Who will assess me?	An independent assessor, appointed by EUIAS.
Provisional Grading	The independent assessor will award a provisional grade. You must pass ALL the pass criteria in order to achieve a pass.
Overall grading for this component	Fail, Pass, Merit or Distinction.

Practice Component 1: Observation with Questions

You should have an opportunity to have a practice practical assessment which mirrors the real assessment. A practice practical would be set up for you using the structure in the table above by your employer or training provider.

Component 2: Interview based on Portfolio of Evidence


Overview

The interview is based on your portfolio of evidence. It is to allow you to demonstrate how you have met the KSBs in order to carry out your occupational role as a Water Industry Network Technician effectively and safely. The interview allows for testing of responses where there are a range of potential answers that cannot be tested through the multiple-choice test.



Step-by-Step Guide

The table below provides a step-by-step guide on how the interview based on the portfolio of evidence will be carried out:

Who will assess me?	1 independent assessor, appointed by EUIAS will assess you under examination conditions.
How will the interview be organised?	<p>Locations: Your interview will take place at your employer's premises or a suitable venue.</p> <p> Time: Your interview will be 1 hour 30 minutes – However, the independent assessor has the option to increase the time of your interview by up to 10%, to allow you to complete your last answer.</p> <p>Your interview will be:</p> <ul style="list-style-type: none"> • a discussion between you and the independent assessor • face to face or remote, as agreed • assessed and outcomes will be recorded by the assessor on official EUIAS interview documents • recorded using the relevant technology such as Microsoft Teams or an audio recording device. <p>You will have access to your portfolio of evidence throughout the interview.</p>
What topics will I have to cover?	<p>The questions you will be asked will cover the following topics:</p> <p>Core</p> <ul style="list-style-type: none"> • working in the water industry • the environment and sustainability

- collecting evidence
- fault-finding and problem solving; making recommendations
- team working
- information technology and written communications

The themes will be assessed in the context of your specialism:

Water distribution network technician

- detecting leakage
- pressure and flow measurement
- water sampling
- network optimisation
- network maintenance
- water fittings regulations

Water leakage technician

- monitoring leakage performance
- contributing to leakage trials
- step testing
- maintenance of meters or loggers

Wastewater network technician

- responding to pollution incidents
- reacting to alarms
- combined sewer overflow maintenance
- specialist techniques

For amplification and guidance refer to the WINT Specification:

[WINT-EPA-Specification-V2.0.pdf \(euias.co.uk\)](https://www.euias.co.uk/WINT-EPA-Specification-V2.0.pdf)

How many questions will I be asked?

- A minimum of 10 questions (based on the above topics)
- Set questions which maybe contextualised to the contents of your portfolio

	<ul style="list-style-type: none"> • Follow-up questions in order to seek clarification
Provisional Grading	The independent assessor will award a provisional grade. You must pass ALL the pass criteria in order to achieve a pass.
Overall grading for this component	Fail, Pass or Distinction

Portfolio of Evidence Requirements

The requirements are as follows:

Portfolio Mapping Document

You must map your portfolio of evidence to the KSBs covered by the interview. You must include a mapping document at the front of your portfolio that clearly references the location of the evidence in your portfolio.

For further guidance on how to map refer to:

- Section below 'How do I organise my portfolio of evidence and map it to the mapping document?'
- WINT Specification Section 5: Guidance on portfolio of evidence and apprentice mapping
- Apprentice Guide Appendix B for the portfolio mapping document

How do I organise my portfolio of evidence and map it to the mapping document?

Step-by-Step Guide

You must include a portfolio mapping document and place it at the front of your portfolio, see table above for guidance and where to locate the portfolio mapping document.

Your portfolio is not assessed. It serves two purposes:

- The independent assessor reviews your portfolio before the interview to help focus and contextualise their questions
- You should carefully prepare, index and map your portfolio as this will further support you during your interview. Your organised portfolio will allow you with ease to refer to examples and discuss the evidence with the independent assessor



What should I include in my portfolio?

Quality vs quantity

You should be supported in selecting and mapping evidence for your portfolio by your employer or training provider.

We would advise you to choose the best pieces of evidence and map them to each KSB which will be covered during your interview. To be confident of meeting the KSB, you should aim to have two/three pieces of evidence mapped to each KSB.

Examples of acceptable evidence:

- that is mapped against the relevant KSBs that will be assessed by the interview
- workplace documentation/records, for example job task sheets/job card/times sheets, equipment maintenance /service records related to the apprentice
- witness statements signed and dated by coaches/trainers
- any employer contributions should focus only on direct observation of evidence (for example witness statements) rather than opinions
- annotated photographs/diagrams
- video clips (maximum total duration 10-minutes); the apprentices must be in a view and identifiable

The above is not a definitive list. You can include other relevant evidence sources.



You **must not** include in your portfolio any methods of self-assessment.

Evidence must be:

- produced by you (authentic)
- relevant to the standard (K, S or B) that it is mapped to
- produced during the time you were carrying out your on-programme training

What can I do to prepare for the interview?

You should:

- be familiar with the structure of your portfolio
- know the KSBs covered by the interview

- know where you have mapped your KSBs by referring to your portfolio mapping document
- ensure there is quality evidence to cover every KSB in the interview
- practise mapping evidence and completing the evidence mapping grid
- know how you will be graded

The role of your employer or training provider

Employers or training providers are expected to support you in preparing your portfolio by:

- clarifying responsibility for supporting you in selecting and mapping evidence for your portfolio, including the role of employer coaches/mentors where applicable
- advising you on which pieces of evidence you should select to ensure that when it is looked at as a whole, your evidence provides coverage of all the required elements of the standard (KSBs) assessed in the interview
- supporting the mapping of your evidence and production of your mapping document
- authenticating evidence you provide is valid
- signing off your portfolio
- submitting your portfolio to EUIAS as part of Gateway

Practice Component 2: Interview based on Portfolio of Evidence

You should have an opportunity to have a practice interview which mirrors the real assessment. The practice interview based on your portfolio of evidence would be set up using the structure in the table above by your employer or training provider.

Component 3: Multiple-choice Test

Overview

The multiple-choice test is paper based. You will have 90 minutes to complete the test. The test consists of 50 questions.



































The multiple-choice questions will have four possible answers of which one will be correct.



Step-by-Step Guide

The table below provides a step-by-step guide on how the multiple-choice test will be carried out:

Who will start and finish your multiple-choice test?	You will sit your multiple-choice test in the presence of an invigilator.														
How will the question appear?	<p>Here is an example of how the question will appear:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="background-color: #e0e0e0;">Question 1</th> </tr> <tr> <td colspan="2" style="padding: 5px;">In a workplace, who is responsible for maintaining health and safety?</td> </tr> <tr> <th colspan="2" style="background-color: #e0e0e0;">Possible answers</th> </tr> <tr> <td style="width: 30px; padding: 5px;">a)</td> <td style="padding: 5px;">Employers</td> </tr> <tr> <td style="padding: 5px;">b)</td> <td style="padding: 5px;">Safety managers</td> </tr> <tr> <td style="padding: 5px;">c)</td> <td style="padding: 5px;">Most senior person on-site</td> </tr> <tr> <td style="padding: 5px;">d)</td> <td style="padding: 5px;">Everyone</td> </tr> </table> <p>You must select one answer that you think is correct. You will be provided with an answer sheet where you will be expected to shade in the answer you have selected. Here is an example:</p>	Question 1		In a workplace, who is responsible for maintaining health and safety?		Possible answers		a)	Employers	b)	Safety managers	c)	Most senior person on-site	d)	Everyone
Question 1															
In a workplace, who is responsible for maintaining health and safety?															
Possible answers															
a)	Employers														
b)	Safety managers														
c)	Most senior person on-site														
d)	Everyone														

	<div style="text-align: right;">  <p>ENERGY & UTILITIES INDEPENDENT ASSESSMENT SERVICE</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>Candidate ID Attempt</p> <p>Last Name</p> <p>First Name</p> <p>Exam Date Paper</p> <p>Centre Name</p> <p>Centre Number</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>MARKING INSTRUCTIONS</p> <p> ANSWER COMPLETED CORRECTLY</p> <p>Examples of how NOT to mark your examination sheet. These will not be recorded</p> <p> DO NOT partially shade the answer circle.</p> <p> DO NOT use ticks or crosses.</p> <p> DO NOT use circles.</p> <p> DO NOT shade over more than one circle.</p> <table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>1</td><td></td> <td>21</td><td></td> <td>41</td><td></td> </tr> <tr> <td>2</td><td></td> <td>22</td><td></td> <td>42</td><td></td> </tr> <tr> <td>3</td><td></td> <td>23</td><td></td> <td>43</td><td></td> </tr> </table> </div> <p> Always have a go even if you are not sure that it is the correct answer.</p>	1		21		41		2		22		42		3		23		43	
1		21		41															
2		22		42															
3		23		43															
<p>Can I take any resources into the exam room?</p>	<p>The test is closed which means that you cannot refer to reference books or any other materials. You will be provided with stationery on the day.</p> <p>A (scientific) calculator is required for the test.</p>																		
<p>Can I have access to the internet?</p>	<p>No access to the internet is allowed and this means you must not take your SMART watch into the exam room.</p>																		
<p>How will the multiple-choice test be organised for me?</p>	<p>Locations: Your multiple-choice test will take place at your employer's or training provider's premises or a suitable venue.</p> <ul style="list-style-type: none"> • You will take the test in a quiet space and in the presence of an invigilator • Your test will be scheduled by your employer or training provider with the EUIAS • If you fail the multiple-choice test, you can re-sit or re-take the failed test at your employer's discretion. There are no limits to the number of re-sits or re-takes you can take but it is important to revise and ensure that you are confident with the knowledge you are being tested on 																		

What criteria will I have to learn?

AND

How many questions will be asked on each criteria?

The multiple-choice test questions are knowledge based and sample the 3 core knowledge criteria. Below is a list of the knowledge criteria, assessed in the multiple-choice test along with the range of questions that will be allocated to a multiple-choice test paper:

Number of Questions	Knowledge
4-6	<p>K1 Core</p> <p>Overview of water and wastewater industries</p> <ul style="list-style-type: none"> • Regulators and stakeholders (roles and powers): • Drinking Water Inspectorate (DWI) • Water Services Regulation Authority (OFWAT) • Customer Council for Water (CCWater) • Environment Agency (EA) • Health and Safety Executive (HSE) • Department for Environment Food and Rural Affairs (Defra) • Highway Authority • Market Operator Services Limited (MOSL) (wholesale and retail)
2-4	<p>K3 Core</p> <p>Business operation considerations:</p> <ul style="list-style-type: none"> • How activities may impact customers <ul style="list-style-type: none"> ▪ financial constraints ▪ ethical business practices • Customer Experience Measure (CMEX). • Regulatory and legislative performance measures: <ul style="list-style-type: none"> ▪ Guaranteed Standards Scheme (GSS) ▪ Director General (DG) - response to written complaints (DG7)

	3-5	K6 Core	<ul style="list-style-type: none"> • Water and wastewater science • Microbiological parameters • Chemical parameters • Aesthetic parameters • Prescribed concentration or value, or legal limits • Industry target standards: how they may vary across companies
	2-4	K7 Core	<ul style="list-style-type: none"> • Maths commonly used in the water and wastewater industries • S.I units • Calculations • Standard form • Measurement of distance, area, volume and flow, and unit conversion • Simple transposition of formula • Routine flow and hydraulics theories, principles, and calculations
	1-2	K9 Core	<ul style="list-style-type: none"> • Access to Private Land, Streets and Wayleaves
	1-2	K10 Core	<ul style="list-style-type: none"> • Duty to maintain apparatus in streets (Highway defect notices – section 81)
	13-15	K11 Core	<ul style="list-style-type: none"> • Health and Safety at Work Act – responsibilities • Management of health and safety at work regulations • Control of Substances Hazardous to Health (COSHH) • Risks and hazards

- Risk assessments and controlling risk
- Control methods for harmful substances and chemicals, effluents, and sludge
- Health and safety signage
- Personal Protective Equipment (PPE)
- Manual handling
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
- Asbestos awareness
- Lone working
- Confined spaces awareness
- Awareness of excavation support
- Working at height
- Working time directive
- First aid
- Emergency procedures
- Drug and alcohol awareness
- Permits to work
- Storage of tools, equipment and materials
- ATEX compliance (safety requirements of the workplace and equipment used in explosive atmosphere)
- Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)
- Pressure System Safety Regulations (PSSR)
- Provision of Work Equipment Regulations (PUWER)
- Lifting Operations and Lifting Equipment Regulations (LOLER)
- Safe isolation of plant and equipment (lockout, tagout)

	2-4	K13 Core	<ul style="list-style-type: none"> • Environment and sustainability • Environmental Protection Act • Types of pollution and control measures • Principles of sustainable development • Waste management and waste streams • Invasive species • Duty of Care in the Environmental aspect
	1-2	K21 Water distribution network technician	<p>The Water Supply (water fittings) regulations:</p> <ul style="list-style-type: none"> • waste • misuse • undue consumption • erroneous measurement • contamination
	1-3	K22 Water distribution network technician; and	
	1-3	K34 Water leakage technician	<p>National water hygiene:</p> <ul style="list-style-type: none"> • importance of water • water as a carrier of disease • potential contamination and its consequences • preventing contamination
	1-3	K23 Water distribution network technician	<p>Water science:</p> <ul style="list-style-type: none"> • Liquids, gases, and solid states commonly found in water industry • Elements, molecules, compounds, and ions • The pH scale, acids, and alkalinity • Physical, chemical, and biological process definition
	3-5	K24 Water distribution network technician; and	
4-6	K35 Water leakage technician		

- Water quality requirements
- Drinking water safety plans
- Water quality parameters and the role of water quality alarms
- Exceedance procedures
- Water quality incident investigation requirements
- Water quality records
- Consequences of failure

1-2 K25 Water distribution network technician

- Restoration of supplies
- Provision of alternative supplies

**2-4 K26 Water distribution network technician; and
4-6 K39 Water leakage technician**

Water network assets and design:

- pumps and control valves
- air valves
- PRVs (Pressure Reducing Valve)
- PSVs (Pressure Sustaining Valve)
- wash-outs and fire hydrants
- pumping stations
- treated water storage



**1-2 K29 Water distribution network technician; and
1-2 K40 Water leakage technician**

- Materials used in clean water networks (mains and services): regulation 31

1-2 K33 Water distribution network technician

- Sources of leakage
- High users
- Unaccounted for properties
- Change of use of buildings
- Theft investigation
- Domestic and commercial leakage

	<ul style="list-style-type: none"> • Determining pipe ownership • Notification process
1-3	<p>K42 Water leakage technician</p> <ul style="list-style-type: none"> • Pressure management • Low Pressure Register (DG2)
2-4	<p>K44 Wastewater network technician</p> <ul style="list-style-type: none"> • Wastewater science: • Liquids, gases, and solid states commonly found in water industry • Elements, molecules, compounds, and ions • The pH scale, acids, and alkalinity • Physical, chemical, and biological process definition • Nutrients • Odour
1-3	<p>K46 Wastewater network technician</p> <ul style="list-style-type: none"> • Sewer performance and flow surveys
1-3	<p>K47 Wastewater network technician</p> <p>Working in confined spaces:</p> <ul style="list-style-type: none"> • safety equipment • respiratory apparatus • lifting equipment
1-3	<p>K48 Wastewater network technician</p> <p>Wastewater networks assets and design:</p> <ul style="list-style-type: none"> • new connections • adopted sewers • private sewers • pipework responsibilities and data capture
1-3	<p>K49 Wastewater network technician</p> <p>Wastewater networks construction materials</p>
1-3	<p>K50 Wastewater network technician</p> <p>Wastewater network hydraulics and flow</p>

	<p>1-3 K51 Wastewater network technician Sewer pumping station operations</p> <hr/> <p> Remember the questions have been written to reflect the Water Industry Network Technician role as a whole and are not focussed on specific plant, machinery, or employer-specific processes. For amplification and guidance refer to Section 3 of the WINT Specification.</p>
<p>What should I do to prepare for the multiple-choice test?</p>	<p>You should be prepared to:</p> <ul style="list-style-type: none"> • revise the criteria listed above • ask your employer or training provider for additional questions that they have prepared to support you • attend the multiple-choice test which will last 90 minutes <p> While on-programme, the employer or training provider must ensure you are:</p> <ul style="list-style-type: none"> • familiar with all areas assessed by the multiple-choice test as listed above • supported in completing a practice test and provide you with constructive feedback to enable you to identify areas you need to carry out further revision in

Practice Component 3: Multiple-Choice test



You should have an opportunity to have a practice multiple-choice test which mirrors the real assessment. The practice multiple-choice test would be set up using the structure in the table above by your employer or training provider. The feedback provided will assist you with preparing for the actual multiple-choice test.

Overall grading

All assessment components contribute equally to your overall EPA grade.

Grades from individual assessment components will be combined in the following way to determine your overall EPA grade as a whole.

Observation with questions	Interview based on a portfolio of evidence	Multiple-choice test	Overall grading
Fail	Any grade	Any grade	Fail
Any grade	Fail	Any grade	Fail
Any grade	Any grade	Fail	Fail
Pass	Pass	Pass	Pass
Pass	Pass	Distinction	Pass
Pass	Distinction	Pass	Pass
Distinction	Pass	Pass	Pass
Distinction	Distinction	Pass	Merit
Distinction	Pass	Distinction	Merit
Pass	Distinction	Distinction	Merit
Distinction	Distinction	Distinction	Distinction

Any grade = fail, pass or distinction

Section 4: Resits and retakes

If you fail one or more EPA components you can re-sit or a re-take the failed component at your employer's discretion. Your employer needs to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, but a re-take does. You should have a supportive action plan to prepare for your re-sit or re-take.

Your employer and EUIAS will agree the timescale for your re-sit or re-take. A re-sit is typically taken within two months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required. It is typically taken within four months of the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full, unless in the opinion of the EUIAS exceptional circumstances apply outside the control of you or your employer.

Where any assessment method has to be re-sat or re-taken, you will be awarded a maximum EPA grade of pass, unless EUIAS determines there are exceptional circumstances which required a re-sit or re-take.

All assessment methods must be taken within a six month period, otherwise the entire EPA will need to be re-sat/re-taken.

Re-sits and re-takes will not be offered to you if you wish to move from pass to a higher grade.

The EUIAS resit and re-take policy can be found at:

<https://www.euias.co.uk/end-point-assessment/policies-and-fees/>



Section 5: Appendices

Appendix A: Glossary

Appendix B: Portfolio Mapping Document

Appendix A: Glossary

Amplification – provides more detail on how individual knowledge, skills or behaviours statements should be interpreted. Where the KSB statements, themselves are deemed self-explanatory, no amplification is provided. Assessment may include questions on anything identified in the amplification

Behaviours – mindsets, attitudes or approaches needed for competence. Whilst these can be innate or instinctive, they can also be learnt. Behaviours tend to be very transferable. They may be more similar across occupations than knowledge and skills. For example, team worker, adaptable and professional

Elements – are the knowledge, skills and behaviours and what is needed to competently undertake the duties required for an occupational standard

Guidance – is only provided where it is required to support interpretation of the KSB statements

Gateway – the stage of the apprenticeship where the apprentice, employer and trainer determine whether the apprentice is ready to undertake the End-Point Assessment

Independent Assessor – Will holistically assess the knowledge, skills and behaviours (KSBs) that you have been learnt throughout the apprenticeship. Their role as an Independent Assessor would involve assessing components 1 (Observation with Questions) and 2 (interview based on your portfolio of evidence)

Knowledge – the information, technical detail, and 'know-how' that someone needs to have and understand to successfully carry out the duties. Some knowledge will be occupation-specific, whereas some may be more generic

Options / Pathways – a specialist route within an occupational standard that builds on the occupational competence for a new entrant to the occupation

Skills – the practical application of knowledge needed to successfully undertake the duties. They are learnt through on and/or off-the-job training or experience

Standard – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation’s duties. The occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships & Technical Education current criteria. For further details refer to:

[Water industry network technician / Institute for Apprenticeships and Technical Education](#)

Topic - is a collection of elements grouped into a theme e.g., Health and Safety

Appendix B: Portfolio Mapping Document

Introduction

Throughout the on-programme part of the apprenticeship, you will need to keep compile a portfolio of evidence to support the requirements of the interview. The evidence within the portfolio will need to be mapped to the KSB requirements using the mapping document overleaf.

The independent assessor will use the mapping document to review the evidence in their portfolio in preparation for the interview. The independent assessor will not assess the portfolio.

The portfolio mapping document below consists of

- 2 pages covering mapping for core requirements
- 2 pages covering mapping for the water distribution network technician specialism
- 1 page covering mapping for the water leakage technician specialism
- 1 page covering mapping for the wastewater network technician specialism

You should use the mapping for the core and the specialism you are following.

Your next steps

- Complete all the details on the first page and include employer details of where relevant competencies from your experience at work was gained
- Ensure each piece of evidence is signed off by your tutor/supervisor/mentor and lead provider (employer or training provider). You can use a number of different types of evidence to demonstrate your competence as described in Section 6 of the Specification – ‘What to include in the portfolio?’. For further guidance, you must seek advice from your tutor/supervisor/mentor and lead provider
- Map evidence to the criteria in the following pages using a referencing system indicating where the evidence for the criteria is located in your portfolio e.g., work based evidence Job 1 (J1) page 5 paragraph 2. This will allow the independent assessor to locate the section or specific piece of evidence being discussed with you during the interview
- Place the portfolio mapping document at the front of the portfolio of evidence

- Your lead provider must make arrangements for EUIAS to have access to your portfolio including the portfolio mapping document at Gateway

Portfolio Mapping Document

Mapping Sign off on Portfolio Completion:

Apprentice Name (Print)	Apprentice Signature	Training Provider (Company)	Training Provider Signatory	Date of Sign Off

GROUP 1: (Core) Working in the water industry

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K2	Technician's role. Limits of autonomy. Different teams and functions involved in operations: how they work together			

GROUP 2: (Core) The environment and sustainability

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S6	Conduct and assess impact of activity for example, environmental, cost, reputation, safety, and health. Apply control measures			
S7	Comply with environmental and sustainability regulations and requirements. For example, safe disposal of waste, re-cycling or re-use of materials, and efficient use of resources			
S8	Apply principles of sustainable development. For example, in choice of materials			
B2	Prioritise and promote the environment, and sustainability			

GROUP 3: (Core) Collection evidence

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S10	Collect mitigation data or evidence			

GROUP 4: (Core) Fault-finding and problem solving: making recommendations

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K14	Fault finding and problem-solving techniques: root cause analysis and diagnostics. Optimisation			
S12	Identify issues. Apply fault-finding and problem-solving techniques: identify root cause. Resolve faults			
S13	Consider, identify, and promote areas for improvement. For example, in relation to quality, cost, time, safety, and impact			

GROUP 5: (Core) Team working

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K19	Team working and culture. How to work as part of a team, the importance of establishing and meeting the requirements of different roles. Negotiation and conflict management techniques			
K20	Equality, diversity, and inclusion in the workplace			
S18	Identify and organise resources to complete tasks. For example, equipment, traffic management, and personnel			
S19	Prioritise work activities			
S23	Liaise with, negotiate with, and handle conflict in individual or group environments			
B5	Team-focus to meet work goals: support others			
B6	Respond and adapt to work demands			
B7	Committed to continued professional development to maintain and enhance competence in own area of practice			

GROUP 6: (Core) Information technology

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K15	Information and digital technology: email, word processing, spreadsheets, presentation, remote working platforms, and work and asset management systems. General Data Protection Regulation (GDPR). Cyber security			
S14	Use information technology. Follow cyber security requirements. Comply with GDPR			



GROUP 7: (Water distribution network technician) Detecting leakage

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K32	Leakage monitoring methods and equipment: leak noise correlators, ground microphones, listening stick, acoustic loggers, and step test. 'Reactive' use of flow meter data (telemetry or nightlines)			
S34	Select and use leakage detection tools and methods to identify source of leakage. For example, step testing, acoustic and electronic, data logging ground microphones, and correlators			

GROUP 8: (Water distribution network technician) Pressure and flow measurement

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K31	Water distribution network technician. Pressure management. Low Pressure Register (DG2).			
S25	Read and interpret technical data for example, flows and pressures			
S26	Install pressure gauges			
S27	Conduct flow and pressure measurements			
S32	Set up temporary loggers (flow and pressure)			

GROUP 9: (Water distribution network technician) Water sampling

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K28	Water quality monitoring, sampling, and testing requirements and techniques. Equipment, resources, and materials used. Sampling points			
S31	Sample for chemical and micro-biological analysis			

GROUP 10: (Water distribution network technician) Network optimisation

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S33	Carry out network optimisation activity. For example, PRV, PSV, and air valve maintenance			



GROUP 11: (Water distribution network technician) Network maintenance

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K27	Types of maintenance: planned preventative maintenance, and reactive. Calibration requirements			
S36	Select and use equipment to complete planned preventative maintenance. For example, conduct high velocity mains cleansing and low turnover flushing			

GROUP 12: (Water distribution network technician) Water fittings regulations

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S24	Apply and enforce water fittings regulations to customer installations for example, rainwater harvest systems and solar panels			

GROUP 7: (Water leakage technician) Monitoring leakage performance

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K36	Leakage detection operations. Sources of leakage. High users. Unaccounted for properties. Change of use of buildings. Theft investigation. Customer side leakage. Determining pipe ownership			
K37	Leakage performance monitoring methods and equipment: leak noise correlators, ground microphones, listening stick, acoustic loggers, and dynamic pressure modelling. Data logging operations. 'Proactive' use of flow meter data (telemetry or nightlines)			
S43	Conduct targeted DMA (district metered area) survey			
S45	Access, download, and interpret data from pressure and flow loggers			

GROUP 8: (Water leakage technician) Contributing to leakage trials

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K38	New leakage technology trials			
S46	Test and assess application of innovative leakage equipment			

GROUP 9: (Water leakage technician) Maintenance of meters or loggers

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K43	Types of maintenance: planned preventative maintenance, and reactive. Calibration requirements			
S47	Apply maintenance practices to meters and loggers. Identify and arrange repairs			

GROUP 10: (Water leakage technician) Step testing

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K41	Valve and hydrant operations			
S38	Conduct step testing using valves			



GROUP 7: (Wastewater network technician) Responding to pollution incidents

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K45	Regulatory pollution reporting requirements and individuals limits of authority. Flooding reporting (DG5)			

GROUP 8: (Wastewater network technician) Maintenance

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K52	Types of maintenance: planned preventative maintenance, and reactive			
K53	Combined sewer overflows operation and maintenance requirements			

GROUP 9: (Wastewater network technician) Reacting to alarm

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S55	Follow alarm response procedures			

GROUP 10: (Wastewater network technician) Specialist techniques

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K55	Water jetting operations.			
K57	Sonde equipment for location of blockages or defects.			
S50	Use dye testing to trace and investigate cross or illegal connections.			
S52	Use sonde equipment.			



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