ENERGY & UTILITY SKILLS

Skills for a greener world

EUIAS Level 2 End-point Assessment for Water Network Operative
(Clean Water Network Operative; Waste Water Network Operative)

Specification

QAN 610/0213/6

EUSR ENERGY & UTILITIES INDEPENDENT ASSESSMENT SERVICE ENERGY & UTILITIES jobs ENERGY & UTILITY SKILLS PARTNERSHIP NSAP

EUIAS End-point Assessment

Specification for

Level 2 Water Network Operative

(Clean Water Network Operative; Waste Water Network Operative)

QAN 610/0213/6

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Updates to this specification

Since the first publication of the EUIAS Water Network Operative Specification – Clean Water Network Operative; Waste Water Network Operative, the following updates have been made.

Version	Date first published	Section updated	Page(s)
V2.0	September 2023	Revised using new EUIAS specification template	All
V1.2	February 2022	First published	All

Section 1: At a Glance EPA Summary

Qualification name	EUIAS Level 2 End-point Assessment for Water Network Operative
Ofqual qualification number	610/0213/6
Standard reference	ST0898
Assessment plan	ST0898/V1.1
Standard title	Water Network Operative
Pathways	Clean Water Network Operative Waste Water Network Operative
Level	2
Gateway pre-requisites submitted to EUIAS	Apprentice has: • achieved English and maths qualifications in line with the apprenticeship funding rules • compiled and submitted a portfolio of evidence, which the interview will be based on
On-programme duration	Typically 18 months
Gateway readiness	Apprentice has met all Gateway pre-requisites. Employer completes, signs and submits Gateway Eligibility Form (GER) form to EUIAS. See Appendix B, WNO Supporting Documents 'Gateway Eligibility Form.'
End-point assessment duration	Typically 3 months after the Gateway

End-point assessment methods and their order	• Observation with questions • Interview based on portfolio of evidence • Multiple-choice test
End-point assessment methods and component grading	Observation with questions: Fail, Pass or Distinction Interview based on portfolio of evidence: Fail, Pass Multiple-choice Test: Fail or Pass
Overall Grading	Fail; Pass or Distinction
Certification	EUIAS request Apprenticeship completion certificates from the ESFA
Glossary of Terms	Appendix A, WNO Supporting Documents

Objective

The purpose of the Water Network Operative (WNO) end-point assessment (EPA) is to confirm that an apprentice is fully capable of doing their job before they receive their apprenticeship certificate. It also helps to demonstrate that what an apprentice has learned can be applied in the real world.

Once the apprentice has completed the WNO end-point assessment requirements successfully and has been certified they could take on the following job roles:

- Mains layer
- Repair and maintenance operative
- Service layer
- Utility operative
- Water operative

Gateway Readiness

The employer must be satisfied that the apprentice is consistently working at, or above, the level of the occupational standard. Gateway pre-requisites are listed in the summary table above.

Recognition of prior learning (RPL)

EUIAS does not recognise any apprentice prior learning (RPL) or prior achievement (RPA) for the purpose of amending the assessment requirements of any end-point assessments.

Please refer to the EUIAS RPL and RPA policy at www.euias.co.uk/end-point-assessment/policies-and-fees

In order for EUIAS to award an end-point assessment qualification, the apprentice must successfully complete all required assessment components with EUIAS. This means that:

- each of the EPA components must be completed in full with EUIAS
- where an apprentice transfers to EUIAS from another EPAO they have to undertake the entire EPA with EUIAS
- components of the EPA cannot be certificated in isolation
- evidence produced for the portfolio must be related to the time the apprentice is on their apprenticeship programme to demonstrate current practice
- examples used by the apprentice, during the interview, must relate to the time they were on their apprenticeship programme

This does not affect the Gateway requirements which must be met in order for an apprentice to be eligible for end-point assessment.

This does not affect any reasonable adjustments that may be granted.

Section 2: End-point Assessment Components

Component 1: Observation with Questions

Overview

In an observation with questions, an independent assessor, appointed by EUIAS, observes an apprentice undertaking work as part of their normal duties, under normal working conditions. The apprentice will demonstrate the application of the relevant core and specific job role knowledge, skills and behaviours (KSBs) through naturally occurring evidence. The observation must be of an apprentice completing their usual work and simulation is not permitted. The independent assessor will ask questions in relation to underpinning knowledge or where an opportunity to observe an activity has not naturally occurred.

The apprentice will be observed carrying out the following activities:

- Work preparation: complete risk assessment, select tools and equipment, check signing, lighting and guarding
- Excavation – in full or part
- Construct and connect a service; use tools and equipment
- Construct and connect a mains; use tools and equipment

The apprentice must be allowed to synoptically demonstrate the application of the relevant core and specific job role knowledge, skills and behaviours (KSBs) through naturally occurring evidence. The independent assessor will ask questions before or during the observation. To remain as unobtrusive as possible, the independent assessor will ask questions during natural breaks between tasks and after completion of work rather than disrupting the apprentice's flow.

Centres unfamiliar with this standard are strongly recommended to use the EUIAS Practical Observation Review service to help ensure the practical task is suitable for end-point assessment.

Step-by-Step Guide

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

Assessors	1 independent assessor, appointed by EUIAS.
Practical structure	The total assessment time is 5 hours – the time for questioning is included in the overall assessment time. Apprentices may be assessed completing the duties over one or more sites. An independent assessor may observe only one apprentice at any one time, to ensure quality and rigour. The independent assessor will ask standardised open questions, with follow up questions as appropriate, to confirm their understanding of the rationale for actions taken and the choices made to complete the tasks. Questioning will take place both during and after work completion. The observation with questions, may not be split other than to allow the apprentice to move from one location to another and for meal/comfort breaks. During these breaks, the clock will be stopped and then restarted to ensure that the assessment duration is not reduced. **See pages [12-23] for the full list of KSBs to be covered in the practical observation**
Where will the	The observation with questions should take place in a location where water utility work is the responsibility of the apprentice's employer.

assessment take place?	Questioning, after work completion, must take place in a quiet room, free from distractions and influence.
What are the tasks that will be covered?	The assessment task must allow the apprentice to undertake the activities. For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage' below pages [12-23]. The observation must also allow the apprentice to demonstrate the behaviours listed in the next section.
Who sets the task(s)?	Employer or training provider set the tasks based on the guidance provided in this Specification. Centres unfamiliar with the WNO standard should use the EUIAS Practical Observation review Service to review proposed practical tasks before end-point assessment takes place. The task must provide apprentices with the opportunity to achieve all the KSBs assessed in the practical observation. EUIAS will work with the employer and/or training provider to review the practical task briefs/job task sheets which are based on the activities described above. The apprentice must be provided with both written and verbal instructions by the independent assessor on the tasks.
What resources can the apprentice use?	Equipment and resources needed for the observation must be: • provided by the employer • the plant, machinery, equipment and PPE required for the job • in good and safe working condition Relevant work instructions/manuals must be available in hard copy or electronically.
How many questions will the apprentice be asked?	The independent assessor: • will ask a minimum of five questions across the tasks • may ask follow-up questions in order to seek clarification • will ask questions about KSBs that were not observed to gather assessment evidence. These questions are in addition to the minimum five questions for the observation

What will the questions focus on?	Underpinning knowledge and/or skills and behaviours where an opportunity to observe them has not occurred.
Grading	Fail, Pass or Distinction.

Observation Knowledge, Skills and Behaviours (KSBs) coverage

The observation with questions covers:

Observation Elements: Knowledge	Amplification and Guidance (where required)
K1: Core. Health and safety practice: risk assessments and safe systems of work, permits to work, working in confined spaces, personal protective equipment (PPE), manual handling	Includes (but not limited to) explanation of: • Health and Safety responsibilities of employers and employees • How risk assessments are carried out and how they relate to safe systems of work • Where PPE fits into the hierarchy of risk • How manual handling risks are managed
K4: Core. Principles and processes that underpin the location of utility network assets; health and safety guidance on avoiding damage to underground utility services	**Principles:** • The main risks of digging and how these risks are managed • Colour of water and sewerage pipes • Private and public ownership based on location of assets At Level 2, an apprentice should be aware of the general principles but would not be expected to understand in any significant depth **Processes:** • Using maps and drawing • Reading posts and plates

Observation Elements: Knowledge	Amplification and Guidance (where required)
	• Hand digging where required • Obtaining the correct permissions to dig • Location of buried assets using tools such as a metal detector, Cat and Genny Apprentices should know how to locate underground assets on the company's GIS, challenges associated with build overs and permissions required to build over the location of utility network assets **Specific H&S Guidance:** • Includes PPE, risk assessments, use of GIS and visual checks. • May also include any of the following: site plans, historical paper plans, use of cable location devices (e.g. Cat and Genny), marking ground, National Grid involvement with electric/gas mains, trial holes and safe digging **Specific digging related H&S guidance:** HSG47

Observation Elements: Knowledge	Amplification and Guidance (where required)
K5: Core. Checks and operation requirements for commonly used utility network operations equipment and tools: utility location equipment/tools, pneumatic gun, hand/power tools – power disc cutter, chain saw, drills	Includes (but not limited to) explanation of: • The general approach to checks and operational requirements of equipment and tools • The specific checks and operational requirements of any equipment and tools used during the observation
K8: Core. Excavation techniques: open cut, moling, vacuum extraction; and trench support techniques: proprietary systems, sheeting and mechanical	Includes (but not limited to) explanation of: • The main differences between the excavation techniques • The broad advantages and disadvantages of open trench and trenchless technology • How to support excavations using mechanical means • How to prevent an excavation collapse by angling back the sides of the excavation (‘battering’)
K12: Core. Communication techniques – written, verbal; customer service techniques	
K14: Option 1: Clean water network operative. Procedures for the construction and connection of clean water network assets (mains and services)	**Procedures** include (but are not limited to): • Hygienic working • Trenching • Pipe handling

Observation Elements: Knowledge	Amplification and Guidance (where required)
	• Jointing and fusion techniques • Testing • Commissioning
K19: Option 2: Waste water network operative. Procedures for the construction and connection of waste water network assets (mains and services)	**Procedures** include (but are not limited to): • Trenching • Pipe handling • Jointing and fusion techniques • Testing • Commissioning

Observation Elements: Skills	Amplification and Guidance (where required)
S1: Core. Identify hazards and implement controls to reduce risks; comply with method statements	**Risks** include (but are not limited to): • Contamination and illness • Hepatitis and aids • Musculoskeletal injury • Traffic accidents

Observation Elements: Skills	Amplification and Guidance (where required)
	Controls include (but are not limited to): • Risk assessment, generic, specific and dynamic • Method statements/safe systems of work • PPE **Hazards** include (but are not limited to): • Contaminated water/sewage • Buried utility services and other infrastructure • Needles • Traffic • Adverse weather • Working on pressurised water systems **Dynamic Risk Assessment:** The apprentice should be able to demonstrate completing a dynamic risk assessment using their company's preferred format
S2: Core. Interpret work instructions/engineering instructions and determine actions	**Work Instructions:** The apprentice should be able to explain: • How they are allocated work (e.g. Mobile work manager, work order, maintenance schedule tasks, work scheduling system etc) • How they check the location of a job

Observation Elements: Skills	Amplification and Guidance (where required)
	• What additional information they may require before travelling to the job • How to read and interpret work instructions
S3: Core. Identify and organise resources to undertake activities	**Resources** include: people, equipment, time, materials **Activities**: • Include customer visits, carrying out investigations, sampling • May include unblocking sewers (waste),leak detection (water), inspection/repair/replacement of pumps
S4: Core. Comply with workplace health, safety & environmental policy and practice; use of Personal Protective Equipment (PPE) and safety equipment	The apprentice should be able to explain: • The key risks and control measures associated with the activity being observed • The key environmental risks and control measures associated with the activity being observed
S5: Core. Check signing, lighting and guarding; address issues if required	The apprentice should be able to explain: • When NRSWA applies • The risks being managed • How they work when NRSWA doesn't apply

Observation Elements: Skills	Amplification and Guidance (where required)
	Issues may include restriction of traffic, deteriorating conditions, road traffic collision, work taking longer than 60 minutes etc
S6: Core. Excavate holes for utility network services	The apprentice should be able to explain: • The excavation technique being used • The key risks and control measure, specifically avoiding striking underground assets
S7: Core. Monitor and maintain site conditions; good housekeeping	
S8: Core: Identify, locate and avoid utility supply apparatus and sub-structures	The apprentice should be able to explain: • The types of apparatus and structures that may be encountered • How these may be located and avoided • The limitations of the detection technique in the activity being observed
S9: Core. Select, check and operate equipment and tools; report faults if required	**Equipment and tools:** • Should include any equipment or tools provided in the Apprentice's work vehicle • May include jetting, CCTV camera, manhole lifting keys, metal detector, Cat and Genny, leakage detection equipment, valve keys, portable water testing equipment, crowbar, screwdriver

Observation Elements: Skills	Amplification and Guidance (where required)
	The apprentice should be able to explain: • How they select, check, and operate the equipment required for the activity they are undertaking • How they identify and report faults
S11: Core. Communicate with colleagues and/or stakeholders, for example, statutory agencies and members of the public, customers	The apprentice should be able to explain: • When they might need to communicate with a colleague • How they make sure they have been understood • How and when it may be necessary to communicate with an external organisation • How to communicate with a member of the public
S15: Core. Record information, for example job reports, time sheets	The apprentice should be able to explain how they are allocated work and record work completed
S16: Removed	
S20: Option 1: Clean water network operative. Join materials by mechanical means on clean water services, for example encapsulation, straight, ferrule, flange connections.	**Jointing –** the apprentice should be aware of and follow the Company's guidance on jointing and tapping detailing permissible materials and construction arrangements

Observation Elements: Skills	Amplification and Guidance (where required)
	Details the apprentice would be expected to know include • Minimum spacing between tappings • That individual service pipes shall only be connected to the main, using under pressure tappings, once the main has passed a bacteriological sample and been commissioned The apprentice should be able to explain: • How water mains can be connected using a mechanical joint, and why this may be necessary • How a service can be connected to a water main using mechanical means, and how the connection location is selected
S21: Option 1: Clean water network operative. Drill and tap clean water services	The apprentice should be able to explain: • Why and how a clean water is tapped • The hygiene requirements • The key risks and control measures
S22: Option 1: Clean water network operative. Install water supply services	The apprentice should be able to explain: • How a service is laid, connected to the main, flushed and connected to the property (if this is required)

Observation Elements: Skills	Amplification and Guidance (where required)
	• The hygiene procedures associated with this activity
S23: Option 1: Clean water network operative. Conduct disinfection procedures for clean water mains and services	The apprentice should be able to explain: • Why and how a water main is disinfected • Why and how a service is disinfected
S28: Option 1: Clean water network operative. Use pumps and dewatering equipment	The apprentice should be able to explain: • Why and how pumps may be needed when working on a clean water network • Common issues with using pumps
S30: Option 2: Waste water network operative. Join materials by flexible seals on waste water services	The apprentice should be able to explain why and how rubber seals are used to join materials in a wastewater network
S31: Option 2: Waste water network operative. Install waste water supply services	The apprentice should be able to explain: • The difference between sewers and drains • The installation requirements of each
S37: Option 2: Waste water network operative. Use pumps and dewatering equipment to mitigate and maintain flow in the network	The apprentice should be able to explain one or more ways in which pumps and dewatering equipment can be used to mitigate issues and maintain flows

Observation Elements: Skills	Amplification and Guidance (where required)
S40: Option 2: Waste water network operative. Decontaminate equipment, tooling and PPE	The apprentice should be able to explain: • Why decontaminating equipment, tools and PPE is important • How they do this for each category

Observation Elements: Behaviours	Amplification and Guidance (where required)
B1: Core. Prioritises health, safety and environment when undertaking work	
B4: Core. Professional, for example wears work attire according to company requirements, polite and courteous, maintains security of business specific and personal data	
B5: Core. Self-motivated, for example manages own time effectively, takes responsibility to complete the job	
B6: Core. Pride in work, for example works to agreed quality targets and standards	

Observation with Questions Roles and Responsibilities

Role	Responsibility
Independent Assessor	Record and report assessment outcome decisions for each apprentice, following instructions and using assessment recording documentation provided by EUIAS.
Employer/Training Provider	The training provider must liaise effectively with the employer to ensure the apprentice is prepared for the observation with questions. Provide the venue for the observation which must be suitably equipped to allow the apprentice to attempt all aspects of the observation. Provide all necessary tools and equipment for the apprentice. Ensure the apprentice has access to the resources used on a daily basis. Use the EUIAS Practical Observation review Service to review fitness for purpose of the assessment task
EUIAS	Arrange for the observation to take place, in consultation with the employer/training provider and independent assessor.

Component 2: Interview (based on a portfolio of evidence)

Overview

The interview is based on the apprentice's portfolio of evidence and focuses on the KSBs. The interview allows for testing of responses where there are a range of potential answers.

The portfolio, compiled throughout the apprenticeship and completed by Gateway must be submitted to EUIAS.

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:

Assessors	1 independent assessor approved by EUIAS
Interview (based on the portfolio) structure	**Number of questions:** A minimum of eight open questions. Additional follow up questions are allowed, to seek clarification. **Location**: A quiet room on the employer's premises or a suitable venue for example a training provider's premises or another employer's premises. **Time**: 1 hour **The interview will be:** • face to face or remote, as agreed • recorded in writing using the interview record template provided by EUIAS • video recorded using relevant technology such as Microsoft Teams or an audio recording device • conducted under examination conditions The apprentice will have access to their portfolio of evidence throughout the interview. Portfolio:

	• The apprentice's Manager/Mentor will typically support the development of the evidence portfolio in accordance with company policy and procedures • See 'Portfolio of Evidence Requirements' guidance below on the content of evidence • The portfolio must contain sufficient quality evidence relating to each element of the standard covered by the interview. Typically, this will be contained in small number of job write-ups produced towards the end of the training periods • Although questioning will cover ALL the elements of the standard (listed below in this section of the Specification), they will prioritise areas according to what they see in the portfolio
What topics will be covered?	For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage below pages [28-36].
When will the portfolio of evidence be referred to?	**The portfolio of evidence**: • will be reviewed by the independent assessor before the interview • can be referred to by the apprentice to illustrate their answers Note: the portfolio of evidence is not directly assessed.
Grading	Fail or Pass

Portfolio of Evidence Requirements

The requirements are as follows:

Portfolio Mapping Document The apprentice must map their portfolio of evidence to the KSBs as this evidence will be used by the independent assessor to assess the apprentice during the interview. The portfolio mapping document must be clearly referenced and included at the front of the portfolio.

For further guidance on mapping refer to:

- Section 5 Practice Guidance on portfolio of evidence and apprentice mapping
- Appendix D, WNO Supporting Documents 'Portfolio Mapping Document.'

How will the training provider submit the apprentice's Portfolio to EUIAS?

As part of the pre-requisite gateway requirements the apprentice must have compiled and submitted a portfolio of evidence that includes a portfolio mapping document (placed at the front of the portfolio), which the interview will be based on.

Interview Knowledge, Skills and Behaviours (KSBs) coverage

The Interview based on portfolio of evidence covers:

Interview Elements: Knowledge	Amplification and guidance (where required)
K6: Core. Before/after use checks, maintenance and storage requirements for commonly used utility network operations equipment and tools: utility location equipment/tools, pneumatic gun, hand/power tools – power disc cutter, chain saw, drills	The apprentice can explain: • The types of checks they carry out on the equipment and tools they use • Why these checks are important
K11: Core. Reporting channels; limits of authority	
K15: Option 1: Clean water network operative. Procedures for the repair of mains clean water network assets	The apprentice can explain: • The importance of hygiene when undertaking mains repairs, and how this is ensured • The different techniques for repairing minor and major bursts • Any cut and replace or trenchless procedure they are familiar with
K16: Option 1: Clean water network operative. Procedures for clean water network emergencies	**Procedures** may include**:** • Tankering from other sites • Provision of emergency supplies • Sampling and testing of emergency supplies

Interview Elements: Knowledge	Amplification and guidance (where required)
	• Issuing boil/do not use notices • Mutual assistance
K20: Option 2: Waste water network operative. Procedures for repairs in waste water: mechanical and patches (hot, cold and ultraviolet)	**Identifying and Approving Repairs:** The apprentice should be aware how repairs on the sewer network are: • Identified, e.g. customer complaint, CCTV etc • Arranged, e.g. through contractor or internal team **Procedures for repairing sewers** to include: • Open cut • Trenchless • Replacement sections • Advantages and disadvantages of different methods Trenchless methods include: • Removing roots via jetting or cutting • Slip-lining • Patching (hot, cold and ultraviolet) • Advantages and disadvantages of each

Interview Elements: Knowledge	Amplification and guidance (where required)
K21: Option 2: Waste water network operative. Procedures for dealing with emergencies, internal contamination flooding (DG5), pollution (Category 1-4)	**Emergency** procedures may include: • The role of emergency services and when they should be involved • How command and control changes when a major incident is declared • Over-pumping • Provision of sandbags **Internal Flooding** may include: • The Company's procedures • Response time • Definition of internal flooding • Reporting of internal flooding • Level of clean-up provided • GSS payments **Pollution incident** may include how pollution incidents are: • Initially reported (e.g. member of the public, EA Officer, self-reporting) • Investigated • Classified and how category 1, 2, 3 & 4 pollution incidents broadly vary • Recorded

Interview Elements: Skills	Amplification and Guidance (where required)
S10: Core. Maintain and store equipment and tools, for example charge batteries, clean equipment, grease machines, re-fuel	The apprentice can explain how they maintain and store the equipment and tools that the work with
S12: Core. Use breathing apparatus	The apprentice can explain: • The use and limitations of breathing apparatus • When they have used breathing apparatus, even if only in training
S13: Core. Use gas detection equipment	The apprentice can explain: • The use and limitations of gas detection equipment • When they have used gas detection equipment
S14: Core. Carry out trench installation for example, sheeting, lightweight and proprietary systems	The apprentice can explain installing trench support systems
S17: Option 1: Clean water network operative. Carry out squeeze off activities to clean water services (Clean water)	The apprentice can explain: • The situations in which squeezing off might be appropriate • Avoiding repeated squeezing off in the same location • When they have used squeezing off

Interview Elements: Skills	Amplification and Guidance (where required)
S18: Option 1: Clean water network operative. Join materials by electro-fusion	The apprentice can explain: • Understanding the principles of electrofusion • Using electrofusion to join clean water materials
S19: Option 1: Clean water network operative. Join materials by butt fusion processes	**Materials:** typically used for potable water supply pipework include copper, stainless steel and various plastics, including cross-link polyethylene (PE-X), thermoplastic (ABS), medium-density and barrier polyethylene (MDPE), polybutylene, multilayer pipe and concrete for larger trunk mains **Butt fusion:** the apprentice can explain: • Understanding the principles of butt fusion • Using butt fusion to join clean water materials
S24: Option 1: Clean water network operative. Conduct repairs to clean water asbestos mains	The apprentice can explain: • Understanding the risks of working on asbestos mains and the associated company procedures
S25: Option 1: Clean water network operative. Conduct pressure and soundness (integrity of pipework) testing to clean water services	The apprentice can explain: • Understanding why pressure and soundness testing is required • Conducting pressure and integrity tests

Interview Elements: Skills	Amplification and Guidance (where required)
S26: Option 1: Clean water network operative. Use flow and line stopping procedures	The apprentice can explain: • Understanding why and how line-stopping are used • Conducting flow and line stopping procedures
S27: Option 1: Clean water network operative. Repair water network equipment, for example hydrants, values, boundary boxes	The apprentice can explain: • Understanding the range of network equipment that needs maintenance and the maintenance that each type requires • Conducting maintenance on network equipment
S29: Option 1: Clean water network operative. Apply clean water network emergency procedures	**Emergency procedures:** The apprentice can explain: • Providing alternative water supplies • Tankering water • Providing bowsers and bottled water • Sampling and testing of emergency supplies, • Issuing boil/do not use notices, • Stopping leaks • Extra chlorination
S32: Option 2: Waste water network operative. Prepare pipework for lining	The apprentice can explain: • Understanding why and how relining is used • Understanding the requirements for successful relining

Interview Elements: Skills	Amplification and Guidance (where required)
	• Undertaking relining activities
S33: Option 2: Waste water network operative. Prepare for rodding activities for example, break out concrete or manhole point	The apprentice can explain: • Understanding how and why rodding activities are required • Understanding the requirements for successful rodding activities • Having prepared for a rodding activity
S34: Option 2: Waste water network operative. Conduct repairs on waste water asbestos pipes	The apprentice can explain the risks of working on asbestos mains and the associated company procedures
S35: Option 2: Waste water network operative. Repair and maintain pressurised pipes on rising mains	The apprentice can explain: • Understanding that sewers and rising mains operate in a different manner • Understanding the maintenance requirements of rising mains • Having undertaken maintenance work on rising mains
S36: Option 2: Waste water network operative. Use mitigation methods to maintain flow on waste water networks flow, for example stopping or diverting	The apprentice can explain: • Understanding why mitigation techniques are required and how they are deployed in practice • Having undertaken mitigation methods

Interview Elements: Skills	Amplification and Guidance (where required)
S38: Option 2: Waste water network operative. Apply waste water network emergency procedures	**Emergency procedures** may include: • When to escalate to Duty Manager/emergency services • Over-pumping, jetting • Clean-up of external and internal out-of-sewer flooding • Deployment of sandbags
S39: Option 2: Waste water network operative. Apply cure in place patches	The apprentice can explain: • Understanding why and how cure in place patches are used • Having used cure in place patches

Elements: Core Behaviours	Amplification and Guidance
B2: Core. Adaptable, for example willing to accept changing priorities and working requirements	
B3: Core. Team player, for example keeps others informed, recognises personal and professional limitations and seeks advice when necessary, takes account of equality and diversity in interactions	
B7: Core. Committed to continued professional development	

Interview Roles and Responsibilities

Role	Responsibility
Independent Assessor	Record and report assessment outcome decisions for each apprentice, following instructions and using assessment recording documentation provided by EUIAS.
Employer/Training Provider	Ensure that the portfolio of evidence has been submitted to EUIAS at Gateway. The interview must be scheduled with EUIAS for a date and time which allow the apprentice to be well prepared. Ensure the apprentice has access to their portfolio before and on the day of the interview.
EUIAS	Arrange for the interview to take place, in consultation with the employer/training provider and independent assessor.

Component 3: Multiple-choice Test

Overview

The multiple-choice test is paper based. Apprentices have 60 minutes to complete the test. It consists of 40 multiple-choice questions.

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

The Pass mark is 28 correct answers.

For this paper:

- access to the internet or intranet is NOT allowed

Apprentices must take the test in a quiet space, free from distractions and influence, in the presence of an invigilator.

Multiple-choice Test Coverage

40% of questions will cover core knowledge and 60% will be relevant to the pathway (clean water, waste water) that the apprentice is following.

The table below lists each of the knowledge elements, assessed in the multiple-choice test. Amplification and guidance can be found in the table below.

Number of Questions	Knowledge	Amplification and Guidance (where required)
8 - 10	**K2:** Core. Health and safety regulations and procedures: Health and Safety at Work Act 1974, New Roads and Street Works Act 1991, Working at Heights, Provision and Use of Work Equipment Regulations (PUWER), Control of Substances Hazardous to Health (COSHH), Lifting Operations Lifting Equipment Regulations (LOLER), first aid, fire safety. Types and uses of asbestos and where they may come into contact; safe work practices, control measures, and protective	

Number of Questions	Knowledge	Amplification and Guidance (where required)
	equipment needed to undertake asbestos mains work.	
6 - 8	**K3:** Core. Environmental requirements; Environment Protection Act 1990.	
3 - 5	**K7:** Core. Principles of traffic management and control.	**Principles** include (but are not limited to): • Identification of the NRSWA as the relevant act • Knowing that at least one person undertaking traffic management work must hold a NRWSA card and have it available on site for inspection • Understanding that schools will require special consideration
3 - 5	**K9:** Core. Emergency services, Highways authorities, Environment Agency; who they are, what they do; escalation procedures.	**Procedures** may include: • When emergency services, highways authorities and regulators such as Health & Safety Executive (HSE), Environment Agency (EA), Drinking Water Inspectorate (DWI) should be contacted • Self-reporting of pollution incidents to EA

Number of Questions	Knowledge	Amplification and Guidance (where required)
3 - 5	**K10:** Core. Industry structure and regulatory requirements; Drinking Water Inspectorate, The Water Services Regulation Authority (OFWAT), regulatory surveys.	**Regulatory surveys:** how they influence cMEX position, reward/consequences for good/poor cMEX performance. **Regulators:** role of regulators such as The Water Services Regulation Authority (OFWAT), DWI & EA.
3 - 5	**K13:** Core. Equality & diversity considerations in the workplace.	Includes (but not limited to): • The need to give everybody an opportunity regardless of protected characteristics, so far as is practicable • The need to make reasonable adjustments to job roles and work arrangements • Using gender neutral language • Avoiding stereotyping
3 - 5	**K17:** Option 1: Clean water network operative. Consequences of flooding and pollution, on people and the environment.	**Consequences** include (but are not limited to): • Risk to life, risk of injury, risks to wellbeing • Damage to property • Release of contaminants into the environment

Number of Questions	Knowledge	Amplification and Guidance (where required)
3 - 5	**K18:** Option 1: Clean water network operative. Principles of taking water samples.	**Principles** The apprentice should understand: • Sampling frequencies and schedules • Different bottles for microbiological/bacterial samples and chemical samples • Taking a representative sample, storage and transport of samples
3 - 5	**K22:** Option 2: Waste water network operative. Consequences of waste water flooding and pollution, on people and the environment.	**Consequences** include (but are not limited to): • Risk to life, risk of injury, risks to wellbeing • Damage to property • Release of contaminants into the environment
3 - 5	**K23:** Option 2: Waste water network operative. Decontamination risks and mitigations; biological hazards.	Includes (but are not limited to): **Risks -** contamination/infection from sewage, working in confined spaces **Mitigations -** risk assessments, PPE, washing, safe working practices when working in confined spaces **Hazards** - sewage, needles, inclement weather

Multiple-choice Test Roles and Responsibilities

Role	Responsibility
Invigilator	Approved by EUIAS. Attend induction training as directed by EUIAS.
Employer/Training Provider	Ensure that the multiple-choice test is scheduled with EUIAS for a date and time which allow the apprentice to be well prepared.
EUIAS	Arrange for the multiple-choice test to take place, in consultation with the employer/training provider. Mark multiple-choice test answers accurately according to the mark scheme and procedures.

Section 3: Grading and Grading Criteria

Component 1: Observation with questions

A Fail will be awarded if an apprentice has not achieved **all** the Pass descriptors.

To gain a Pass, an apprentice must successfully achieve **all** the descriptors for each KSB, as shown below.

To achieve a Distinction an apprentice must achieve all the pass descriptors and all of the following distinction descriptors.

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
Health and safety/ Housekeeping **K1** **S1 S4 S5 S7** **B1**	Conducts risk assessment; identifies hazards and implements control measures Conducts work in line with health, safety & environmental procedures, policy and practice; uses Personal Protective Equipment and safety equipment as specified by employer; conducts work in line with method statement and ensures	Explains compliance with health and safety procedures with reference to the positive and negative impact on individuals, business and the environment

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
	health, safety and the environment is prioritised Checks signing, lighting and guarding; identifies any non-compliance where it occurs and takes action to rectify Monitors and maintains site conditions, keeps work environment tidy and organised, for example storage of tools when not in use, no litter, no hazards	
Determine action/organise **S2 S3**	Identifies the task requirements using information provided and determines actions; seeks clarification where required	

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
	Identifies and organises required resources	
Tools and equipment **K5** **S9**	Conducts equipment/tool checks; raises any issues if appropriate Uses equipment and tools safely and in line with manufacturers' instructions/method statement	Gives reasons for undertaking equipment/tool checks in compliance with manufacturers and company policies and procedures
Locate utility network assets **K4** **S8**	Identifies, locates and avoids utility supply apparatus and sub-structures, following health and safety guidance on avoiding damage to underground utility services; causes no damage	
Excavate **K8** **S6**	Excavates holes for utility network services in line with work instructions	

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
Communication **Documentation** **K12** **S11 S15**	Provides verbal information and records accurate and full information required for the task; information is suitable for the audience, uses technical terminology accurately and appropriately	Explains how and why they would adapt communication to different audiences
Backfill and reinstate S16	Removed	
Professional **B4**	Acts professionally, for example, wears work attire according to company requirements, polite and courteous, maintains security of business specific and personal data	
Self-motivated **B5**	Assumes the responsibility to complete tasks within the limits of their authority without direction, managing own time	

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
Pride in work **B6**	Completes the tasks to set quality targets and standards, demonstrating pride in work	
Clean Water Network Operative option		
Construct and connect clean water network assets **K14** **S20 S21 S22 S23 S28**	Constructs and connects clean water network assets – clean water service and main, in line with specification/work instructions; caries out required techniques correctly in line with task requirement: join materials by mechanical means, drill and tap, install water supply, conduct disinfection procedures, use pump and dewatering equipment	Identifies and explains the potential issues that could arise during the work and how they mitigate against them

Observation KSBs	Pass Apprentices must meet all of the following pass descriptors	Distinction Apprentices must achieve all the pass descriptors and all of the following distinction descriptors
Waste Water Network Operative option		
Waste water network operative option **Construct and connect waste water network assets** **K19** **S30 S31 S37 S40**	Constructs and connects waste water network assets – waste water service and main, in line with specification/work instructions; caries out required techniques correctly in line with task requirement: join materials by flexible seals, install waste water supply services, use pumps and dewatering equipment to mitigate and maintain flow in the network, decontaminate equipment, tooling and PPE	Identifies and explains the potential issues that could arise during the work and how they mitigate against them

Component 2: Interview based on a portfolio of evidence

A Fail will be awarded if an apprentice has not achieved **all** the Pass descriptors.

To gain a Pass, an apprentice must successfully achieve **all** the descriptors for each KSB, as shown below.

Interview KSBs	Pass Apprentices must meet all of the following pass descriptors
Tools and equipment – maintenance and storage **K6** **S10**	Describes how they correctly maintain and store given equipment/tools, to meet company requirements
Reporting channels **K11**	Describes their reporting channels and limits of authority, identifying an issue they would report and to whom
Breathing apparatus **S12**	Describes when and how they have used breathing apparatus, outlining correct application
Gas detection **S13**	Describes when and how they have used gas detection equipment, outlining correct application
Trench installation **S14**	Describes when and how they have carried out trench installation using different methods for example, sheeting, lightweight and proprietary systems, outlining correct application

Interview KSBs	Pass Apprentices must meet all of the following pass descriptors
Adaptable **B2**	Describes a situation where they were willing to accept changing priorities and working requirements, the action they took, and what impact it had on the business
Team player **B3**	Describes how their contribution to team activities led to successful outcomes and how they achieved that, and how they take account of equality and diversity in interactions
Continued Professional Development (CPD) **B7**	Outlines different types of CPD they have undertaken, their plans for future CPD and the potential benefits it will bring to them and their organisation
Clean Water Network Operative option	
Repairs **K15** **S24 S27**	Describes how they have conducted repairs to clean water asbestos mains and water network equipment, identifying procedures they correctly applied
Specialist techniques **S17 S18 S19 S25 S26**	Describes how they have applied specialist techniques: squeeze off activities, joining materials by electro-fusion, joining materials by butt fusion, pressure and soundness testing, flow and line stopping, outlining correct application

Interview KSBs	Pass Apprentices must meet all of the following pass descriptors
Emergencies **K16** **S29**	Describes a clean network emergency situation where they have applied clean water network emergency procedures, outlining the procedures followed and why they are important
Waste Water Network Operative option	
Repairs **K20** **S34 S35 S39**	Describes how they have conducted repairs to waste water asbestos pipes and maintained pressurised pipes on rising mains, identifying repair procedures they have correctly applied, both mechanical and patches
Specialist techniques **S32 S33 S36**	Describes how they have applied specialist techniques: prepared pipework for lining, prepared for rodding activities, used mitigation methods; outlining correct application
Emergencies **K21** **S38**	Describes a waste water network emergency situation where they have applied waste water network emergency procedures, outlining the procedures followed and why they were important

Component 3: Multiple-choice Test

The following grade boundaries apply to the knowledge assessment:

Grade	Minimum mark	Maximum mark
Fail	0	27
Pass	28	40

Overall grading

The apprenticeship will be graded fail, pass or distinction. The final grade will be determined by collective performance in the three assessment components.

In order to gain a pass, an apprentice must achieve a minimum of a pass in each EPA component. A pass represents full competence against the standard. To achieve a distinction grade, an apprentice must achieve a distinction in both the observation with questions and interview components.

The overall grade for the WNO Standard is based on the grades in individual components as follows:

Observation with questions	Interview based on a portfolio of evidence	Multiple-choice test	Overall grading
Fail in any component			Fail
Pass	Pass	Pass	Pass
Distinction	Pass	Pass	Distinction

Section 4: Resits and retakes

Apprentices who fail one or more EPA components can re-sit or re-take the failed component at the employer's discretion. The apprentice's 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. Apprentices should have a supportive action plan to prepare for a re-sit or a re-take.

The employer and EUIAS agree the timescale for a 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 and is typically taken within four months of the EPA outcome notification. 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 are not offered to apprentices wishing to move from pass to a higher grade.

An apprentice will get a maximum EPA grade of pass for a re-sit or re-take.

The EUIAS resit and re-take policy can be found at:
https://www.euias.co.uk/end-point-assessment/policies-and-fees/

Section 5: Practical Guidance

Water Network Operative Practical Observation and Planning Form

Purpose

EUIAS provide an optional Practical task(s) review service to assist with planning for all employers/training providers with apprentices registered on this standard. To access the service, see Appendix E, WNO Supporting Documents 'Level 2 WNO Observation with Questions Planning Form.'

The purpose of the review service is to provide support in ensuring that the practical task(s), test facilities, necessary equipment, tools and examination conditions are in place to allow the practical task(s) to take place. The review helps ensure the proposed practical task(s) are sufficiently complex to allow the apprentice to demonstrate the required knowledge, skills and behaviours against the relevant elements of WNO specification. Details of the relevant elements are included in Section 2 of the Specification.

Tasks should be designed to allow variation to be introduced, reducing predictability. Practical observation must be conducted in real working environments.
The employer/training provider must ensure:

- the practical observation enables the assessment of core and specific knowledge, skills and behaviours in a real working environment
- it makes use of existing test facilities, which will be familiar to the apprentice and therefore allow them to perform at their best
- the equipment and tools are available

The employer/training provider must ensure that the practical task(s) is developed to allow the independent assessor to observe the apprentice synoptically demonstrate core and specific KSBs.

Submitting the form to EUIAS

The employer/training provider should complete and submit the 'Level 2 WNO Practical Observation with Planning Form' to the EUIAS Service Delivery Team for approval 1 month before the Observation. The form should be accompanied by

photographs and/or video(s) of the plant, machinery, equipment areas, including practical tasks/briefs which the apprentice will be working on.

EUIAS Review Process

Once the approval form has been received the review process will be conducted by EUIAS. The outcomes will be shared with the employer/training provider no later than 5 working days following the review.

Please be aware:

- Practical task/briefs review does not guarantee that the apprentice will pass the practical task
- No health and safety risk assessment has been carried out by EUIAS
- EUIAS review does not remove any of the training provider obligations to ensure full coverage of the standard, and full compliance with relevant legislation
- EUIAS review is based only on information supplied and is not a guarantee that the practical tasks/briefs, selected plant/machinery/equipment on the day of the practical will be sufficient for an EPA practical task
- The information provided in this Level 2 WNO Practical Observation and Planning Form must not be shared with the apprentice

Preparing for the Practical Observation

Where possible, the employer/training provider should provide the apprentice with the opportunity to carry out a practice practical observation as close to the real assessment described in Section 2 of the specification (Component 1).

The employer/training provider should prepare a practical task similar to (but not identical to) the tasks being used for the live assessment. A suitable person should be chosen to play the part of the assessor.

A template is provided to help ensure that the activities assessed during the practical observation will give complete coverage of the standard. See Appendix F, WNO Supporting Documents ‘Practice Observation with Questions Template.’

Preparing for the Interview

A practice interview should take place between the apprentice and the person acting the role of an assessor. The apprentice should draw on evidence from their portfolio during the discussion.

Guidance on Portfolio of Evidence

The portfolio is not assessed. It serves the following purpose:

- Provides the opportunity to demonstrate the core and specific KSBs required across the standard
- The assessor reviews the portfolio before the interview to help focus and contextualise their questions
- A carefully prepared mapped portfolio supports the apprentice during the interview

Quality vs Quantity

The apprentice should be supported in selecting and mapping evidence for their portfolio in the mapping document. They must gather evidence on the full range of KSBs required by the standard and be assessed on particular tasks or procedures or items of equipment during their practical observation.

The portfolio must be sufficient to evidence the apprentice can apply the KSBs required in a variety of tasks.

In theory one comprehensive job-write up could cover all the required KSBs. In practice, this is more likely to be in several job write-ups plus a few smaller pieces of evidence targeting specific elements of the standard.

Choose the best pieces of evidence that have been mapped for each KSB covered by the interview based on the portfolio. An independent assessor will look for one suitable piece of evidence for each KSB. To be confident of meeting the standard, apprentices should aim to have two pieces of evidence mapped to each KSB. Progress review documents should also be included.

What to include in the Portfolio?

The portfolio evidence:

- must contain a mapping document where evidence is mapped against the KSBs. A template has been produced to help the apprentices with collecting and mapping their evidence. A copy of the template is included. See Appendix D, WNO Supporting Documents 'Portfolio Mapping Document.'
- must contain **at least one piece of quality evidence relating to each KSB**. This piece of quality evidence must demonstrate the KSBs as outlined in Section 2 of this Specification which will be assessed by the interview based on the portfolio
- must include evidence that **covers all KSBs** required, and this would normally come from evidence relating to at **least 5 holistic jobs**
- **written accounts of activities** that have been completed and referenced against the knowledge, skills and behaviours supported by appropriate photographic evidence and work products, for example work instructions, safety documentation, company policies and procedures as appropriate to the activities
- **progress review documentation** - reviews which should be completed and recorded to determine progression towards competence across the entire occupational Standard
- will be available, during the interview, allowing the apprentice to refer to it
- must contain demonstrations of work carried out over the apprentice's on programme period
- where practicable this should include:
    - photographs
    - images
    - diagrams
    - job descriptions and witness evidence/testimony
    - situations that have been difficult and challenging, and how these have been overcome e.g. equipment breakdown which has results in a change in working practice while still adhering to company procedures
    - any employer contributions must focus on direct observation of evidence (e.g. review/witness statements) of competence rather than opinions

The above is not a definitive list. The apprentice can include other relevant evidence sources. The portfolio must not contain any methods of self-assessment.

Evidence must be:

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

What can the apprentice do?

The apprentice should:

- be familiar with the structure of their portfolio
- know the KSBs covered by the interview
- know the grading criteria
- ensure there is evidence to cover every KSB in the interview
- practise mapping evidence and completing the evidence mapping grid

The role of the employer/training provider

Employer/training providers are expected to support the apprentice in preparing their portfolio by:

- clarifying responsibility for supporting the apprentice to select and map evidence for the portfolio, including employer coaches/mentors where applicable
- advising on which pieces of evidence to select to ensure that when looked at as a whole, they provide coverage of all the required elements of the standard assessed in the interview
- supporting the mapping of evidence and production of a mapping document
- authenticating evidence as valid
- signing off the portfolio
- submitting the portfolio to EUIAS as part of Gateway

What to expect in the practice interview?

The practice interview will be based on the portfolio which will provide the apprentice with the opportunity to practice discussing their KSBs gained throughout their on-

programme and by referring to the evidence from their portfolio using the portfolio mapping document. A suitable person should be chosen to play the part of the assessor.

A practice interview based on the portfolio template is provided for use to prepare the appropriate questions to ask and to record the apprentices' performance. See Appendix G, WNO Supporting Documents 'Practice Interview Template.'
As part of the practice exercise, apprentices should have access to their portfolio to support their responses.

Preparing for the Multiple-choice Test

While on-programme, the employer and/or training provider should brief the apprentice on the areas to be assessed by the multiple-choice test, as detailed in Section 2 in this specification. It is good practice to identify the areas within the learning programme where the relevant knowledge is delivered, ensuring that apprentices are aware that elements of these might come up in the test.

The multiple-choice test is aligned to the standard rather than a specific job role that the apprentice may be doing. The questions have been written to reflect the Water Network Operative role as a whole and not focussed on specific plant, machinery, or employer-specific processes.

In readiness for end-point assessment, the apprentice should complete a practice multiple-choice test. This should be undertaken in advance of the live multiple-choice test, with enough time to mark the test, and provide feedback to the apprentices. See Appendix C, WNO Supporting Documents 'Practice Multiple-choice Tests.'

For maximum effect, ensure the test is taken in exam conditions similar to those that will be experienced in a live test.

Section 6: Authenticity and security of apprentice work

The apprentices must be advised by their training provider and employer that copying of any work (whether it is from another apprentice or from internal, external documents or source) and presenting it as their own will be deemed as malpractice and will lead to their work being disqualified. Apprentices must not share their work or allow any person to copy their work as this is not allowed and would also be deemed as malpractice.

In signing off the portfolio, training providers and employers must be satisfied that the evidence in the portfolio is:

- **adequate**: evidence must cover all relevant KSBs within the assessment plan. Adequate does not mean a large quantity of evidence. The evidence should focus on quality rather than quantity
- **authentic**: apprentices must be able to confirm and talk about the evidence that they submit with the independent assessor, appointed by the EUIAS. It is vitally important apprentices only submit evidence relating to them
- **appropriate**: all evidence must be relevant to the KSBs assessed during the interview
- **recent and up to date**: all evidence must be linked to KSBs must be recent and current which demonstrate the apprentice's competence. The independent assessors, appointed by the EUIAS will assess current competencies, and the apprentice must map the evidence to demonstrate the relevant work to the KSB. Apprentices must gather the evidence during their on-programme training