



ENERGY &
ENVIRONMENT
AWARDS

Skills for a greener world

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

Specification

QAN 610/6029/X
ST0898 V1.2

Specification for

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

QAN 610/6029/X

Updates to this specification	3
Section 1: At a Glance EPA Summary	4
Objective	5
Gateway Readiness	6
Recognition of prior learning (RPL)	6
Section 2: End-point Assessment Components	8
Component 1: Practical Assessment	8
Component 2: Question and Answer Session based on an EPA portfolio	35
Component 3: Multiple-choice Test	51
Section 3: Grading and Grading Criteria	59
Component 1: Practical Assessment	59
Component 2: Question and Answer Session based on an EPA Portfolio	64
Component 3: Multiple-choice Test	71
Overall grading	71
Section 4: Resits and retakes	72
Section 5: Practical Guidance	73
Water Network Operative Practical Assessment Planning and Approval Form ..	73
Preparing for the Practical Assessment	74
Preparing for the Question And Answer Session based on an EPA portfolio	74
Guidance on the EPA Portfolio	75
Preparing for the Multiple-choice Test	78
Section 6: Authenticity and security of apprentice work	79

Updates to this specification

Since the first publication of Energy & Environment Awards 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)
v4.0	August 2025	Rebranded	All
v3.1	Oct 2024	Approval Process updated	75
v3.0	Oct 2024	First published	All

Section 1: At a Glance EPA Summary

Qualification name	EEA Level 2 End-point Assessment for Water Network Operative
Ofqual qualification number	610/6029/X
Standard reference	ST0898
Assessment plan	V1.2
Standard title	Water Network Operative
Pathways	Clean Water Network Operative Waste Water Network Operative
Level	2
Gateway pre-requisites submitted to Energy & Environment Awards	Apprentice has: <ul style="list-style-type: none"> • achieved English and mathematics qualifications in line with the apprenticeship funding rules • compiled and submitted an EPA portfolio for the question and answer session
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 Energy & Environment Awards. 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	<ul style="list-style-type: none"> • Practical assessment • Question and answer session – based on a portfolio of evidence • Multiple-choice test <p>The assessment methods can be delivered in any order.</p>
End-point assessment methods and component grading	<p>Practical assessment: Fail or Pass</p> <p>Question and answer session – based on a portfolio of evidence: Fail; Pass or Distinction</p> <p>Multiple-choice test: Fail or Pass</p>
Overall Grading	Fail; Pass or Distinction
Certification	Energy & Environment Awards 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
- Service layer
- Repair and maintenance operative
- Utility operative
- Water operative

Gateway Readiness

Gateway takes place before the EPA can start. The employer and training provider will review their apprentice's knowledge, skills and behaviours to see if they have met the minimum requirements of the apprenticeship set out in the apprenticeship standard and are ready to take the assessment. Only apprentices who complete gateway successfully can start the EPA. Gateway pre-requisites are listed in the summary table above. The Gateway Eligibility Form must be completed see Appendix B, WNO Supporting Documents

Recognition of prior learning (RPL)

Energy & Environment Awards 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 Energy & Environment Awards RPL and RPA policy at <https://energyenvironmentawards.co.uk/policies-and-fees/>

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

- each of the EPA components must be completed in full with Energy & Environment Awards
- where an apprentice transfers to Energy & Environment Awards from another EPAO they have to undertake the entire EPA with Energy & Environment Awards
- 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 question and answer session, 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: Practical Assessment

Overview

In a practical assessment with questions, an independent assessor, appointed by Energy & Environment Awards, observes the apprentice completing a task or series of tasks approved by Energy & Environment Awards. The apprentice is **not** observed carrying out their day to day role. The assessment environment, equipment and infrastructure will reflect the apprentice's natural working environment. Energy & Environment Awards will review the practical assessment arrangements planned by the employer/training provider.

An independent assessor will ask questions during the practical assessment. 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.

Step-by-Step Guide

The table below provides a step-by-step guide on how the practical assessment will be carried out:

Assessors	1 independent assessor, appointed by Energy & Environment Awards.
Practical structure	<p>The total assessment time is 3 hours – the time for questioning is included in the overall assessment time.</p> <p>The apprentice may choose to end the practical assessment early. The apprentice must be confident they have demonstrated competence against the assessment requirements for the practical assessment. The independent will ensure the apprentice is fully aware of all assessment requirements and the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues.</p>

	<p>The independent assessor or EPAO cannot suggest or choose to end any assessment methods early (unless in an emergency).</p> <p>The independent assessor may observe only one apprentice at any one time, to ensure quality and rigour.</p> <p>The independent assessor will ask questions to assess the level of competence against the grading descriptors. Questioning will take place both during and after work completion.</p> <p>The practical assessment 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.</p>
<p>Where will the assessment take place?</p>	<p>The practical assessment will take place in a realistic working environment approved by Energy & Environment Awards for example, a training provider's premises or a training facility in the employer's premises.</p>
<p>What are the tasks that will be covered?</p>	<p>The apprentice will be observed and assessed against the following themes:</p> <ul style="list-style-type: none"> • health, safety and environment • prepare and maintain site for water network operations • select, prepare and use or operate tools and equipment • pipe cutting • procedures • communication • work organisation • maintain, repair and install assets • quality assurance • <p>See pages [10-31] for the full list of KSBs to be covered in the practical assessment.</p>

Who sets the task(s)?	<p>Energy & Environment Awards will review the employer/training provider planned task or series of tasks which are based on the themes listed above.</p> <p>See Appendix D, WNO Supporting Documents 'Practical Assessment Planning and Approval Forms.</p>
What resources can the apprentice use?	<p>The employer/training provider will provide equipment and resources needed for the practical assessment.</p> <p>Equipment and resources needed for the practical assessment must be:</p> <ul style="list-style-type: none"> the plant, machinery, 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>
How many questions will the apprentice be asked?	<p>The independent assessor</p> <ul style="list-style-type: none"> will ask at least six open questions may ask follow-up questions in order to seek clarification
What will the questions focus on?	Underpinning knowledge and/or skills and behaviours based on the grading descriptors and themes.
Grading	Fail or Pass

Practical Assessment Knowledge, Skills and Behaviours (KSBs) coverage

The practical assessment covers:

Theme: Health, safety and environment (CORE)	Amplification and guidance (where required)
S1: Identify hazards and implement controls to reduce risks to people and the environment.	Hazards such as substances and materials, noise, confined spaces, excavations and electricity Controls such as PPE and pressure management
S2: Comply with a safe system of work, including permits, work and engineering instructions.	Safe System of Work: risk assessment, safety procedures, training and competence Permits: work permits and Permit to Work (PTW) System Work Instructions: detailed instructions and Standard Operating Procedures (SOPs) Engineering Instructions: technical guidelines, engineering controls
S4: Comply with workplace health, safety and environmental policy and practice; use of Personal Protective Equipment (PPE) and safety equipment.	Workplace Health, Safety, and Environmental Policy and Practice: Health and Safety policies, environmental policies, best practices, key risks and control measures associated with the activity being observed Use of Personal Protective Equipment (PPE): PPE requirements, proper usage, training Use of Safety Equipment such as fire extinguishers, first aid kits, safety harnesses, emergency showers:

Theme: Health, safety and environment (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • inspection and maintenance • ensuring safety equipment is easily accessible • ensuring employees know where it is located and how to use it
B1: Put health and safety first.	<p>Health and Safety first: prioritising the well-being and safety of individuals above all other considerations in the workplace, e.g.</p> <ul style="list-style-type: none"> • risk management • training • use of safety equipment such as Personal Protective Equipment (PPE), safety devices • emergency preparedness • reporting and communication: incident reporting, open communication • continuous improvement: providing feedback on safety practices

Theme: Prepare and maintain site for water network operations (CORE)	Amplification and guidance (where required)
<p>K8: Principles and processes that underpin the locating of utility network assets; health and safety guidance on avoiding damage to underground utility services.</p>	<p>Principles such as:</p> <ul style="list-style-type: none"> • 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 <p>An apprentice should be aware of the general principles</p> <p>Processes such as:</p> <ul style="list-style-type: none"> • using maps and drawing • reading posts and plates • hand digging where required • obtaining the correct permissions to dig • location of buried assets using tools such as a metal detector, CAT (Cable Avoidance Tool) and Genny <p>Apprentices should know how to locate underground assets on the company's GIS (Geographic Information System), challenges associated with build overs and permissions required to build over the location of utility network assets</p> <p>Health and Safety guidance such as:</p>

Theme: Prepare and maintain site for water network operations (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • PPE, risk assessments, use of GIS and visual checks • 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 Health and Safety guidance: HSG47
S6: Identify, locate and avoid damage to underground utility services.	<p>Identify Underground Utility Services:</p> <ul style="list-style-type: none"> • The types of apparatus and structures that may be encountered • Consulting utility maps <p>Locate Underground Utility Services:</p> <ul style="list-style-type: none"> • Using detection equipment such as Ground Penetrating Radar (GPR), electromagnetic locators, and acoustic devices • Marking • The limitations of the detection technique in the activity being observed <p>Avoid Damage to Underground Utility Services:</p> <ul style="list-style-type: none"> • Safe digging practices • Training and awareness

Theme: Prepare and maintain site for water network operations (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • Communication (verbal, written)
S3: Identify and organise resources.	Resources such as people, equipment, time, materials
S5: Follow procedures for signing, lighting and guarding as well as public and pedestrian segregation and escalate issues if required.	<p>Signing, Lighting, and Guarding:</p> <ul style="list-style-type: none"> • Signing such as warning signs, directional signs, and informational signs • Lighting requirements especially during low visibility conditions such as nighttime or bad weather, to ensure the safety of both workers and the public • Guarding such as barriers, cones, and other protective measures to guard the work area and prevent unauthorized access <p>Public and pedestrian segregation:</p> <ul style="list-style-type: none"> • Segregation: measures to delineate safe routes for pedestrians and vehicles • Equipment such as barriers, fencing, and clear markings <p>Escalate issues if necessary:</p>

Theme: Prepare and maintain site for water network operations (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • issues such as unexpected hazards, conflicts with the public, or significant safety concerns <p>Apprentices should be able to demonstrate:</p> <ul style="list-style-type: none"> • setting out temporary signing, lighting and guarding traffic control equipment • when NRSWA (New Roads and Street Works Act 1991) applies • the risks being managed • how they work when NRSWA doesn't apply <p>Apprentices will need to show their NRSWA training record</p>
S8: Monitor and maintain site conditions; good housekeeping.	<p>Site conditions such as condition of support mechanisms, risk control measures such as access and egress</p> <p>Good housekeeping such as removal of surplus materials</p>
B2: Take ownership of given work.	<p>Take ownership of given work: take responsibility for the tasks assigned. Examples include (but are not limited to):</p> <ul style="list-style-type: none"> • accountability: accept responsibility, follow through • commitment to quality: attention to detail, continuous improvement

Theme: Prepare and maintain site for water network operations (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> communication: keep stakeholders informed, seek feedback

Theme: Select, prepare and use or operate tools and equipment (CORE)	Amplification and guidance (where required)
K9: Pre and post use checks, operation, maintenance, and storage requirements, for utility network operations equipment and tools including utility location equipment.	<p>Pre-use checks such as:</p> <ul style="list-style-type: none"> visual inspection: check for any visible damage, wear, or defects functionality test: test the equipment to ensure it is functioning correctly e.g. calibration and sensitivity settings safety features: ensure all safety features, such as guards and emergency stop buttons, are in place and operational <p>Post-use checks such as:</p> <ul style="list-style-type: none"> cleaning to remove any dirt, debris, or contaminants inspection to identify any new damage or wear record the usage, any issues encountered <p>Operation such as:</p>

Theme: Select, prepare and use or operate tools and equipment (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • procedures for starting, operating, and shutting down the equipment • continuously monitoring the equipment during use to detect potential issues <p>Maintenance such as:</p> <ul style="list-style-type: none"> • regular maintenance e.g. lubrication, calibration, and replacement of worn parts <p>Storage Requirements such as:</p> <ul style="list-style-type: none"> • storing the equipment in a clean, dry, and secure location to protect it • security <p>Apprentices should be able to demonstrate:</p> <ul style="list-style-type: none"> • 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
S9: Select, check and operate equipment and tools; report faults if required.	<p>Equipment and tools such as:</p> <ul style="list-style-type: none"> • equipment or tools provided in the Apprentice's work vehicle

Theme: Select, prepare and use or operate tools and equipment (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> jetting, CCTV camera, manhole lifting keys, metal detector, CAT and Genny, leakage detection equipment, valve keys, portable water testing equipment, crowbar, screwdriver <p>Apprentices should be able to demonstrate:</p> <ul style="list-style-type: none"> how they select, check, and operate the equipment required for the activity they are undertaking procedures if equipment is not working correctly
S10: Maintain and store equipment and tools, for example charge batteries, clean equipment, grease machines, re-fuel.	<p>Apprentices can demonstrate</p> <ul style="list-style-type: none"> how they maintain and store the equipment and tools that they work with
K10: Gas detection equipment.	<p>Apprentices should understand:</p> <ul style="list-style-type: none"> the purpose and use of gas detection equipment the limitations of gas detection equipment
S12: Use gas detection equipment.	<p>Apprentices can demonstrate:</p> <ul style="list-style-type: none"> pre-checks including calibration the use and limitations of gas detection equipment

Theme: Select, prepare and use or operate tools and equipment (CORE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • when they have used gas detection equipment • what to do if equipment is not working correctly

Theme: Pipe cutting (CORE)	Amplification and guidance (where required)
K15: Pipe cutting techniques.	Pipe cutting techniques such as mechanical, manual, abrasive
S20: Carry out pipe cutting.	Apprentices can demonstrate: <ul style="list-style-type: none"> • appropriate safety measures, such as wearing appropriate personal protective equipment (PPE) • following proper procedures and using appropriate tools

Theme: Procedures (CORE)	Amplification and guidance (where required)
K26: Standard operating procedures (SOP). S14: Follow standard operating procedures (SOP).	

Theme: Communication (CORE)	Amplification and guidance (where required)
K20: Verbal communication techniques – giving and receiving information using industry terminology. Matching style to audience.	Audience such as: colleagues, manager, supervisors, customers, external stakeholders
S11: Communicate with others verbally for example, internal and external customers, colleagues and managers.	Apprentices should be able to demonstrate: <ul style="list-style-type: none"> • 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

Theme: Communication (CORE)	Amplification and guidance (where required)
K21: Written communication techniques and documentation requirements including job sheets. S13: Communicate in writing with others and record task information, for example, job sheets.	Apprentices should be able to explain how they: <ul style="list-style-type: none"> • are allocated work • record work completed • request any follow on work

Theme: Work organisation (CORE)	Amplification and guidance (where required)
K24: Work organisation and time management techniques. S17: Organise and prioritise own work.	Apprentices should be able to demonstrate tasks completed in a logical and time efficient way

Theme: Maintain, repair and install clean water assets (CLEAN WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
K28: National Water Hygiene (water quality as a food source and product).	National Water Hygiene: <ul style="list-style-type: none"> the standards and practices to ensure water meets high-quality and safety standards to protect public health and maintain the integrity of water supplies Apprentices will need to show their training record for National Water Hygiene
S32: Follow hygiene procedures.	Hygiene procedures , such as personal hygiene
K29: Procedures for the construction and connection of clean water network mains and services.	Procedures such as: <ul style="list-style-type: none"> hygienic working excavation installation of pipes and structures making the connection: jointing and fusion techniques inspection and testing commissioning
S25: Install clean water assets.	Apprentices should be able to demonstrate:

Theme: Maintain, repair and install clean water assets (CLEAN WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • how a service is laid, connected to the main, flushed and connected to the property (if this is required) • the hygiene procedures associated with the activity
S23: Join materials by mechanical means on clean water assets.	<p>Jointing – the apprentice should be aware of and follow the company’s guidance on jointing and tapping detailing permissible materials and construction arrangements</p> <p>Details the apprentice would be expected to know include:</p> <ul style="list-style-type: none"> • 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 <p>Apprentices should be able to demonstrate how:</p> <ul style="list-style-type: none"> • water mains can be connected using a mechanical joint, and why this may be necessary • a service can be connected to a water main using mechanical means, and how the connection location is selected

Theme: Maintain, repair and install clean water assets (CLEAN WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
K31: Procedures for the repair of clean water network assets.	<p>Procedures such as:</p> <ul style="list-style-type: none"> • carrying out the repair work according to established guidelines • conducting tests to ensure that the water network is functioning correctly • completing records of the repair process <p>Apprentices should understand:</p> <ul style="list-style-type: none"> • the importance of hygiene when undertaking mains repairs, and how this is ensured • the different techniques for repairing minor and major bursts • cut and replace or trenchless procedures
S29: Repair water network asset.	<p>Assets such as:</p> <ul style="list-style-type: none"> • metallic • non-metallic • all ancillary pipes and fittings, taps and valves

Theme: Maintain, repair and install clean water assets (CLEAN WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
K39: Disinfection procedures for clean water mains and services.	Procedures such as: <ul style="list-style-type: none"> • flushing • chlorination • testing • documenting Apprentices should understand: <ul style="list-style-type: none"> • why and how a water main is disinfected • why and how a service is disinfected
S26: Conduct disinfection procedures for clean water mains and services.	Apprentices should be able to demonstrate: <ul style="list-style-type: none"> • selecting appropriate disinfectants, and disinfection methods • making sure the section is isolated • disinfecting pipework and disposing of the disinfected water

Theme: Quality assurance for clean water assets (CLEAN WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
<p>K32: Principles to assess and test the integrity of the repair on the water asset.</p> <p>S27: Check the performance of the asset and escalate issues if necessary.</p>	<p>Principles such as:</p> <ul style="list-style-type: none"> • inspection and monitoring • pressure testing • material testing • hydraulic testing • Non-Destructive Testing (NDT) • documentation and reporting • compliance with standards
Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
<p>K42: Procedures for the construction and connection of waste water network assets, including sewers, drains, and combined sewer overflows.</p>	<p>Procedures such as:</p> <ul style="list-style-type: none"> • hygienic working • excavation

Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • installation of pipes and structures • making the connection: jointing and fusion techniques • inspection and testing • commissioning
S33: Install or replace waste water assets.	<p>Install or replace waste water assets includes activities such as:</p> <ul style="list-style-type: none"> • setting up new pipelines, pumps, and treatment facilities • upgrading or replacing old or damaged pipes, pumps, and other equipment • ensuring the proper functioning and efficiency of waste water management systems • complying with environmental regulations and standards during the installation/replacement process <p>Apprentices should understand:</p> <ul style="list-style-type: none"> • the difference between sewers and drains • the installation requirements of each

Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
K43: Procedures for repairs in waste water.	<p>Apprentices should be aware how repairs on the sewer network are:</p> <ul style="list-style-type: none"> • identified, e.g. customer complaint, CCTV etc • arranged, e.g. through contractor or internal team <p>Procedures for repairs such as:</p> <ul style="list-style-type: none"> • open cut • trenchless • replacement sections <p>The apprentice should know the advantages and disadvantages of different methods.</p> <p>Trenchless methods include:</p> <ul style="list-style-type: none"> • removing roots via jetting or cutting • slip-lining • patching (hot, cold and ultraviolet) <p>Apprentices should understand:</p> <ul style="list-style-type: none"> • that sewers and rising mains operate in a different manner • the maintenance requirements of rising mains

Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
	<ul style="list-style-type: none"> the risks of working on asbestos mains and the associated company procedures
S37: Repair waste water network assets.	Repair waste water network assets includes activities such as: <ul style="list-style-type: none"> identifying and fixing leaks or breaks in pipelines repairing or replacing malfunctioning pumps and valves restoring damaged or worn-out treatment facilities ensuring the overall integrity and functionality of the waste water system adhering to safety and environmental standards during the repair process
K46: Personal hygiene measures.	Personal hygiene measures such as: <ul style="list-style-type: none"> hand hygiene PPE – wearing and disposal avoid touching face showering / changing clothes vaccinations

Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
	Apprentices should understand the importance of hygiene.
K50: Principles of wastewater flows.	Principles of wastewater flows such as: <ul style="list-style-type: none"> • fluid dynamics: flow rate, velocity, and pressure • gravity flow • pumping systems • collection systems
S38: Use mitigation methods to maintain flow, for example using pumps, stopping or diverting.	Mitigation methods include activities such as: <ul style="list-style-type: none"> • using mechanical pumps to move waste water around obstructions or through alternative routes • stopping the flow of waste water for short periods to perform necessary repairs or maintenance • diverting waste water to different sections of the network to bypass problem areas or to manage flow during high-demand periods • continuously monitoring the flow and making adjustments as needed to maintain optimal performance.

Theme: Maintain, repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	Amplification and guidance (where required)
	<p>Apprentices should ensure compliance with environmental and safety regulations.</p> <p>Apprentices should be able to explain one or more ways in which pumps and dewatering equipment can be used to mitigate issues and maintain flows.</p>
S40: Decontaminate equipment, tooling and PPE.	<p>Decontaminate equipment, tooling and PPE includes activities such as:</p> <ul style="list-style-type: none"> • cleaning equipment • sanitising tools • decontaminating PPE • applying suitable chemicals and methods to effectively decontaminate surfaces and materials • following safety protocols • disposing of waste properly <p>Apprentices should understand why decontaminating equipment, tools and PPE is important</p>

Practical Assessment Roles and Responsibilities

Role	Responsibility
Independent Assessor	<p>Explain, to the apprentice, the format and timescales of the practical assessment before it starts.</p> <p>Conduct and assess the practical assessment.</p> <p>Invigilate and supervise the apprentice during tests and in breaks during the practical assessment</p> <p>On behalf of Energy & Environment Awards, where necessary:</p> <ul style="list-style-type: none"> • ensure the apprentice understands the implications of ending an assessment early • document the apprentice's request to end any assessment early. <p>Record and report assessment outcome decisions for each apprentice, following instructions and using assessment recording documentation provided by Energy & Environment Awards.</p>
Employer/Training Provider	<p>The training provider must liaise effectively with the employer to ensure the apprentice is prepared for the practical assessment.</p> <p>Arrange for the practical assessment to take place, in a realistic working environment, in consultation with Energy & Environment Awards.</p> <p>Provide all necessary tools and equipment for the apprentice to allow the apprentice to attempt all aspects of the practical assessment.</p> <p>Ensure the apprentice has access to the resources used on a daily basis.</p>

Role	Responsibility
	Use Energy & Environment Awards practical assessment review service to review fitness for purpose of the assessment task.
Energy & Environment Awards	<p>Energy & Environment Awards will review the practical assessment arrangements planned by the employer/training provider.</p> <p>Arrange for the practical assessment to take place, in a realistic working environment, in consultation with the employer/training provider and independent assessor.</p>

Component 2: Question and Answer Session based on an EPA portfolio

Overview

The question and answer session is based on the apprentice's EPA portfolio developed from the EPA Portfolio Template's tasks and focuses on holistic evidence covering the KSBs. The question and answer session allows for testing of responses where there are a range of potential answers.

The EPA portfolio, compiled throughout the apprenticeship and completed by Gateway must be submitted to Energy & Environment Awards. The EPA Portfolio Template will be issued to employers/training providers by their Energy & Environment Awards Service Delivery Coordinator.

Step-by-Step Guide

The table below provides a step-by-step guide on how the question and answer session based on an EPA portfolio will be carried out:

Assessors	1 independent assessor approved by Energy & Environment Awards
Question and answer session (based on a portfolio of evidence) structure	<p>Number of questions: A minimum of five open questions. Additional follow up questions are allowed, to seek clarification.</p> <p>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.</p> <p>Time: 1 hour</p> <p>The apprentice may choose to end the question and answer session early. The apprentice must be confident they have demonstrated competence against the assessment requirements. The independent will ensure the apprentice is fully aware of all assessment requirements and the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues.</p> <p>The independent assessor or EPAO cannot suggest or choose to end any assessment methods early (unless in an emergency).</p>

	<p>The question and answer session will be:</p> <ul style="list-style-type: none"> • face to face or remote, as agreed • recorded in writing using the question and answer session record template provided by Energy & Environment Awards • video recorded using relevant technology such as Microsoft Teams or an audio recording device • conducted under examination conditions <p>The apprentice will have access to their EPA portfolio throughout the question and answer session.</p> <p>EPA Portfolio:</p> <ul style="list-style-type: none"> • The apprentice’s Manager/Mentor will typically support the development of the EPA portfolio in accordance with company policy and procedures • Although questioning will cover ALL the elements of the standard (listed below in this section of the Specification), the assessor will prioritise areas according to what they see in the portfolio • For further guidance on the EPA portfolio refer to Section 5 Practical Guidance on EPA Portfolio
What topics will be covered?	For further details refer to ‘Knowledge, Skills and Behaviours (KSBs) coverage below pages [36-48].
When will the portfolio of evidence be referred to?	<p>The EPA portfolio:</p> <ul style="list-style-type: none"> • will be reviewed by the independent assessor before the question and answer session • can be referred to by the apprentice to illustrate their answers <p>Note: the EPA portfolio is not directly assessed.</p>
Grading	Fail, Pass or Distinction

Question and Answer Session - Based on a Portfolio of Evidence Knowledge, Skills and Behaviours (KSBs) coverage

The question and answer session covers:

Task: Communication and working with others	Amplification and guidance (where required)
Teamworking (CORE)	
K25: Team working principles. S19: Apply team working principles.	Team working principles such as: <ul style="list-style-type: none"> • clear objectives • effective communication • defined roles and responsibilities • mutual trust and respect • support and collaboration • diversity and inclusion • adaptability
B3: Team-focus to meet work goals.	Team-Focus: prioritising the team's needs and goals over individual ambitions. Working together, using each other's strengths, and supporting one another To Meet Work Goals: specific objectives or targets that the team aims to achieve e.g. deadlines, performance metrics Apprentices should be able to demonstrate how their contribution to team activities led to successful outcomes and how they achieved that

Task: Communication and working with others	Amplification and guidance (where required)
Communication (CORE)	
K16: Core Escalation procedures for emergency situations, including emergency services, highways authorities, local authorities, Environment Agency, and utility companies.	Escalation procedures such as: <ul style="list-style-type: none"> • when emergency services, highways authorities and regulators such as Health and Safety Executive (HSE), Environment Agency (EA), Drinking Water Inspectorate (DWI) should be contacted • self-reporting of pollution incidents to EA
K19: Core Reporting channels; limits of authority.	Reporting channels: the pathways or methods through which information is communicated within an organisation Limits of authority: the boundaries within which individuals or roles can make decisions and take actions
Equity and diversity (CORE)	
K22: Core Equity, diversity and inclusion considerations in the workplace. S18: Apply equity, diversity and inclusion rules. B4: Support an inclusive workplace for example, respectful of different views.	Equity, diversity and inclusion considerations such as: <ul style="list-style-type: none"> • fair treatment • open communication about diversity and inclusion issues • understanding and respecting different cultural backgrounds and perspectives

Task: ICT and digital	Amplification and guidance (where required)
ICT and digital (CORE)	
<p>K23: Core Information technology and digital: email, equipment digital interfaces, management information systems. General Data Protection Regulation (GDPR). Cyber security.</p> <p>S15: Use information technology and digital systems. Comply with GDPR and cyber security.</p>	<p>Use Information Technology and Digital Systems to enhance productivity, efficiency, and communication. Examples such as:</p> <ul style="list-style-type: none"> • software applications: equipment digital interfaces, data analysis, management information systems and reporting • cloud services: storing and accessing data over the internet • digital communication tools: email, instant messaging, video conferencing <p>Comply with GDPR and cyber security: adhering to regulations and best practices to protect personal data and ensure the security of digital systems</p>

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
Excavation (CORE)	
<p>K14: Core Excavation techniques: open cut, moling, vacuum extraction.</p> <p>S7: Carry out safe excavation practices for utility network services.</p>	<p>Includes (but not limited to) explanation of:</p> <ul style="list-style-type: none"> • 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

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • how to prevent an excavation collapse by angling back the sides of the excavation ('battering')
Repair and install clean network assets (CLEAN WATER NETWORK OPERATIVE)	
K35: Procedures for the disposal of chlorinated water.	Apprentices should be able to describe procedures such as: <ul style="list-style-type: none"> • dechlorination methods • disposal methods • relevant risk assessment • environmental considerations • health and safety: PPE and storage
K36: Continuous supply procedures. S28: Use continuous supply procedures.	Apprentices should be able to describe activities within continuous supply procedures such as: <ul style="list-style-type: none"> • infrastructure maintenance • leak detection and repair • pressure management • monitoring and quality control
K37: Pumping equipment. S31: Use pumping equipment.	Apprentices should be able to explain: <ul style="list-style-type: none"> • why and how pumps may be needed when working on a clean water network

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • common issues with using pumps
K38: The use and removal of chemicals to avoid contamination in the water network, in line with regulations.	<p>Use of chemicals: application of various chemicals, e.g. chlorine, coagulants, pH adjusters in water treatment processes to ensure the water is safe for consumption and use</p> <p>Removal of chemicals: methods such as dechlorination, filtration, using activated carbon filters</p> <p>Avoid contamination in the water network: ensuring through monitoring and maintenance that the chemicals used in water treatment do not remain in the water at harmful levels</p> <p>In line with regulations: adhering to legal standards and guidelines such as Environmental Permitting Regulations, Health and Safety Regulations, to ensure safe water practices</p>
K41: The safe operation of hydrants and valves, in line with company procedures.	<p>Safe operation of hydrants and valves includes activities such as:</p> <ul style="list-style-type: none"> • following safety protocols • using the correct techniques and tools to open, close, and adjust hydrants and valves • conducting routine checks to ensure hydrants and valves are in good working condition and free from defects • training • compliance with regulations as well as company policies

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
S21: Clean water. carry out squeeze off activities.	<p>Squeeze off includes activities such as:</p> <ul style="list-style-type: none"> • identifying the location • using specialised equipment • stopping the flow • performing necessary work • releasing the squeeze • inspecting for damage <p>Apprentices should understand:</p> <ul style="list-style-type: none"> • the situations in which squeezing off might be appropriate • avoiding repeated squeezing off in the same location
S22: Join materials by fusion techniques.	<p>Fusion techniques such as:</p> <ul style="list-style-type: none"> • butt fusion • electrofusion • socket fusion • saddle fusion <p>Apprentices should understand:</p> <ul style="list-style-type: none"> • when a fusion technique is applicable • the process for completing the fusion

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
S24: Drill and tap clean water assets.	Apprentices should be able to demonstrate: <ul style="list-style-type: none"> • why and how a clean water is tapped • the hygiene requirements • the key risks and control measures
Repair and install waste water assets (WASTE WATER NETWORK OPERATIVE)	
K47: The operating principles of sewerage pumps and pumping stations and their impact on the network.	<p>Operating principles of sewerage pumps and pumping stations includes aspects such as:</p> <ul style="list-style-type: none"> • different types of pumps and their specific roles in moving sewage through the system • key components of pumping stations, including pumps, motors, control systems, and backup power supplies • how pumps regulate the flow of sewage to prevent overflows, backups, and ensure smooth operation <p>Performance and efficiency of the sewerage network includes aspects such as:</p> <ul style="list-style-type: none"> • energy efficiency to reduce operational costs and environmental impact • regular maintenance practices to ensure pumps and stations operate reliably and minimise downtime

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • impact on network performance for the overall capacity, pressure, and efficiency • the role of pumps and stations in managing emergency situations
K48: Pumping stations - lock off and isolation procedures for pumps.	Lock off and isolation procedures such as: <ul style="list-style-type: none"> • isolation: locate, isolate and disconnect all energy sources connected to the pump • lockout: attach lockout devices to all isolation points
K49: Preparations needed for a no dig team. S35: Prepare the site for a no dig team.	Preparations such as: <ul style="list-style-type: none"> • equipment preparation • safety measures • team briefing • environmental considerations • communication plan
S34: Replace and join materials by flexible seals, for example band seals on waste water services.	Apprentices should be able to explain why and how rubber seals are used to join materials in a waste water network
S36: Carry out excavation and shoring of deep excavations.	Excavation and shoring of deep excavations include activities such as: <ul style="list-style-type: none"> • excavation: using heavy machinery to dig deep trenches or pits • shoring: shoring systems, such as trench boxes, hydraulic shoring, or sheet piling

Task: Excavation, repairing and installing clean water / waste water network assets	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • ensuring all safety protocols are followed • taking steps to minimise environmental impact • working closely with other teams
K6: Policies and procedures for escalating environmental and pollution incidents.	
B6: Consider the impact on the environment when using resources and carrying out work.	

Task: Clean water/ Waste water network fault-finding, problem solving and the environment and sustainability	Amplification and guidance (where required)
Clean water network fault-finding and problem solving (CLEAN WATER NETWORK OPERATIVE)	
K33: Common faults and issues in the clean water network. Problem solving techniques.	Common Faults and Issues such as: <ul style="list-style-type: none"> • leaks and bursts • blockages • pressure problems • corrosion

Task: Clean water/ Waste water network fault-finding, problem solving and the environment and sustainability	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • valve failures • pump failures • contamination <p>Problem-Solving Techniques such as:</p> <ul style="list-style-type: none"> • leak detection e.g. acoustic devices, pressure testing, or infrared technology • pipe cleaning techniques such as flushing, rodding, or using chemical cleaners to remove blockages
K34: Consequences of bursts and leaks on people and the environment.	<p>Consequences for people such as:</p> <ul style="list-style-type: none"> • water supply disruption • health risks • property damage • increased costs being passed on • inconvenience <p>Consequences for the environment such as:</p> <ul style="list-style-type: none"> • wastage; loss of large volumes of treated water • energy waste • soil erosion

Task: Clean water/ Waste water network fault-finding, problem solving and the environment and sustainability	Amplification and guidance (where required)
	<ul style="list-style-type: none"> • habitat disruption • pollution
S30: Identify and solve common issues within the clean water network.	Common issues such as: <ul style="list-style-type: none"> • leak detection • pressure monitoring • water quality testing • wear and tear of infrastructure
Waste water network fault-finding and problem solving (WASTE WATER NETWORK OPERATIVE)	
K44: Procedures for dealing with contamination and pollution.	Procedures for contamination pollution such as: <ul style="list-style-type: none"> • contain the spill • assess the situation • notify relevant people • clean up
S39: Identify and solve common issues within the waste water network.	Common issues such as <ul style="list-style-type: none"> • blockages • leaks and breaks • infiltration and inflow • equipment malfunctions

Task: Clean water/ Waste water network fault-finding, problem solving and the environment and sustainability	Amplification and guidance (where required)
	Solutions such as: <ul style="list-style-type: none"> • cleaning and maintenance • pipe repair and replacement • upgrading infrastructure
Environment and sustainability (CORE)	
K4: Pollution; the risks and consequences of pollution incidents on people and the environment. Including types of pollution, control measures, light, noise, smells, spills, and waste.	Consequences include (but are not limited to): <ul style="list-style-type: none"> • risk to life, risk of injury, risks to wellbeing • damage to property • release of contaminants into the environment Pollution incident may include how pollution incidents are: <ul style="list-style-type: none"> • 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
K5: Environmental and sustainability regulations and guidance, including the Environmental Protection Act and hazardous waste regulation. The environmental impact of clean and waste water operations.	

Task: Clean water/ Waste water network fault-finding, problem solving and the environment and sustainability	Amplification and guidance (where required)
K6: Policies and procedures for escalating environmental and pollution incidents.	
B6: Consider the impact on the environment when using resources and carrying out work.	

Task: Learning and development	Amplification and guidance (where required)
Learning and development (CORE)	
S16: Carry out learning and development activities.	Learning and development activities such as: <ul style="list-style-type: none"> • identify skills gaps • setting objectives • attend training
B5: Seek learning and development opportunities.	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

Question and answer session - based on a portfolio of evidence 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 Energy & Environment Awards.
Employer/Training Provider	<p>The question and answer session based on an EPA portfolio must be scheduled with Energy & Environment Awards for a date and time which allow the apprentice to be well prepared.</p> <p>Ensure the apprentice has access to their portfolio before and on the day of the question and answer session based on an EPA portfolio.</p>
Energy & Environment Awards	<p>Arrange for the question and answer session based on an EPA portfolio to take place, in consultation with the employer/training provider and independent assessor.</p> <p>Develop and produce a question bank in line with EPA plan.</p>

Component 3: Multiple-choice Test

Overview

The knowledge test is a computer-based test which consists of multiple-choice questions. Paper-based tests are available on request.

Apprentices have 60 minutes to complete the test. It consists of 30 multiple-choice questions.

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

The Pass mark is 21 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

The multiple-choice test consists of 30 knowledge questions.

The table below lists each of the knowledge elements, assessed in the knowledge assessment. Amplification and Guidance can be found in the table below.

Number of Questions	Knowledge	Amplification and Guidance (where required)
Core		
2 - 5	K1: Health and safety practice: risk assessments and safe systems of work, permits to work, working in confined spaces, Personal Protective Equipment (PPE), manual handling	<p>The apprentice should understand the health and safety responsibilities of employers and employees.</p> <p>Health and safety practice includes:</p> <ol style="list-style-type: none"> 1. Risk assessments and safe systems of work. How risk assessments are carried out and how they relate to safe systems of work 2. Permits to work 3. Working in confined spaces 4. Personal Protective Equipment (PPE) and where PPE fits into the hierarchy of risk 5. Manual handling and how risks are managed

Number of Questions	Knowledge	Amplification and Guidance (where required)
5 - 8	K2: 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	The purpose, basic requirements and procedures of: <ol style="list-style-type: none"> 1. Health and Safety at Work Act 1974 2. New Roads and Street Works Act 1991 3. Working at Heights 4. Provision and Use of Work Equipment Regulations (PUWER) 5. Control of Substances Hazardous to Health (COSHH) 6. Lifting Operations Lifting Equipment Regulations (LOLER) 7. first aid 8. fire safety
2 - 4	K3: Types and uses of asbestos and where they may come into contact; safe work practices, control measures, and protective equipment needed to undertake asbestos mains work	Includes: <ol style="list-style-type: none"> 1. Types and uses of asbestos and where they may come into contact 2. Asbestos and safe work practices 3. Asbestos and control measures 4. Asbestos and protective equipment needed to undertake asbestos mains work

Number of Questions	Knowledge	Amplification and Guidance (where required)
1 - 3	K7: Identify utility assets on maps or drawings	Includes: 1. Identify utility assets on maps or drawings
1 - 3	K11: Principles of traffic management control and safe working practices when working on the highway and on site	Includes: 1. Principles of traffic management control such as identification of the NRSWA as the relevant act; selection and setting out of appropriate signing, lighting, guarding and traffic control equipment 2. Safe working practices when working on the highway and site such as PPE, importance of checking equipment for defects, purpose of SLG equipment
2 - 4	K12: Trench support systems and when to use them. Including sheeting, mechanical sheeting, lightweight and proprietary systems	Trench support systems and when to use them including: 1. sheeting 2. mechanical sheeting 3. lightweight systems 4. proprietary systems

Number of Questions	Knowledge	Amplification and Guidance (where required)
1 - 2	K13: Requirements for the backfill and reinstatement of road and pavement surfaces after water network construction or repair.	Includes: <ol style="list-style-type: none"> 1. Requirements for the backfill and reinstatement of road and pavement surfaces such as materials and quality control
3 - 5	K17: Roles and responsibilities of industry stakeholders, including: Drinking Water Inspectorate, The Water Services Regulation Authority (OFWAT), Consumer Council for Water, Environment Agency, and DEFRA.	Roles and responsibilities of: <ol style="list-style-type: none"> 1. Drinking Water Inspectorate 2. The Water Services Regulation Authority (OFWAT) 3. Consumer Council for Water (CCW) 4. Environment Agency (EA) 5. DEFRA
2 - 4	K18: Ethical business practices, including Customer Experience Measure (CMEX), Regulatory and Legislative Performance Measures, Guaranteed Standards Scheme (GSS) and Director General (DG) in response to written complaints (DG7).	Ethical business practices, including. <ol style="list-style-type: none"> 1. Customer Experience Measure (CMEX) - purpose and components 2. Regulatory and Legislative Performance Measures such as DWI requirements, operational performance and environmental performance 3. Guaranteed Standards Scheme (GSS) – purpose, payments, exemptions, standards and customer rights

Number of Questions	Knowledge	Amplification and Guidance (where required)
		4. Director General (DG) in response to written complaints (DG7) – purpose, response times, complaint categories
Clean water network operative		
1 - 2	K27: Regulation 31 of the Water Supply (Water Quality) Regulations.	1. Regulation 31 of the Water Supply (Water Quality) Regulations such as purpose and approval requirements
1 - 2	K30: Principles of working with asbestos in the clean water network.	1. Principles of working with asbestos in the clean water network such as risk assessment, PPE, controlled working practices, waste management and regulatory compliance
1 - 2	K40: Principles and reasons for taking water samples.	1. Principles for taking water samples such as sampling frequencies and schedules, different bottles for microbiological/bacterial samples and chemical samples, representative sample, storage and transport of samples 2. Reasons for taking water samples such as assessing water quality, monitoring treatment processes and detecting contaminants

Number of Questions	Knowledge	Amplification and Guidance (where required)
Waste water network operative		
1 - 2	K45: Principles of working with asbestos in the waste water network.	1. Principles of working with asbestos in the waste water network such as risk assessment, PPE, controlled working practices, waste management and regulatory compliance

Knowledge Test Roles and Responsibilities

Role	Responsibility
Invigilator	<p>Is typically provided by the employer or training provider.</p> <p>Attend induction training as directed by Energy & Environment Awards.</p> <p>Not invigilate an assessment, solely, if they have delivered the assessed content to the apprentice.</p> <p>Invigilate and supervise the apprentice during tests and in breaks during assessment methods to prevent malpractice in line with Energy & Environment Awards invigilation procedures.</p>
Employer/Training Provider	<p>Ensure that the knowledge test is scheduled with Energy & Environment Awards for a date and time which allow the apprentice to be well prepared.</p>
Energy & Environment Awards	<p>Arrange for the multiple-choice test to take place, in consultation with the employer/training provider.</p> <p>Mark multiple-choice test answers accurately according to the mark scheme and procedures.</p>

Section 3: Grading and Grading Criteria

Component 1: Practical Assessment

The apprentice must demonstrate core KSBs and pathway specific skills for either Clean Water Network Operative or Waste Water Network Operative in an integrated way for their pathway.

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 theme, as shown below.

Theme KSBs	To achieve a Pass the apprentice must achieve ALL of the following:
(Core) Health, safety and environment S1 S2 S4 B1	<p>Complies with health, safety and environmental policy and practices in the workplace by identifying hazards and implementing controls to reduce risks to people and the environment. (S1, S4)</p> <p>Puts health and safety first by following safe systems of work and using permits, engineering and work instructions. (S2, B1)</p>
(Core) Prepare and maintain site for water network operations	<p>Completes housekeeping and monitors and maintains site conditions by following procedures for signing, lighting,</p>

Theme KSBs	To achieve a Pass the apprentice must achieve ALL of the following:
K8 S3 S5 S6 S8 B2	<p>guarding and public and pedestrian segregation. Identifies and escalates any non-compliance when required in line with organisational procedures. (S5, S8)</p> <p>Takes ownership of given work to identify, organise and use resources to undertake the activity. (S3, B2)</p> <p>Locates and identifies underground utility services and follows health and safety guidance to avoid damage. (K8, S6)</p>
(Core) Select, prepare and use or operate tools and equipment K9 K10 S9 S10 S12	<p>Selects, undertakes pre and post use checks and uses or operates tools and equipment, including utility location equipment in line with manufacturer's instructions to carry out water network operations. Reports faults with tools and equipment where required in line with organisational procedures. (K9, S9)</p> <p>Maintains and stores tools and equipment in line with manufacturer's guidelines. (S10)</p>

Theme KSBs	To achieve a Pass the apprentice must achieve ALL of the following:
	Uses gas detection equipment to identify gasses. (K10, S12)
(Core) Pipe cutting K15 S20	Cuts pipes in line with task requirements to complete water network tasks. (K15, S20)
(Core) Procedures K26 S14	Follows standard operating procedures to complete tasks. (K26, S14)
(Core) Communication K20 K21 S11 S13	<p>Communicates with others using verbal communication techniques, giving and receiving information using industry terminology in a way that is suitable for the audience. (K20, S11)</p> <p>Communicates with others using written techniques in a way that supports task completion. Completes documentation, task information and job sheets accurately. (K21, S13)</p>
(Core) Work organisation K24 S17	Applies work organisation and time management techniques to organise and prioritise their own work. (K24, S17)

Theme KSBs	To achieve a Pass the apprentice must achieve ALL of the following:
(Clean water network operative) Maintain, repair and install clean water assets K28 K29 K31 K39 S23 S25 S26 S29 S32	<p>Carries out repairs on clean water assets and conducts disinfection procedures for clean water mains and services in line with task requirements. (K31, K39, S26, S29)</p> <p>Follows hygiene procedures when working on clean water assets in accordance with National Water Hygiene requirements. (K28, S32)</p> <p>Constructs, installs and connects clean water network mains and services, joining materials by mechanical means in line with task requirements. (K29, S23, S25)</p>
(Clean water network operative) Quality assurance for clean water assets K32 S27	<p>Assess and test the performance of the asset repair and report any issues if necessary, in line with organisational procedures. (K32, S27)</p>
(Waste water network operative) Maintain, repair and install waste water assets K42 K43 K46 K50	<p>Repairs waste water network assets in line with company procedures. (K43, S37)</p>

Theme KSBs	To achieve a Pass the apprentice must achieve ALL of the following:
S33 S37 S38 S40	<p>Uses mitigation methods to maintain waste water flows. (K50, S38)</p> <p>Follows personal hygiene measures and decontaminates tools, equipment and PPE following waste water network operations. (K46, S40)</p> <p>Constructs, installs or replaces and connects waste water network assets including sewers, drains and combined sewer overflows in line with task requirements. (K42, S33)</p>

Component 2: Question and Answer Session based on an EPA Portfolio

The apprentice must demonstrate core and pathway specific KSBs for either Clean Water Network Operative or Waste Water Network Operative in an integrated way for their pathway.

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 of the Pass descriptors.

To gain a Distinction, an apprentice must successfully achieve **all** of the Pass descriptors and **all** of the Distinction descriptors.

Task: Working with others	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
(Core) Teamworking K25 S19 B3	Describes how they apply team working principles to meet work goals. (K25, S19, B3)	Explains how their team focus supports wider teams to meet their goals. (K25, S19, B3)
(Core) Communication K16 K19	Explains the reporting channels and escalation procedures for emergency situations, including emergency services,	

Task: Working with others	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
	highways authorities, local authorities, Environment Agency and utility companies. (K16, K19)	
(Core) Equity and diversity K22 S18 B4	Describes how they apply and support equity, diversity, and inclusion in their work in line with rules. (K22, S18, B4)	

Task: ICT and digital	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
(Core) ICT and digital K23 S15	Describes how they use information technology and digital information systems and comply with GDPR and cyber security to support work tasks. (K23, S15)	

Task: Excavation, repairing and installing clean water / waste water network assets	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
(Core) Excavation K14 S7	Describes how to carry out open cut, moling and vacuum extraction excavation techniques safely when working on the water network. (K14, S7)	Justifies the excavation technique used. (K14, S7)
(Clean water network operative) Repair and install clean network assets K35 K36 K37 K38 K41 S21 S22 S24 S28 S31	<p>Explains the procedures for using and removing chemicals and disposing of chlorinated water to avoid contamination in the water network in accordance with regulations. (K35, K38)</p> <p>Describes how to use continuous supply procedures. (K36, S28)</p> <p>Describes how to safely operate hydrants, valves and pumping equipment in line with company procedures. (K37, K41, S31)</p>	

Task: Excavation, repairing and installing clean water / waste water network assets	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
	<p>Explains how to squeeze off, drills and taps clean water assets in line with task requirements. (S21, S24)</p> <p>Explains how they join materials by fusion techniques. (S22)</p>	
(Waste water network operative) Repair and install waste water assets K47 K48 K49 S34 S35 S36	<p>Explains how sewerage pumps and pumping stations operate, and how they impact on the network. (K47)</p> <p>Describes how to lock off and isolate pumps. (K48)</p> <p>Describes how they prepare the site for a no-dig team. (K49, S35)</p>	

Task: Excavation, repairing and installing clean water / waste water network assets	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
	<p>Describes how to use flexible seals to join materials when replacing waste water services. (S34)</p> <p>Explains how to carry out and shore deep excavations. (S36)</p>	
Task: Clean Water / Waste water network f fault-finding, problem solving and the environment and sustainability	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
(Clean water network operative) Clean water network fault-finding and problem solving K33 K34 S30	Describes problem solving techniques they use to identify and solve common faults and issues in the clean water network. (K33, S30)	Explains the importance of identifying and reporting faults and issues in terms of impact on others or the business. (K33, S30)

Task: Clean Water / Waste water network f fault-finding, problem solving and the environment and sustainability	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
	Explains the consequences that burst pipes and water leaks can have on people and the environment. (K34)	
(Waste water network operative) Waster water network fault-finding and problem solving K44 S39	Explains how to identify and solve common issues within the waste water network, including the procedures for dealing with contamination and pollution. (K44, S39)	Explains the importance of identifying and resolving common issues within the waste water network, including contamination and pollution. (K44, S39)
(Core) Environment and sustainability K4 K5 K6 B6	<p>Describes the risks and consequences that types of pollution, including light, noise, smells, spills and waste can have on people and the environment. (K4)</p> <p>Explains how they comply with environmental and sustainability regulations and guidance, including the</p>	Explains the importance of complying with environmental and sustainability regulations and the importance of escalating environmental and pollution incidents. (K5, K6)

Task: Clean Water / Waste water network f fault-finding, problem solving and the environment and sustainability	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
	Environmental Protection Act and hazardous waste regulations when carrying out work and what the policies and procedures are for escalating environmental and pollution incidents. (K5, K6, B6)	

Task: Learning and development	Pass Apprentice must successfully achieve all of the Pass descriptors	Distinction Apprentice must successfully achieve all of the Pass descriptors and all of the Distinction descriptors.
(Core) Learning and development S16 B5	Describes the learning and development activities they have completed to support competence in their role. (S16, B5)	

Component 3: Multiple-choice Test

The following grade boundaries apply to the multiple-choice test:

Grade	Minimum mark	Maximum mark
Fail	0	20
Pass	21	30

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 the Question and Answer session component.

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

Practical assessment	Question and answer session - based on an EPA portfolio	Multiple-choice test	Overall grading
Fail in any component			Fail
Pass	Pass	Pass	Pass
Pass	Distinction	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 the EPAO should agree the timescale for a re-sit or re-take. A re-sit is typically taken within 2 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 4 months of the EPA outcome notification.

Failed assessment methods must be re-sat or re-taken within a 6-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.

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 if they need to re-sit or re-take one or more assessment methods, unless Energy & Environment Awards determines there are exceptional circumstances.

Energy & Environment Awards resit and re-take policy can be found at:

<https://energyenvironmentawards.co.uk/policies-and-fees/>

Section 5: Practical Guidance

Water Network Operative Practical Assessment Planning and Approval Form

Purpose

Energy & Environment Awards must approve employers' practical assessment. The purpose of the approval is to provide Energy & Environment Awards with assurance that the practical assessment will be conducted in line with the WNO Assessment Plan. The approval must take place before the first practical assessment is carried out. To access the service, see Appendix D, WNO Supporting Documents 'Practical Assessment Planning and Approval Forms.'

Submitting the form to Energy & Environment Awards

To obtain approval, employers must complete the Practical Assessment Planning and Approval Form. This must be submitted to Energy & Environment Awards Service Delivery Team for approval at least 3 months before Gateway.

Energy & Environment Awards Approval Process

Once the Practical Assessment Planning and Approval Form. has been received the approval process will be conducted by Energy & Environment Awards. The outcomes will be shared with the employer/training provider no later than 10 working days following receipt of the relevant documents.

The employer/training provider must ensure:

- the task(s) being observed is suitable and sufficient and is to be carried out at a suitable premises. Site access for the assessor and any specific requirements must be advised in advance
- all equipment and resources are suitable for the task, in good safe working condition and certification where applicable

Please be aware:

- Practical assessment approval does not guarantee that the apprentice will pass the assessment

- No health and safety risk assessment has been carried out by Energy & Environment Awards
- Energy & Environment Awards approval does not remove any of the training provider obligations to ensure full coverage of the standard, and full compliance with relevant legislation
- Energy & Environment Awards approval 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 the practical assessment
- The information provided in the Level 2 WNO Practical Assessment and Approval Form must not be shared with the apprentice

Preparing for the Practical Assessment

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

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 assessment will give complete coverage of the standard. See Appendix E, WNO Supporting Documents 'Practice Practical Assessment Forms.'

Preparing for the Question And Answer Session based on an EPA portfolio

A practice question and answer session based on an EPA portfolio 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 the EPA Portfolio

Throughout the on-programme part of the apprenticeship, each apprentice must compile an EPA portfolio to support them in their EPA question and answer session. The question and answer session will draw on the evidence contained in the EPA portfolio. The EPA portfolio should reflect their individual experiences and the activities carried out during this period and meet the requirements outlined in the assessment plan.

A completed EPA portfolio is one of the Gateway requirements.

The EPA portfolio is not assessed. It serves the following purposes:

- It provides the opportunity for each apprentice to provide examples of the knowledge, skills and behaviours that will be assessed in the question and answer session
- A carefully prepared EPA portfolio will support each apprentice during the question and answer session
- It allows the assessor to review it before the question and answer session to help focus and contextualise the questions that the apprentice will be asked.

The EPA portfolio is a record of how each apprentice demonstrated the knowledge, skills and behaviours that are assessed in the question and answer session. Each apprentice will have access to their EPA portfolio during the question and answer session. A set of five tasks to support the compilation of the EPA portfolio has been developed. They help each apprentice focus on the specific knowledge, skills and behaviours that will be assessed in the question and answer session.

For each task there is

- a series of questions to be answered in the text box that follows. Boxes will expand to take more text; however each apprentice should be aware that quality of answer is more important than quantity. Each apprentice will be able to use their answers as prompts in the question and answer session
- a table for each apprentice to record evidence that supports the examples provided in response to the questions.

Supporting evidence must be:

- produced by the apprentice (authentic)
- relevant to the task
- cross referenced and easily accessible in the portfolio
- produced during the time the apprentice is carrying out their on-programme training

Each apprentice should include their best examples to answer each question in this document. The examples should be individual to the apprentice.

The completed EPA portfolio should contain the five tasks and at least one piece of evidence backing up each of the questions. A piece of evidence may cover more than one question. No other evidence should be included.

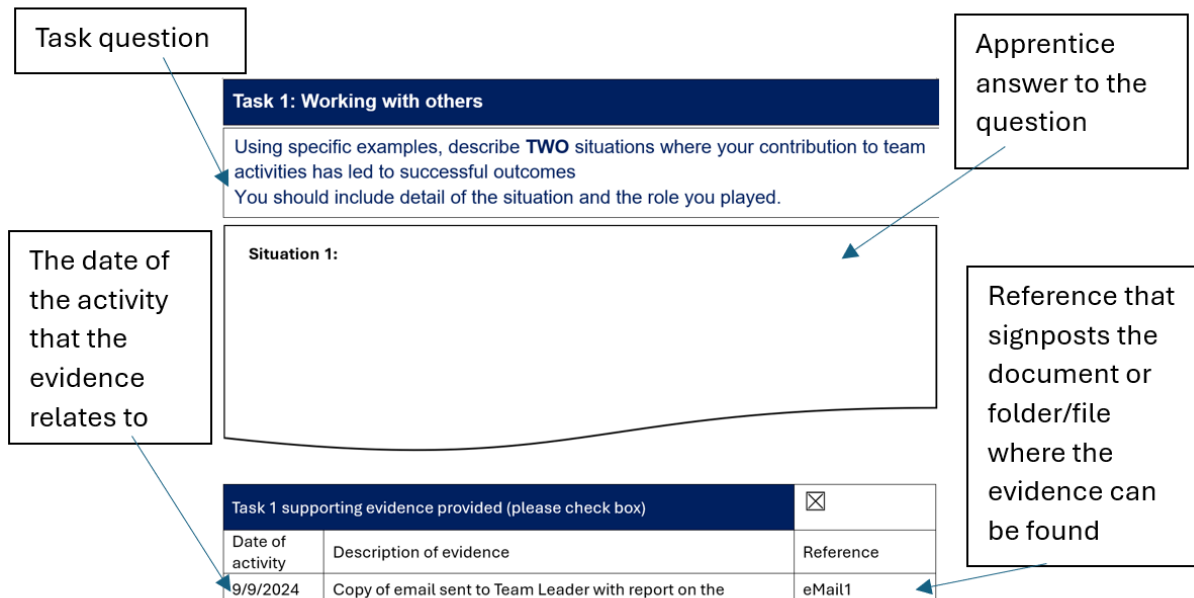
Examples of acceptable evidence:

- 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
- employer contributions that focus only on direct observation of evidence (for example witness statements) rather than opinions
- annotated photographs showing the apprentice carrying out tasks
- diagrams
- video clips (maximum total duration 10 minutes); the apprentice must be in view and identifiable

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

Each piece of evidence must be given a reference. For those using e-portfolios such as ONEFILE or SMARTASSESSOR, the reference used must simply be the file or folder name each apprentice used when uploading the evidence to such systems.

How the apprentice should complete the EPA portfolio template



Task question

Task 1: Working with others

Using specific examples, describe **TWO** situations where your contribution to team activities has led to successful outcomes
You should include detail of the situation and the role you played.

Apprentice answer to the question

Situation 1:

The date of the activity that the evidence relates to

Reference that signposts the document or folder/file where the evidence can be found

Task 1 supporting evidence provided (please check box)		
Date of activity	Description of evidence	Reference
9/9/2024	Copy of email sent to Team Leader with report on the	eMail1

The role of the employer/training provider

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

- providing clear instruction and deadlines will allow apprentices to plan and compile their portfolio in preparation for the Gateway meeting
- advising on which pieces of evidence to select
- authenticating evidence as valid
- signing off the EPA portfolio
- submitting the portfolio to Energy & Environment Awards as part of Gateway requirements

What to expect in the practice question and answer session

The practice question and answer session will be based on the EPA 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 their responses to the tasks and associated evidence. A suitable person should be chosen to play the part of the assessor.

A practice question and answer session template is provided for use to prepare the appropriate questions to ask and to record the apprentices' performance. See Appendix F, WNO Supporting Documents 'Practice Question and Answer Session Forms.'

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 of 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 are 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 Test.'

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 Energy & Environment Awards. It is vitally important apprentices only submit evidence relating to them
- **appropriate:** all evidence must be relevant to the KSBs assessed during the question and answer session based on an EPA portfolio
- **recent and up to date:** all evidence must be linked to the tasks in the EPA Portfolio Template. The evidence must be recent and current which demonstrate the apprentice's competence. The independent assessors, appointed by Energy & Environment Awards will assess current competencies. Apprentices must gather the evidence during their on-programme training.

© **Energy & Environment Awards Limited**

All rights reserved. No part of this publication may be reproduced, stored in a retrievable system, or transmitted in any form or by any means whatsoever without prior written permission from the copyright holder.

www.energyenvironmentawards.co.uk