ENERGY & ENVIRONMENT AWARDS

Skills for a greener world

EEA Level 3 End-point Assessment for Water Industry Treatment Process Technician
(Water treatment process technician; Wastewater treatment process technician)

Apprentice Guide

QAN 610/6024/0
ST1291 V1.0 V1.1

Apprentice Guide for

EEA Level 3 End-point Assessment for Water Industry Treatment Process Technician

QAN 610/6024/0

Updates to this Guide

Since the first publication of Energy & Environment Awards Water Industry Treatment Process Technician Apprentice Guide, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v2.0	May 2025	Rebranded	All
v1.0	July 2023	First published	All

At A Glance Component 1: Observation with Questions

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

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

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

At A Glance Component 3: Multiple-choice Test

Date(s):	
Time:	
Location:	
Examination Conditions:	Controlled by an invigilator
Additional Requirements:	
Assessed and marked by:	Energy & Environment Awards

Introduction

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

How This Apprentice Guide Is Organised

- ✓ Section 1:

  What is in the Apprentice Guide?

- ✓ Section 2:

  An Apprentice's End-point Assessment Journey

- ✓ Section 3:

  End-point Assessment Components

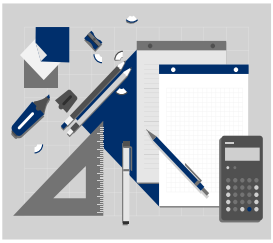
How to Use This Guide

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

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

Section 1: The Basics

What is an Apprenticeship Standard?



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

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

The standard can be accessed via the link below:
https://skillsengland.education.gov.uk/apprenticeship-standards/st1291

What is an Assessment Plan?

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

Energy & Environment Awards designed the end-point assessment (EPA) to meet the requirements of the Assessment Plan. The Assessment Plan can be accessed via the link below:
https://skillsengland.education.gov.uk/apprenticeship-standards/st1291

What is an end-point assessment (EPA)?

The end-point assessment is the assessments you take at the end of your apprenticeship. You will typically spend 36 months on-programme working towards your standard with a minimum of 20% off-the-job training. You are required to spend a minimum of 12 months on-programme. After this you have a Gateway meeting with your employer or training provider to confirm you are ready for the end-point assessments. The words end-point means that you will be assessed at the end of your on-programme (training) to confirm you have met the standard. Your EPA period will typically last 4 months. The end-point assessments consist of 3 components:

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

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

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

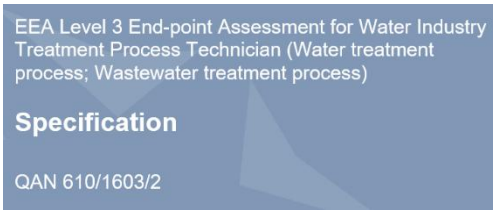
What are the Gateway Requirements?

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

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

Your training provider will send copies of these documents to Energy & Environment Awards.

What is the EPA Specification?



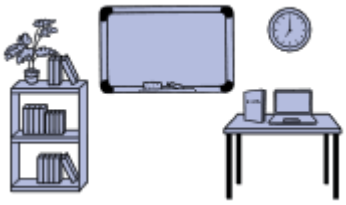
The end-point assessment specification provides details of the assessment methods used in your EPA, which:

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

The Specification can be accessed via the link below:
https://energyenvironmentawards.co.uk/epa/water-industry-treatment-process-technician/

Section 2: Apprentice EPA Journey

Let us Begin Your EPA Journey.



Find a quiet place and read on….

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

- Water treatment process technician
- Wastewater treatment process technician

Your EPA journey consists of 3 elements:

- A training programme with on the job, off the job elements, typically 36 months
- Gateway meeting window
- End-point Assessment (EPA) typically 4 months

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

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

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

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

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

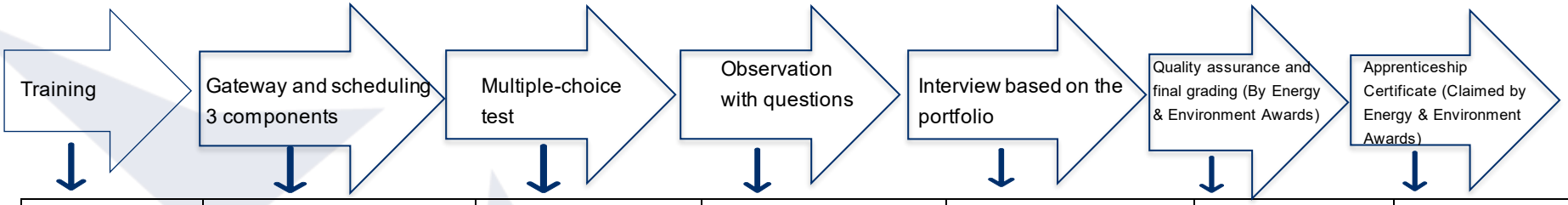
You must pass all 3 components to achieve this qualification. For further guidance refer to Section 3 End-point Assessment Components.

Reasonable adjustments

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

Your EPA Journey in a Diagram

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



Typically, 36 months	You have: Attended a Gateway meeting with your employer/provider. Achieved English and maths at level 2. Compiled a portfolio of evidence, which your interview will be based on.	90 minutes. Multiple-choice 50 questions. Under exam conditions supervised by an invigilator. Face to face. Closed book.	6 hours. Under examination conditions. Face to face. Normal work duties, in your workplace or a customer's premises. Independent assessor. See below for further details.*	90 minutes. Under examination conditions. Face to face or remote as agreed. Recorded using relevant technology. Independent assessor. See below for further details.*	Awarded Final Grading: Distinction, Merit, Pass or Fail.	ESFA will send your Certificate to your training provider or employer. Contact your training provider or employer if you do not receive your certificate.

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

Section 3: End-point Assessment Components

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

Component 1: Observation with Questions

Overview

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

Step-by-Step Guide

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

Structure of your practical assessment	The total assessment time is 6 hours for completing work as part of your normal duties, in your workplace or a customer's premises. • The observation may be split into discrete sections held on the same working day • Where breaks occur, the clock will be paused. The assessment time is not reduced
Where will the assessment take place?	• Your employer's premises or a customer's premises • The questioning must take place in a quiet room
What knowledge, skills and behaviours (KSBs) do I have to demonstrate during the Observation	**Knowledge, Skills and Behaviours:** **Core** **K19** Documentation requirements for example maintenance records, asset check records **K21** Communication techniques: verbal, written and electronic. Adapting style to audience

with Questions?	**S11** Inspect and check safety equipment: identify and take action **S13** Apply site standards for housekeeping **S14** Conduct risk assessments: identify and document risks and hazards in the workplace. Apply control measures **S15** Comply with health and safety regulations and safe working practices and procedures **S16** Follow site security procedures **S22** Read and interpret written information. For example, work instructions, and service level agreements **S23** Complete work records. **S26** Communicate verbally and in writing. For example, with colleagues, stakeholders, or others. Use water industry terminology where appropriate **B1** Prioritise and promote public health, workplace health and safety, and security **B3** Apply a professional approach **Water treatment process technician specialism** **K10** Operational and quality procedures. Escalation procedures. What they are and how to use them **K28** Water quality monitoring, sampling, and testing requirements and techniques. Equipment, resources, and materials used. Sampling points **K30** Treatment processes: abstraction, clarification, coagulation, disinfection, and filtration. Water works design flows - impact of flow change on treatment process. Hydraulics principles. Objectives, parameters, variables, optimal performance measures (quality, cost, and waste) and the consequences of sub-optimal performance. Waste stream processes **S9** Interrogate and interpret electronic control systems. For example, HMI or SCADA

	S30 Monitor and control water chemical dosing procedures **S31** Operate water process control equipment and instrumentation **S32** Take water samples **S33** Analyse and interpret on-site laboratory data and check against water process parameters **S34** Monitor and control water treatment processes and performance **S35** Monitor and control the effectiveness of disinfection **B4** Take ownership for work and responsibility for the quality of work and impact on others **Wastewater treatment process technician specialism** **K9** Process control systems. Types of equipment used for process control operations and the functions they perform, set-points, and alarm values **K34** Treatment processes: preliminary treatment, primary treatment, secondary treatment, tertiary treatment, sludge treatment, and odour management. Wastewater works design flows - impact of flow change on treatment process **K35** Wastewater compliance and performance monitoring requirements: wastewater quality standards, sampling, analysis, and reporting **K38** Risks of working on wastewater treatment site – personal hygiene risks and requirements **S1** Comply with (water or waste waste) industry regulations and procedures **S10** Use data monitoring and control systems to monitor and control equipment

	S40 Operate wastewater process control equipment and instrumentation **S41** Take wastewater samples **S42** Analyse and interpret on-site testing data and monitoring equipment data and check against wastewater process parameters **S43** Monitor and maintain grit removal and screening assets **S44** Monitor and control the performance of sedimentation, biological and chemical treatment operations **S45** Monitor and control wastewater treatment processes and performance **S47** Follow wastewater hygiene personal procedures For amplification and guidance refer to the WITPT Specification: https://energyenvironmentawards.co.uk/epa/water-industry-treatment-process-technician/
What tasks will I have to cover?	The task(s) must allow you to undertake the activities required for a practical observation. For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage' in the specification, refer to link on page 9.
What resources can I use?	Equipment and resources needed for the observation will be: • provided by your employer • the tools, 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 I be asked?	The independent assessor: • will ask at least 6 questions in relation to underpinning knowledge or where an opportunity to observe you completing an activity has not naturally occurred • may ask questions to follow up to seek clarification from you

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

Practice Component 1: Observation with Questions

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

Component 2: Interview based on Portfolio of Evidence

Overview

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

Step-by-Step Guide

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

Who will assess me?	1 independent assessor, appointed by Energy & Environment Awards will assess you under examination conditions.
How will the interview be organised?	**Locations:** Your interview will take place at your employer's premises or a suitable venue. **Time:** Your interview will be 1 hour 30 minutes – However, the independent assessor has the option to increase the time of your interview by up to 10%, to allow you to complete your last answer. **Your interview will be:** • a discussion between you and the independent assessor • face to face or remote, as agreed • assessed and outcomes will be recorded by the assessor on official Energy & Environment Awards interview documents • recorded using the relevant technology such as Microsoft Teams or an audio recording device. You will have access to your portfolio of evidence throughout the interview.
What topics will I have to cover?	The questions you will be asked will cover the following topics: • working in the water industry (K2 K3 S21) • environment and sustainability (S18 S19 B2)

	• asset and equipment maintenance (K6 S3 S4 S5 S6) • responding to alarms (S2) • improvement and optimisation (K13 S8) • resolving faults (K15 S7) • responding to incidents (K11 S12 S17 S20) • team working (K20 K22 K23 S25 S27 B5 B6 B7) • information technology (K18 S24) The themes will be assessed in the context of your specialism **Water treatment process technician** • water catchment and abstraction (K29 S28 S29) • waste streams management (S36) • shut down, isolation and recommission of water process streams (K8 K14 S37) **Wastewater treatment process technician** • pumping operations (S39) • wastewater flows (K40, S38) **For amplification and guidance refer to the WITPT Specification:** https://energyenvironmentawards.co.uk/epa/water-industry-treatment-process-technician/
How many questions will I be asked?	• A minimum of 12 questions (based on the above topics) • Set questions which maybe contextualised to the contents of your portfolio • Follow-up questions in order to seek clarification
Provisional Grading	The independent assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass.
Overall grading for this component	Fail, Pass or Distinction

Portfolio of Evidence Requirements

The requirements are as follows:

Portfolio Mapping Document

You must map your portfolio of evidence to the KSBs covered by the interview.

You must include a mapping document at the front of your portfolio that clearly references the location of the evidence in your portfolio.

For further guidance on how to map refer to:

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

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

Step-by-Step Guide

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

Your portfolio is not assessed. It serves two purposes:

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

What should I include in my portfolio?

Quality vs quantity

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

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

Examples of acceptable evidence:

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

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

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

Evidence must be:

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

What can I do to prepare for the interview?

You should:

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

The role of your employer or training provider

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

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

Practice Component 2: Interview based on Portfolio of Evidence

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

Component 3: Multiple-choice Test

Overview

The multiple-choice test is paper based. You will have 1 hour 30 minutes to complete the test. The test consists of 50 questions.

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

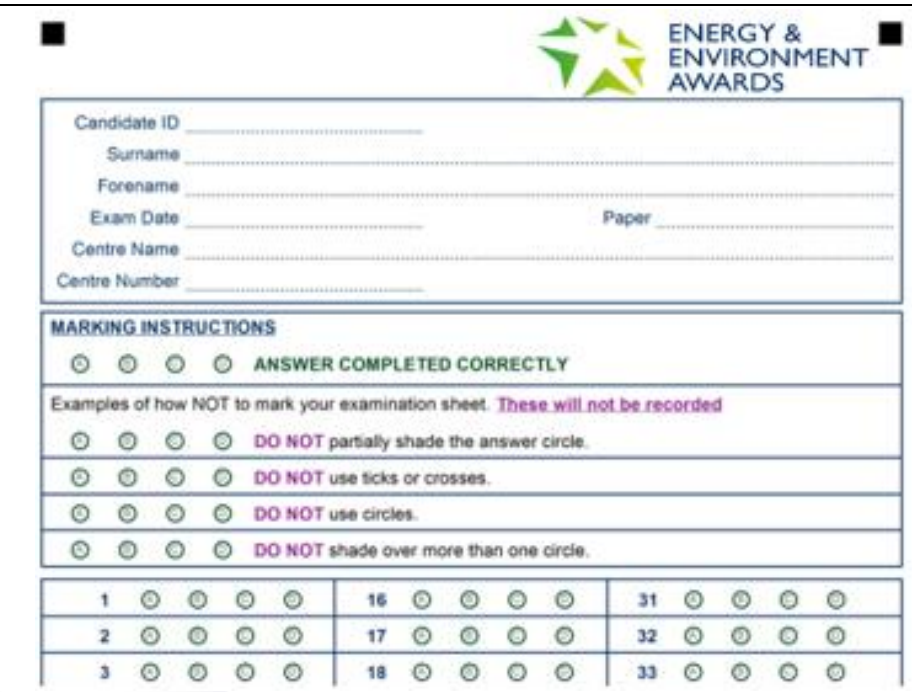
Step-by-Step Guide

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

<table>
<tr><td>Who will start and finish your multiple-choice test?</td><td>You will sit your multiple-choice test in the presence of an invigilator.</td></tr>
<tr><td>How will the question appear?</td><td>Here is an example of how the question will appear:

<table>
<tr><th colspan="2">Question 1</th></tr>
<tr><td colspan="2">In a workplace, who is responsible for maintaining health and safety?</td></tr>
<tr><th colspan="2">Possible answers</th></tr>
<tr><td>a)</td><td>Employers</td></tr>
<tr><td>b)</td><td>Safety managers</td></tr>
<tr><td>c)</td><td>Most senior person on-site</td></tr>
<tr><td>d)</td><td>Everyone</td></tr>
</table>

You must select one answer that you think is correct. You will be provided with an answer sheet where you will be expected to shade in the answer you have selected. Here is an example:</td></tr>
</table>

	 **Always have a go even if you are not sure that it is the correct answer.**
Can I take any resources into the exam room?	The test is closed which means that you cannot refer to reference books or any other materials. You will be provided with stationery on the day. A (scientific) calculator is required for the test.
Can I have access to the internet?	No access to the internet is allowed and this means you must not take your SMART watch into the exam room.
How will the multiple-choice test be organised for me?	**Locations:** Your multiple-choice test will take place at your employer's or training provider's premises or a suitable venue. • You will take the test in a quiet space and in the presence of an invigilator • Your test will be scheduled by your employer or training provider with Energy & Environment Awards • If you fail the multiple-choice test, you can re-sit or re-take the failed test at your employer's discretion. There are no limits to the number of re-sits or re-takes you can take but it is important to revise and ensure that you are confident with the knowledge you are being tested on

What criteria will I have to learn? **AND** How many questions will be asked on each criteria?	The multiple-choice test questions are knowledge based and sample the 3 core knowledge criteria. Below is a list of the knowledge criteria, assessed in the multiple-choice test along with the range of questions that will be allocated to a multiple-choice test paper:

Number of Questions	Knowledge
3	**K5 Core** • Maths commonly used in the water and wastewater industries • S.I units • Calculations • Standard form • Measurement of distance, area, volume and flow, and unit conversion • Simple transposition of formula • Routine flow and hydraulics theories, principles, and calculations
2	**K7 Core** • Energy performance monitoring methods • Energy consumption reduction guidelines • Tariff management
4	**K12 Core** • Chemical awareness • Transport, acceptance and use of chemicals • Agreement of Dangerous Goods transported by Road regulation (ADR) • Chemical delivery requirements • Chemical control methods
17	**K16 Core** • Health and Safety at Work Act – responsibilities

- Management of health and safety at work regulations
- Control of Substances Hazardous to Health (COSHH)
- Risks and hazards
- Risk assessments and controlling risk
- Control methods for harmful substances and chemicals, effluents, and sludge
- Health and safety signage
- Personal Protective Equipment (PPE)
- Working in confined spaces: safety equipment and lifting equipment
- Harnesses, gas detectors and respiratory apparatus.
- Manual handling
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
- Asbestos awareness
- Lone working
- Working at height
- Working time directive
- First aid
- Emergency procedures
- Drug and alcohol awareness
- Permits to work
- Storage of tools, equipment, and materials
- ATEX compliance (safety requirements of the workplace and equipment used in explosive atmosphere)
- Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)
- Pressure System Safety Regulations (PSSR)

		• Provision of Work Equipment Regulations (PUWER) • Lifting Operations and Lifting Equipment Regulations (LOLER) • Safe isolation of plant and equipment (lockout, tagout)
	6	**K17 Core** • Environment and sustainability • Environmental Protection Act • Types of pollution and control measures • Environmental permitting and discharge consents • Operator Self Monitoring (OSM): sampling requirements • Monitoring emissions to air, land, and water (MCERTS) • Principles of sustainable development • Waste management and waste streams • Invasive species and Duty of Care in the Environmental aspect
	1	**K24 Water treatment process technician** • Water Supply (Water Quality) Regulations • Consequences of non-compliance
	2	**K25 Water treatment process technician** National water hygiene: • importance of water • water as a carrier of disease • potential contamination and its consequences preventing contamination
	2	**K26 Water treatment process technician** • Water quality requirements • Drinking water safety plans

	• Water quality parameters and the role of water quality alarms • Water quality incident investigation requirements • Water quality records • Consequences of failure
1	**K27 Water treatment process technician** DWI asset and site security requirements: water storage alarms
1	**K31 Water treatment process technician** Plant shutdown and re-start procedures: • planned • reactive Impact and causes of shutdown
2	**K32 Water treatment process technician** Distribution system protection: • disinfection • chemical treatment • flow • valve operation controls
1	**K33 Water treatment process technician** • Treated water storage point objectives and requirements
1	**K36 Wastewater treatment process technician** • Nature and sources of wastewater effluent and its impact on the environment
4	**K37 Wastewater treatment process technician** • Chemical, biological, microbiological, and physical characteristics of wastewater effluent and trade effluents
5	**K39 Wastewater treatment process technician** • Configuration, operation, and performance requirements of types of sewerage systems and pumping stations:

	○ inter-stage pumping stations ○ detention tanks ○ combined sewer overflow screens (CSO) • Pumps and associated ancillary equipment used **Remember** the questions have been written to reflect the Water Industry Treatment Process Technician role as a whole and are not focussed on specific plant, machinery, or employer-specific processes. For amplification and guidance refer to Section 3 of the WITPT Specification.
What should I do to prepare for the multiple-choice test?	**You should be prepared to**: • revise the criteria listed above • ask your employer or training provider for additional questions that they have prepared to support you • attend the multiple-choice test which will last 90 minutes While on-programme, the employer or training provider must ensure you are: • familiar with all areas assessed by the multiple-choice test as listed above • supported in completing a practice test and provide you with constructive feedback to enable you to identify areas you need to carry out further revision in

Practice Component 3: Multiple-Choice test

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

Overall grading

All assessment components contribute equally to your overall EPA grade.

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

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

Any grade = fail, pass or distinction

Section 4: Resits and retakes

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

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

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

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

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

Energy & Environment Awards resit and re-take policy can be found at: https://energyenvironmentawards.co.uk/policies-and-fees/

Section 5: Appendices

Appendix A: Glossary

Appendix B: Portfolio Mapping Document

Appendix A: Glossary

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

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

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

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

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

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

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

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

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

Standard – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation's duties. The occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships & Technical Education current criteria. For further details refer to: https://skillsengland.education.gov.uk/apprenticeship-standards/st1292?view=epa

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

Appendix B: Portfolio Mapping Document

Introduction

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

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

The portfolio mapping document below consists of

- 4 pages covering mapping for core requirements
- 1 page covering mapping for the water treatment process technician specialism
- 1 page covering mapping for the wastewater treatment process technician specialism

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

Your next steps

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

- Your lead provider must make arrangements for Energy & Environment Awards to have access to your portfolio including the portfolio mapping document at Gateway

Portfolio Mapping Document

Mapping Sign off on Portfolio Completion:

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

GROUP 1: (Core) Working in the water industry

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K2	Technician's role. Limits of autonomy. Different teams and functions involved in operations: how they work together			
K3	Business operation considerations: how activities may impact customers, financial constraints, ethical business practices. Customer Experience Measure (CMEX). Regulatory and legislative performance measures			
S21	Identify and escalate issues			

GROUP 2: (Core) Environmental and sustainability

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S18	Comply with environmental and sustainability regulations and requirements. For example, safe disposal of waste, re-cycling or re-use of materials, and efficient use of resources			
S19	Apply principles of sustainable development. For example, in choice of materials			
B2	Prioritise and promote the environment and sustainability			

GROUP 3: (Core) Asset and equipment maintenance

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K6	Planned preventative maintenance of monitoring equipment requirements. Asset health check requirements			
S3	Inspect (planned) and check assets (reactive) and identify action			
S4	Follow procedures to remove assets for routine maintenance and recommission			
S5	Carry out validation or instrument checks of online equipment and identify action			
S6	Monitor first line maintenance of process control equipment and instrumentation			

GROUP 4: (Core) Improvement and optimisation

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K13	Optimisation in the treatment process: what it means and how it can be achieved			
S8	Consider, identify, and promote areas for improvement for example, in relation to quality, cost, time, safety, and impact			

GROUP 5: (Core) Responding to alarms

Ref.	Apprenticeship Standard Criteria	WORK-LOG EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S2	Follow alarm intervention procedures. Resolve alarm issues			

GROUP 6: (Core) Resolving faults

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K15	Fault finding and problem-solving techniques: root cause analysis and diagnostics			
S7	Identify issues. Apply fault-finding and problem-solving techniques: identify root cause. Resolve faults			

GROUP 7: (Core) Responding to incidents

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K11	Different types of incidents and emergency situations (internal and external): pollution, loss of process, security, weather, and accidents: their potential impact. Incident management and procedures			
S12	Identify and instigate incident escalation procedures			
S17	Follow procedures for emergency situations			
S20	Conduct and assess impact of activity for example, environmental, cost, reputation, safety, and health. Apply control measures			

GROUP 8: (Core) Team working

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K20	Planning, prioritising, work scheduling, and time management techniques			
K22	Team working and culture. How to work as part of a team, the importance of establishing and meeting the requirements of different roles. Negotiation and conflict management techniques			
K23	Equality, diversity, and inclusion in the workplace			
S25	Plan tasks. Identify and organise resources to complete work tasks			
S27	Liaise with, negotiate with, and handle conflict in individual or group environments			
B5	Team-focus to meet work goals: support others			
B6	Respond and adapt to work demands			
B7	Committed to continued professional development to maintain and enhance competence in own area of practice			

GROUP 9: (Core) Information technology

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K18	Information and digital technology: email, word processing, spreadsheets, presentation, remote working platforms, work and asset management systems. General Data Protection Regulation (GDPR). Cyber security			
S24	Use information technology. Follow cyber security procedures. Comply with GDPR			

GROUP 10: (Water treatment process technician) Water catchment and abstraction

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K29	Raw water and catchment management permitting and protection			
S28	Select raw water source or blend of sources			
S29	Monitor and control water abstraction			

GROUP 11: (Water treatment process technician) Waste streams management

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S36	Monitor and control waste stream processes and performance			

GROUP 12: (Water treatment process technician) Shut down, isolation and recommission of water process streams

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K8	Isolation, shutdown, and recommissioning of process streams requirements and procedures			
K14	Asset optimisation and performance: quality, cost, time, safety, and impact			
S37	Apply procedures to shut-down, isolate, and re-commission water process streams			

GROUP 10: (Wastewater treatment process technician) Pumping operations

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S39	Control internal pumping station operations			

GROUP 11: (Wastewater treatment process technician) Wastewater flows

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K40	Purpose, application, and impact of wastewater flows: volumes, permits, catchment area consent, and impact of weather conditions			
S38	Monitor and control incoming flows			

GROUP 12: (Wastewater treatment process technician) Shut down, isolation and recommission of wastewater process streams

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K8	Isolation, shutdown, and recommissioning of process streams requirements and procedures			
K14	Asset optimisation and performance: quality, cost, time, safety, and impact			
S46	Apply procedures to shut-down, isolate, and re-commission wastewater process streams			