



ENERGY &
ENVIRONMENT
AWARDS

Skills for a greener world

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

Supporting Documents

QAN 610/6027/6
ST0876 V1.0

Supporting Documents for

EEA Level 2 End-point Assessment for Water Process Operative (Clean water process operative; Waste water process operative)

QAN 610/6027/6

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Updates to the supporting documents

Since the first publication of Energy & Environment Awards Water Process Operative Supporting Documents – Clean water process operative; Waste water process operative, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v3.0	August 2025	Rebranded	All
v2.1	May 2024	Additional information added as examples for First line operational maintenance and Special requirements box in Observation Planning form	44, 47
v2.0	August 2023	Rebranded	All
v1.0	Apr 2023	First published	All

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 (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

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

Gateway - the stage of the apprenticeship where the apprentice, employer and training provider determine whether the apprentice is ready to undertake end-point assessment

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

Knowledge (as part of KSBs) – specific information, technical detail, and ‘know-how’ identified as part of the apprenticeship standard that must be evidenced during end-point assessment

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

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

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. Occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships and Technical Education current occupation criteria

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

Appendix B: Gateway Eligibility Form

(Standard Version: ST0876 version 1.0; Assessment Plan Version: AP02)

Apprentice's name:		Apprentice's job title:	
Apprentice's ULN:			
Name of Employer:		Name of Training provider:	
Employer representatives present:		Training provider representatives present:	
Apprenticeship start date:		Apprenticeship on-programme end date:	
Was the apprentice aged 19 or over at the start of the programme?		Y / N	
Employer Decision for apprentices aged 19 or over only at the start of the programme:		We require the apprentice to attempt English and maths before taking the end-point assessment	Y / N
Gateway meeting date:			
Has the apprentice taken any part of the end-point assessment for this apprenticeship standard with any other End Point Assessment Organisation?		Y / N	
If 'Yes' please give details:			

Apprentice's details

Eligibility requirements:

Where applicable, the apprentice must confirm their achievement of the following

Note: For apprentices aged 19+, if maths and/or English have been attempted but not achieved evidence of the attempt should be submitted.

Eligibility requirement	Achieved by the apprentice? Y/N	Evidence (Scans of certificates MUST be included)
Achieved Level 1 English or higher		
Achieved Level 1 Maths or higher		
Satisfactory completion of the formal training plan agreed with apprentice by the employer		
Compiled and submitted a competent portfolio of evidence on which the interview will be based		

Gateway Eligibility Declaration

The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:

1. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
2. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests.
3. The apprentice will only submit their own work as part of end-point assessment.
4. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
5. The apprentice has been on-programme for a minimum duration of 365 days.
6. The apprentice has achieved English and maths Level 1 or higher as detailed in this document.
7. The apprentice satisfactorily completed a formal training plan agreed by the employer.
8. The apprentice has compiled and submitted a competent work log of evidence, on which the interview will be based.
9. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship. certificate from the ESFA who issue the certificate on behalf of the Secretary of State.
10. The apprentice has been directed to Energy & Environment Awards Appeals Policy and Complaints Policy.
11. The employer/training provider has given Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
12. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to Energy & Environment Awards, the end-point assessment cannot take place.

Signed on behalf of the employer (print name):	Signature:	Date:
Signed on behalf of the training provider (print name):	Signature:	Date:
Apprentice's name (print):	Signature:	Date:
Energy & Environment Awards use only:		
Energy & Environment Awards Sign off:		
Comments/actions:		

Appendix C: Practice Knowledge Tests

Level: 3

Water Process Operative

Pathway: Clean Water

Paper Code: SAMPLE PRACTICE PAPER

This sample test consists of 30 questions. The live test has 40 questions.

The Pass grade is 70%.

The duration of this examination is 45 minutes. The live test has a duration of 60 minutes.

You must use a pencil to complete the answer sheet - pens must NOT be used.

When completed, please leave the examination answer sheet and question paper on the desk.

For this paper the use of a scientific calculator (non-programmable) is permitted.

For each question, fill in ONE answer ONLY.

If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:

MARKING INSTRUCTIONS

☐ A ☐ B ☐ C ☒ D **ANSWER COMPLETED CORRECTLY**

Examples of how NOT to mark your examination sheet. **These will not be recorded**

☐ A ☐ B ☐ C ☐ D **DO NOT** partially shade the answer circle.

☐ A ☐ B ☒ C ☒ D **DO NOT** use ticks or crosses.

☐ A ☐ B ☐ C ☒ D **DO NOT** use circles.

☐ A ☐ B ☒ C ☒ D **DO NOT** shade over more than one circle.

This paper must be returned to Energy & Environment Awards with the apprentice answer sheets.

You may use this page for rough work

Question 1

The Customer Experience Measure (CMeX) is:

Possible answers

a)	a financial incentive mechanism for UK water companies
b)	a reputational incentive mechanism for UK water companies
c)	designed to reward UK water companies who provide their customers with excellent levels of service
d)	designed to reward UK water companies who provide their domestic customers with excellent levels of service

Question 2

The UK water industry is subject to stricter regulation than other industries such as hospitality and retail because:

Possible answers

a)	the service provided is essential and customers have no choice in who provides it
b)	the UK water industry needs to retain a professional and well-trained workforce to deliver an effective service to customers
c)	many water companies have parent companies outside of the UK
d)	it is required by a European Directive

Question 3

Working at height is any activity in which:

Possible answers

a)	a person could fall a distance liable to cause personal injury
b)	a person could fall greater than 2.5 metres
c)	work takes place at more than 2.5 metres above ground level
d)	work takes place in a position above the ground

Question 4

In the workplace a hazard is defined as something that:

Possible answers

a)	has a high chance of causing harm to a person
b)	has the potential to cause harm to a person
c)	is a danger that cannot be eliminated
d)	is clearly marked as dangerous by the employer

Question 5

Which of the following items of additional PPE would **not** normally be required when working on a lime dosing pump?

Possible answers

a)	Full face mask
b)	Chemical suit
c)	Corrosion resistant gloves
d)	Breathing apparatus

Question 6

Which of the following would **not** be considered part of an operative's standard PPE?

Possible answers

a)	Gloves
b)	Hard hat
c)	Safety boots
d)	Chemical suit

Question 7

What is the most effective way to clean visible dirt off tools?

Possible answers

a)	Use a cloth and then clean with chlorine solution (1000 mg/litre)
b)	Use a cloth and clean with chlorine solution (10 mg/litre)
c)	Wipe it, bag it and send to an approved tool cleaning company
d)	Use a cloth and wash using clean water

Question 8

Which legislation requires water companies to supply 'wholesome' water to customers?

Possible answers

a)	Environmental Protection Act 1990
b)	The Water Supply (Water Quality) Regulations 2018
c)	Water Act 2014
d)	Health and Safety at Work Act 1974

Question 9

If it is not appropriate to release treated, chlorinated water to the network for distribution, how should it be disposed of?

Possible answers

a)	Dechlorinate and discharge at a point with prior permission from the Environment Agency
b)	Super-chlorinate and distribute to service reservoirs via tankers
c)	Via tankers into a nearby watercourse
d)	Via local council specialist waste disposal

Question 10

What is the average volume of water used per person every day in the UK?

Possible answers

a)	80 litres per day
b)	100 litres per day
c)	150 litres per day
d)	240 litres per day

Question 11

What is the volume of a cylindrical tank, to 1 decimal place, with a radius of 3 metres and a depth of 15 metres?

Possible answers

a)	424.1 m ³
b)	4,241.1 m ³
c)	141.4 m ³
d)	1,413.7 m ³

Question 12

A water treatment works produces 5 ML (mega litres) per day.
How much is this in litres?

Possible answers

a)	5,000,000 litres
b)	500,000 litres
c)	50,000,000 litres
d)	5,000 litres

Question 13

A reservoir measuring 10 metres long, 5 metres wide and 2 metres deep is 83% full of water.

How many litres of water is in the reservoir?

Possible answers

a)	8,300
b)	80,000
c)	83,000
d)	100,000

Question 14

After using a 'spill kit' to clear up a minor spillage, what is the next step in the spill clean-up process?

Possible answers

a)	Dispose of PPE and order a replacement set
b)	Replace the spill kit and follow reporting procedures
c)	Tell colleagues about the spillage
d)	Assess the risk

Question 15

An unacceptable method of disinfection is:

Possible answers

a)	UV filtration
b)	chlorination
c)	ozonation
d)	rapid gravity filtration

Question 16

When should a rapid gravity filter be backwashed?

Possible answers

a)	Every 1 -3 months
b)	When the head loss reaches a predetermined level
c)	Following a decrease in raw water turbidity
d)	Following a failure in final water disinfection

Question 17

Which pathogenic microorganism is resistant to chlorine disinfection?

Possible answers

a)	E.coli
b)	Cryptosporidium
c)	Ebola
d)	Enterococcus

Question 18

Orthophosphate dosing is used to:

Possible answers

a)	control the pH of the water
b)	control lead levels in the water
c)	help to reduce turbidity and colour
d)	help reduce the hardness level of the water

Question 19

Which of the following raw water sources usually requires least treatment?

Possible answers

a)	Ground water sources
b)	Upland water sources
c)	Lowland water sources
d)	Brackish water sources

Question 20

Which of the following water sources is **NOT** commonly used in the UK for producing potable water?

Possible answers

a)	Upland river
b)	Sea water
c)	Lowland river
d)	Upland reservoir

Question 21

Water is most likely to originate from an upland surface water source when:

Possible answers

a)	the water is very turbid and low in colour
b)	the water is high in nitrates
c)	the water is soft and high in colour
d)	the water is moderately hard with a pH above 7.0

Question 22

The water cycle shows that the total volume of water on earth:

Possible answers

- | | |
|----|----------------------|
| a) | is always decreasing |
| b) | is always increasing |
| c) | remains constant |
| d) | is in the oceans |

Question 23

Which ONE of the following chemicals is **NOT** used as a coagulant?

Possible answers

- | | |
|----|-------------------------|
| a) | Poly aluminium chloride |
| b) | Ferric sulphide |
| c) | Aluminium sulphide |
| d) | Sodium hydroxide |

Question 24

Hypochlorous acid is formed when:

Possible answers

- | | |
|----|--|
| a) | chlorine dissolves in water |
| b) | organic material and chlorine react together |
| c) | orthophosphate and chlorine react together |
| d) | there is a fault in the clarification stage of the treatment process |

Question 25

Which of the following chemicals is a common coagulant used in water treatment?

Possible answers

a)	Orthophosphate
b)	Ferric sulphate
c)	Chlorine
d)	Lime

Question 26

Why is the pH of water often corrected immediately prior to discharge into the network?

Possible answers

a)	To improve taste
b)	To reduce pesticides
c)	To prevent discolouration
d)	Acidic water can corrode pipes and fittings

Question 27

According to the Water Supply (Water Quality) Regulations, a sample of customer tap water must have:

Possible answers

a)	no more than 1 count of E. coli is permitted within a 100 ml sample
b)	zero coliform bacteria within a 100 ml sample
c)	lead concentration less than 50 µgPb/L within a 100ml sample
d)	free chlorine residual less than 0.3mg/L within a 100ml sample

Question 28

Which of the following water quality failures is **NOT** usually considered a health risk?

Possible answers

a)	Iron
b)	E.coli
c)	Aluminium
d)	Cryptosporidium

Question 29

Which ONE of the following situations would prevent an operative from working in a restricted area?

Possible answers

a)	The operative has a common cold
b)	The operative has just returned from a foreign holiday
c)	The operative has persistent vomiting or diarrhoea
d)	The operative has just returned to work following a period of illness

Question 30

Anyone working on 'restricted operations' must:

Possible answers

a)	have security clearance
b)	have training in chlorine handling
c)	hold a valid National Water Hygiene passport
d)	hold a valid Safety Health and Environmental Awareness (SHEA) Passport

Sample Practice Test Answer Scheme

Question	Answer	Question	Answer	Question	Answer
1	D	11	A	21	C
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3	A	13	C	23	D
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9	A	19	D	29	C
10	C	20	B	30	C

Level: 3

Water Process Operative

Pathway: Waste Water

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Possible answers

a)	has a high chance of causing harm to a person
b)	has the potential to cause harm to a person
c)	is a danger that cannot be eliminated
d)	is clearly marked as dangerous by the employer

Question 5

Which piece of additional PPE should be used when handling screenings from a wastewater treatment site?

Possible answers

a)	Harness
b)	Needle-stick resistant gloves
c)	Emergency breathing apparatus
d)	Gas monitor

Question 6

Which of the following would **not** be considered part of an operative's standard PPE?

Possible answers

a)	Gloves
b)	Hard hat
c)	Safety boots
d)	Chemical suit

Question 7

Where in the process would you find a humus tank?

Possible answers

a)	After the activated sludge plant
b)	Before the primary settlement tank
c)	After the storm tank
d)	After the biological percolating filters

Question 8

Which legislation requires water companies to supply “wholesome” water to customers?

Possible answers

a)	Environmental Protection Act 1990
b)	The Water Supply (Water Quality) Regulations 2018
c)	Water Act 2014
d)	Health and Safety at Work Act 1974

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If it is not appropriate to release treated, chlorinated water to the network for distribution, how should it be disposed of?

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a)	Dechlorinate and discharge at a point with prior permission from the Environment Agency
b)	Super-chlorinate and distribute to service reservoirs via tankers
c)	Via tankers into a nearby watercourse
d)	Via local council specialist waste disposal

Question 10

Which of the following items would **NOT** be considered a gross solid?

Possible answers

a)	Nappies
b)	Masonry
c)	Rags
d)	Primary sludge

Question 11

What is the volume of a cylindrical tank, to 1 decimal place, with a radius of 3 metres and a depth of 15 metres?

Possible answers

a)	424.1 m ³
b)	4,241.1 m ³
c)	141.4 m ³
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d)	50,000,000 litres

Question 13

A reservoir measuring 10 metres long, 5 metres wide and 2 metres deep is 83% full of water.

How many litres of water is in the reservoir?

Possible answers

a)	100,000
b)	83,000
c)	80,000
d)	8,300

Question 14

After using a 'spill kit' to clear up a minor spillage, what is the next step in the spill clean-up process?

Possible answers

a)	Dispose of PPE and order a replacement set
b)	Replace the spill kit and follow reporting procedures
c)	Tell colleagues about the spillage
d)	Assess the risk

Question 15

A storm tank should return flow-to-full treatment:

Possible answers

a)	as soon as possible after the storm event
b)	when the site is receiving full flow-to-full treatment
c)	when the sludge tanker has emptied the sludge tank
d)	when the primary tank has been dropped after desludging

Question 16

The main health hazard from hosing out a blocked inlet screen is:

Possible answers

- | | |
|----|--|
| a) | sewage in the face, mouth and eyes |
| b) | asphyxiation from carbon monoxide gas |
| c) | an explosion when polyaluminium chloride mixes with carbon dioxide |
| d) | repetitive strain injury |

Question 17

Which ONE of the following is **NOT** a symptom of Weil's Disease (leptospirosis)?

Possible answers

- | | |
|----|-----------------------|
| a) | Diarrhoea |
| b) | Tummy ache |
| c) | Yellowing of the skin |
| d) | Convulsions |

Question 18

Which of the following is considered biological treatment of sewage?

Possible answers

- | | |
|----|-----------------------|
| a) | Fixed-film filtration |
| b) | Primary settlement |
| c) | Preliminary treatment |
| d) | Membrane filtration |

Question 19

Which of these treatment processes will **not** reduce ammonia levels in final effluent?

Possible answers

a)	Slow sand filter
b)	Rapid gravity filter
c)	UV filter
d)	Membrane filter

Question 20

Which of the following types of waste is considered hazardous?

Possible answers

a)	Sewage sludge
b)	Screenings
c)	Grit
d)	Asbestos piping

Question 21

Which of the following is **not** usually part of a wastewater treatment work's Permit to discharge?

Possible answers

a)	Biochemical Oxygen Demand (BOD)
b)	Ammonia
c)	Chemical Oxygen Demand (COD)
d)	Free chlorine

Question 22

Under which circumstance might the Environment Agency issue an exemption when a wastewater treatment works breaches its permit conditions?

Possible answers

a)	Exemptions are never issued
b)	If the temperature was under 5°C
c)	Site power failure
d)	Serious mechanical faults

Question 23

Ferric is sometimes added to wastewater as part of the treatment process to:

Possible answers

a)	aid settlement
b)	kill harmful bacteria
c)	improve biological treatment
d)	remove colour from final effluent

Question 24

Which ONE of the following is **NOT** a reason for removing sludge from wastewater?

Possible answers

a)	To use the sludge to generate biogas
b)	To use the sludge as fertiliser
c)	To improve the quality of final effluent discharged to the environment
d)	To prevent malodour complaints

Question 25

Which ONE of the following pieces of information **CANNOT** be gained from SCADA?

Possible answers

a)	Sludge holding tank level
b)	Flow of sludge to holding tanks over the past 7 days
c)	Desludge pumps are on duty or standby
d)	Customer complaints relating to malodour

Question 26

What percentage of raw sewage is pure water?

Possible answers

a)	0.1-0.5%
b)	2-3%
c)	5-10%
d)	10-15%

Question 27

Identify the test that an operative would use to determine how well sludge is likely to settle:

Possible answers

a)	SSVI
b)	MLSS
c)	COD
d)	BOD

Question 28

Which ONE of the following is **NOT** a risk to operatives when working at a wastewater treatment site?

Possible answers

a)	Contracting Leptospirosis (Weil's disease)
b)	Needle-prick injuries
c)	Muscle strain from lifting
d)	Lead poisoning

Question 29

An operative needs to hose out a blocked inlet screen. What addition to standard PPE should be worn?

Possible answers

a)	Face shield
b)	Class 3 PPE conforming to EN20471
c)	Ear defenders
d)	Latex safety boots

Question 30

Which ONE of the following is **NOT** one of the main reasons for treating wastewater?

Possible answers

a)	Protection of public health
b)	Preventing pollution
c)	Complying with the Environmental Permitting (England and Wales) Regulations
d)	Complying with the Water Quality (Water Supply) legislation

Sample Practice Test Answer Scheme

Question	Answer	Question	Answer	Question	Answer
1	D	11	A	21	D
2	A	12	C	22	B
3	A	13	B	23	A
4	B	14	B	24	D
5	B	15	A	25	D
6	D	16	A	26	A
7	D	17	D	27	A
8	B	18	A	28	D
9	A	19	C	29	A
10	D	20	D	30	D

Energy & Environment Awards MCQ Example answer Sheet

SAMPLE ANSWER SHEET



Candidate ID	Attempt
Last Name	
First Name	
Exam Date	Paper
Centre Name	
Centre Number	

MARKING INSTRUCTIONS

Answers should be completed using a HB pencil.

☐ ☐ ☐ ☒ **ANSWER COMPLETED CORRECTLY**

Examples of how NOT to mark your examination sheet. **These will not be recorded**

☐ ☐ ☐ ☐ **DO NOT** partially shade the answer circle.

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☐ ☐ ☐ ☐ **DO NOT** use circles.

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Appendix D - Portfolio Mapping Document

Introduction

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

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

The portfolio mapping document below consists of:

- 2 pages covering mapping for core requirements
- 1 page covering mapping for the clean water process operative
- 1 page covering mapping for the waste water process operative

Apprentices should use the mapping for the core and the option they are following.

Apprentice's next steps

1. Complete all the details on the first page and include employer details of where relevant competencies from their experience at work was gained
2. Ensure each piece of evidence signed off by their tutor/supervisor/mentor and training provider. The apprentice can use a number of different types of evidence to demonstrate their competence as described in Section 6 of the Specification – 'What to include in the portfolio'. For further guidance, the apprentice must seek advice from their tutor/supervisor/mentor and training provider
3. Map evidence to the criteria in the following pages using a referencing system indicating where the evidence for the criteria is located in the 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 and referred to during the interview
4. Place the portfolio mapping document at the front of the portfolio of evidence.

The apprentice's training provider must make arrangements for Energy & Environment Awards to have access to the apprentice's portfolio including the portfolio mapping document at Gateway. For those using e-portfolios such as ONEFILE or SMARTASSESSOR, the reference used must simply be the file or folder name you used when uploading the evidence to such systems.

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) Water process operative role

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K2	Describes the water process operative role, position in structure, limits of authority; escalation procedures			

GROUP 2: (Core) Chemicals: delivery and storage

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K12	Outlines delivery and storage requirements – delivery permits, storage requirements, tank limits and interceptor levels for a given water process chemical			

GROUP 3: (Core) Collection evidence

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K11	Knows and describes how to apply fault-finding techniques			
S5	Identifies a decline trend in process performance			
S8	Describes how to apply a fault-finding technique to find the cause			

GROUP 4: (Core) Stock

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S16	Describes how they audit and request chemical and consumables stock; identifying factors that they take into account			
S17	Describes how they check chemical deliveries for quality and content			

GROUP 5: (Core) Team player

Ref.	Apprenticeship Standard Criteria	WORK-LOG EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
B4	Describes being a team player in the workplace, outlining the situation and the role they played			

GROUP 6: (Core) Customer focus

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
B5	Describes being customer focused, outlining the situation and the approach they applied			

GROUP 7: (Clean water process operative) Clean water-operating parameters

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K15	Describes the impact of weather and the failure of an operating parameter on the treatment process			

GROUP 8: (Clean water process operative) Clean water-treatment work assets and equipment

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K16	Identifies the purpose of a given clean water asset			
K17	Describes the consequences of asset failure on clean water process			

GROUP 7: (Waste water process operative) Waste water-operating parameters

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K26	Describes the impact of weather and the failure of an operating parameter on the treatment process			

GROUP 8: (Waste water process operative) Waste water-treatment work assets and equipment

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K27	Identifies the purpose of a given waste water asset			
K28	Describes the consequences of asset failure on waste water process			

Appendix E: Observation with Questions Planning Form

Instructions

This form has two purposes:

1. To help you plan a practice Observation with Questions for your apprentices
2. To inform Energy & Environment Awards of the proposed task(s) for the live assessment

The apprentice is assessed:

- in their normal place of work. The apprentice completes their day-to-day duties under normal working conditions. This allows the apprentice to demonstrate the KSBs through naturally occurring evidence. Simulation is not permitted during the observation
- A total of 4 hours. The observation may not be split other than to allow comfort breaks as necessary or to allow the apprentice to move from one location to another as required
- Equipment and resources needed for the assessment must be in good and safe working condition

The activities should be designed to assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship. However as a minimum the practical assessment will need to cover the activities and KSBs listed in the planning form below.

Energy & Environment Awards offers a service to review the employer/training provider's Observation with Questions task brief.

Task variations: If you have more than one apprentice being assessed, use the "Practical Task variations" section of the form to indicate what the task variations that will be put in place so that apprentices are not asked to complete identical tasks.

Complete the 'Observation with Questions Planning Form' and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review at least 1 month before the start** of the end-point assessment

Observation with Questions Planning Form

Employer name and site address	
Training provider (if applicable)	
Standard	Water Process Operative
Pathway	Clean water process <input type="checkbox"/> Waste water process <input type="checkbox"/>
Level	2
Location of practical	
Contact Details: Employer/training provider representative, email address and contact number overseeing the setup of the practical (documents and site).	

Use the boxes below to describe the task(s). Details for the individual KSBs can be found in the reference table on pages:48 – 49.

Core requirements	
Work preparation	
KSBs covered: S1	<input type="checkbox"/>
Health, safety and environment	
KSBs covered: K5	<input type="checkbox"/>
S2	<input type="checkbox"/>
S3	<input type="checkbox"/>
B1	<input type="checkbox"/>

Core requirements

Policy and procedures/determine action

KSBs covered: K3 ☐ S9 ☐

First line operational maintenance

[Requirement: Conduct a minimum of **TWO** types of first line operation maintenance on water assets such as Calibration of equipment; Greasing / lubrication; Clearing blockages/removing debris; Cleaning of flow meters / devices; Exercising valves; Washing equipment]

KSBs covered: K8 ☐ S10 ☐

Tools and equipment

KSBs covered: K9 ☐ S11 ☐ S12 ☐ S13 ☐

Housekeeping

KSBs covered: S14 ☐

Core requirements
Information/IT KSBs covered S18 <input type="checkbox"/> S19 <input type="checkbox"/> S20 <input type="checkbox"/>
Takes responsibility KSBs covered: B2 <input type="checkbox"/>
Demonstrate professionalism KSBs covered: B3 <input type="checkbox"/>

Clean water process operative option

Clean water – samples

[Requirement Take, test and record water - a minimum of three different types of samples from across the process, checking and recording compliance levels]

KSBs covered: K20 ☐ S21 ☐

Clean water – process

[Requirement: Apply minimum of **two** water processes]

KSBs covered: K10 ☐ S4 ☐ S6 ☐ S15 ☐ S22 ☐ S23 ☐

Waste water process operative option

Waste water - samples

[Requirement Take, test and record water - a minimum of three different types of samples from across the process, checking and recording compliance levels]

KSBs covered: K31 ☐ S24 ☐

Waste water – process

[Requirement: Apply minimum of **two** water processes]

KSBs covered: K10 ☐ S4 ☐ S7 ☐ S15 ☐ S25 ☐ S26 ☐

Practical Task Variations - Describe how you can vary this task to ensure that the task does not become predictable.

Variation 1:

Variation 2:

Variation 3:

Special requirements (for example: access arrangements/PPE/special PPE, above the normal, so assessors can access the assessment site):

Please identify a quiet room/space to complete the audio recording of the mandatory questions:

Resources (for example: equipment/tools required):

Estimated total duration of practical task(s) must be 4 hours

Please state time for the practical task(s): _____

Remember:

- The specific detail of the tasks to be undertaken should be **kept confidential from the apprentices**

Practical Task: Include relevant photographs to illustrate task(s)

--

Energy & Environment Awards Office use only

Date received	
Date signed off	

Observation with Questions KSB Reference

This reference table will assist the employer and/or training provider to identify the KSB.

Core Knowledge
K3: Policy and procedures: operating manual, safety, emergencies, security, isolation – their purpose.
K5: Core. Dynamic risk assessments.
K8: First line operational maintenance: different types - cleaning, greasing, and washing, removing debris and clearing blockages.
K9: Maintenance tools and equipment: rakes, spades, pressure washers, brushes, spanners.
K10: Telemetry and monitoring processes; monitoring variables including flow, quality, turbidity (particles), chemical usage. Limits, consequences of being outside limits.
Knowledge: Clean water process option
K20: Clean water sampling requirements: different types of samples, sample points, storage, labelling, safe disposal, recording results, permits and consent parameters.
Knowledge: Wastewater process option
K31: Wastewater sampling requirements: different types of samples, sample points, storage, labelling, safe disposal, recording results, permits and consent parameters.
Core Skills
S1: Organise and prioritise work.
S2: Identify risks and control measures.
S3: Follow health and safety and environmental legislation, regulations and practice. For example, apply control measures, wear PPE, harness, gas detector and breathing apparatus required for the task.
S4: Read and interpret information/data.
S6: Undertake sensory analysis.
S7: Use measuring equipment.
S9: Determine action and follow procedure.
S10: Undertake first line operational maintenance of assets.

S11: Select and use tools and equipment; check/calibrate equipment.
S12: Undertake first line maintenance of tools and equipment, for example cleaning.
S13: Store tools and equipment.
S14: Maintain housekeeping: tidy, segregate and dispose of waste.
S15: Prepare and use chemicals.
S18: Communicate – verbal.
S19: Use technology.
S20: Record information/complete documentation.
Skills: Clean water process option
S21: Take clean water sample; process.
S22: Operate clean water treatment work assets.
S23: Apply clean water treatment processes.
Skills: Wastewater process option
S24: Take wastewater sample; process.
S25: Operate wastewater treatment work assets.
S26: Apply wastewater treatment processes.
Core Behaviours
B1: Core. Prioritises on health, safety and environment for example, challenges unsafe practice, says 'no' where action could have negative impact.
B2: Core. Takes responsibility for work for example, completes allocated work, takes proactive approach, knows own limitations and asks for help where required.
B3: Core. Professional for example, ethical – does the right thing, trust-worthy; presents positive image of self and company – work attire worn, polite and respectful

Appendix F: Practice Observation with Questions Template

Water Process Operative

Clean Water Observation with Questions

Name of Apprentice	
Location(s) of Practice Observation	
Name of Assessor	
Date of Practice Observation	
Start Time	
End Time	
Assessor additional comments	

Please indicate the apprentice's practice observation grade (F/P/D):	Grade

Please Note:

To achieve a Pass, the Apprentice must achieve all the pass descriptors.

To achieve a Distinction, the Apprentice must achieve all the pass descriptors and eight out of 12 of the distinction descriptors.

Fail: the apprentice does not demonstrate all the pass descriptors.

Important points

Assessment: The following activities must be observed:

☐ Work preparation: complete dynamic risk assessment and identify control measures (written or visual); select tools and equipment

☐ Take, test and record water - a minimum of **three** different types of samples from across the process, checking and recording compliance levels ((please tick processes for parameters observed)

☐ Chlorine
☐ Suspended solids
☐ Turbidity
☐ Ammonia
☐ Phosphate

☐ pH
☐ Temperature
☐ Metals
☐ Nitrate
☐ UV / DOC

☐ Apply minimum of **two** water processes (please tick processes observed)

☐ Disinfection
☐ Filtration
☐ Waste Streams
☐ Raw Water Processes

☐ Clarification
☐ Chemical Dosing
☐ Advanced Water Treatment Processes
☐ Treated Water Storage Processes

☐ Conduct a minimum of **two** types of first line operation maintenance on water assets (please tick maintenance observed)

☐ Calibration of equipment
☐ Cleaning of flow meters / devices
☐ Exercising valves

☐ Greasing / lubrication
☐ Clearing blockages/removing debris
☐ Washing equipment

Introduction

At the start of the practical observation the Assessor will:

- Introduce themselves
- Confirm their role
- Provide apprentice with information on the format of the observation with questions, including the timescales they will be working to.

(The assessor can share the grading guidance with the apprentice as this appears in the assessment plan)

The apprentice will:

- Give their full name
- Their date of birth
- Their employer name
- Confirm they are prepared for the practical observation; and confirm they can continue with the practical observation.

The apprentice will be asked to show their identification to the Assessor prior to beginning the assessment

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the observation.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- In the live observation the assessor is not allowed to give you feedback at any point.
- Ensure that your mobile is turned off or somewhere where you will not be interrupted during the observation.

Name of person delivering the introduction:		Date	
I confirm that I have received the Trade Test introduction	(Apprentice signature):		

Assessor Guidance

Delivery

- The observation with questions must take four hours. The time for questioning is included in the overall assessment time.
- You must ask a minimum of eight questions, across the tasks.
- Ensure to ask questions during natural stops between tasks and/or after completion of work.
- Follow-up questions can be asked where clarification is required
- The time for questioning is included in the overall assessment time.
- Answers to questions, must be recorded.

Work environment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Organises tasks in order of priority		Justifies their order of work task priority and explains any grouping of tasks in relation to cost/time saving	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

S1: Organise and prioritise work.

Health, safety and environment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Conducts dynamic risk assessment (written or visual); Identifies any workplace risks and suitable control measures		Explains compliance with health and safety procedures with reference to the impact on individuals, business and the environment	
Follows safe working practices and applies control methods; Wears PPE, harness, gas detector and breathing apparatus required for the task correctly, follows method statement and ensures health, safety and the environment is prioritised			
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K5: Dynamic risk assessments.

S2: Identify risks and control measures.

S3: Follow health and safety and environmental legislation, regulations and practice. For example, apply control measures, wear PPE, harness, gas detector and breathing apparatus required for the task.

B1: Prioritises on health, safety and environment for example, challenges unsafe practice, says 'no' where action could have negative impact.

Policy and procedures/determine action

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
<p>Determines appropriate action to be taken based on operational circumstances and follows appropriate policy and procedures</p> <p>Note: This should be covered when candidate covers the processes sections and carries out an 'adjustment' in 'Clean Water – processes' section.</p>		<p>Gives reasons for their choice of action over other options</p> <p>Note: This may be covered in 'Clean Water – processes' section</p>	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K3: Policy and procedures: operating manual, safety, emergencies, security, isolation – their purpose.

S9: Determine action and follow procedure.

First line operational maintenance: Apprentices must complete two maintenance activities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Completes required first line operational maintenance of assets in line with company instructions		Explains the need to undertake operational maintenance that follows company policies/procedures	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K8: First line operational maintenance: different types - cleaning, greasing, and washing, removing debris and clearing blockages.

S10: Undertake first line operational maintenance of assets.

Tools and equipment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Selects, checks, uses and stores appropriate tools and equipment for the task (including calibrating tools/equipment) in accordance with the specification and manufacturer's/ company's instructions, completing the first line maintenance if required		Justifies their choice of equipment and tools over alternative choices to meet the task requirements.	
		Gives reasons for undertaking equipment/tool checks in compliance with manufacturers guidance and company procedures/policies	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K9: Maintenance tools and equipment: rakes, spades, pressure washers, brushes, spanners.

S11: Select and use tools and equipment; check/calibrate equipment.

S12: Undertake first line maintenance of tools and equipment, for example cleaning.

S13: Store tools and equipment.

Housekeeping

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	
Maintains housekeeping; keeps work area tidy as they go, segregates and disposes of waste in line with company policy			
Pass Questions Develop some open-ended questions			
Comments: (what was observed)		Summary of response to question(s):	

S14: Maintain housekeeping: tidy, segregate and dispose of waste.

Information/IT

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Provides verbal information and records accurate and full information required for the task; information is suitable for the audience, uses technical terminology accurately and appropriately		Explains how and why they would adapt the communication when presented with a different audience	
Uses appropriate IT correctly to support the task			
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

S18: Communicate – verbal.

S19: Use technology.

S20: Record information/complete documentation.

Takes responsibility

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Takes responsibility to complete the tasks, for example completes action within limits of authority without direction; Asks for help where required		Identifies how effective their actions have been and where improvements to practice could be made to inform similar tasks in the future	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

B2: Takes responsibility for work for example, completes allocated work, takes proactive approach, knows own limitations and asks for help where required.

Demonstrate professionalism

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Behaves professionally, for example presents positive image of self and company – work attire worn correctly, polite and respectful			
Pass Questions No questions required – observation only			
Comments: (what was observed) 			

B3: Professional for example, ethical – does the right thing, trust-worthy; presents positive image of self and company – work attire worn, polite and respectful

Clean Water Samples

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
<p>Uses correct sample method, sample point and collection vessel</p> <p>Notes: Apprentice must take, test and record 3 water samples across the processes from the following list of parameters: Chlorine, Suspended solids, Turbidity, Ammonia, Phosphate, pH, Temperature, Metals, Nitrate, UV / DOC</p>		<p>Identifies and explains the reasons why errors can arise in testing, for example sample volume, reagent and time and how they mitigate against errors</p>	
<p>Processes sample in line with company requirements, for example applies test, records result and disposes of sample correctly, or labels, stores and sends sample for testing</p>		<p>Explains the need to follow permit and consent parameters</p>	
<p>Identifies sample requirements in relation to permit and consent parameters</p>		<p>Identifies adverse trends and takes relevant action</p>	
<p>Pass Questions Develop some open-ended questions</p>		<p>Distinction Questions Develop some open-ended questions</p>	

Comments: (what was observed)	Summary of response to question(s):
-------------------------------	-------------------------------------

K20: Clean water process operative. Clean water sampling requirements: different types of samples, sample points, storage, labelling, safe disposal, recording results, permits and consent parameters.

S21: Take clean water sample; process.

Clean water – process: Apprentice should complete the tasks below across 2 processes

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Reads and interprets information/data, uses measuring equipment and undertakes sensory analysis to correctly determine operating variables		Identifies opportunities for process efficiencies to reduce the costs of water treatment and/or to optimise performance	
Prepares and uses chemicals in line with manufacturer's/company's instructions, ensuring safe use		Explains consequences of process optimisation on upstream and/or downstream processes	
Applies appropriate clean water treatment process in line with company instructions to maintain/address operational performance/parameters within given tolerances			

Operates (adjusts) clean water treatment work assets in line with company instructions to maintain/address operational performance/parameters within given limits		
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions
Comments: (what was observed)		Summary of response to question(s):

K10: Telemetry and monitoring processes; monitoring variables including flow, quality, turbidity (particles), chemical usage. Limits, consequences of being outside limits.

S4: Read and interpret information/data.

S6: Undertake sensory analysis.

S7: Use measuring equipment.

S15: Prepare and use chemicals.

S22: Clean water process operative. Operate clean water treatment work assets.

S23: Clean water process operative. Apply clean water treatment processes.

Additional Questions

As only naturally occurring work is observed, those criteria that the apprentice did not have the opportunity to demonstrate can be assessed using the relevant following questions.

	Question	Task/ KSB covered by question	Apprentice response
1			
2			
3			

Water Process Operative

Waste Water Observation with Questions

Name of Apprentice	
Location(s) of Practice Observation	
Name of Assessor	
Date of Practice Observation	
Start Time	
End Time	
Assessor additional comments	

Please indicate the apprentice's practice observation grade (F/P/D):	Grade

Please Note:

To achieve a Pass, the Apprentice must achieve all the pass descriptors.

To achieve a Distinction, the Apprentice must achieve all the pass descriptors and eight out of 12 of the distinction descriptors.

Fail: the apprentice does not demonstrate all the pass descriptors.

Important points

Assessment: The following activities must be observed:

☐ Work preparation: complete dynamic risk assessment and identify control measures (written or visual); select tools and equipment

☐ Take, test and record water - a minimum of **three** different types of samples from across the process, checking and recording compliance levels (please tick processes for parameters observed)

☐ Biochemical Oxygen Demand (BOD)

☐ Chemical Oxygen Demand (COD)

☐ Ammonia

☐ Phosphate

☐ Total Nitrogen (TN)

☐ Iron

☐ Aluminium

☐ Mixed Liquor Suspended Solids (MLSS)

☐ Settled Sludge Volume Index (SSVI)

☐ Dissolved Oxygen

☐ pH

☐ Apply minimum of **two** waste water processes (please tick processes observed)

☐ Biological Treatment

☐ Screening

☐ Chemical dosing

☐ Settlement processes

☐ Sludge thickening process

☐ Sludge digestion*

*only to be used if the candidate is a biosolids operator

☐ Conduct a minimum of **two** types of first line operation maintenance on waste water assets (please tick maintenance observed)

☐ Calibration of equipment

☐ Cleaning of flow meters / devices

☐ Exercising valves

☐ Greasing / lubrication

☐ Clearing blockages/removing debris

☐ Washing equipment

Introduction

At the start of the practical observation the Assessor will:

- Introduce themselves
- Confirm their role
- Provide apprentice with information on the format of the observation with questions, including the timescales they will be working to.

(The assessor can share the grading guidance with the apprentice as this appears in the assessment plan)

The apprentice will:

- Give their full name
- Their date of birth
- Their employer name
- Confirm they are prepared for the practical observation; and confirm they can continue with the practical observation.

The apprentice will be asked to show their identification to the Assessor prior to beginning the assessment

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the observation.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- In the live observation the assessor is not allowed to give you feedback at any point.
- Ensure that your mobile is turned off or somewhere where you will not be interrupted during the observation.

Name of person delivering the introduction:		Date	
I confirm that I have received the Trade Test introduction	(Apprentice signature):		

Assessor Guidance

Delivery

- The observation with questions must take four hours. The time for questioning is included in the overall assessment time.
- You must ask a minimum of eight questions, across the tasks.
- Ensure to ask questions during natural stops between tasks and/or after completion of work.
- Follow-up questions can be asked where clarification is required
- The time for questioning is included in the overall assessment time.
- Answers to questions, must be recorded.

Work environment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Organises tasks in order of priority		Justifies their order of work task priority and explains any grouping of tasks in relation to cost/time saving	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed) 		Summary of response to question(s): 	

S1: Organise and prioritise work.

Health, safety and environment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Conducts dynamic risk assessment (written or visual); Identifies any workplace risks and suitable control measures		Explains compliance with health and safety procedures with reference to the impact on individuals, business and the environment	
Follows safe working practices and applies control methods; Wears PPE, harness, gas detector and breathing apparatus required for the task correctly, follows method statement and ensures health, safety and the environment is prioritised			
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K5: Dynamic risk assessments.

S2: Identify risks and control measures.

S3: Follow health and safety and environmental legislation, regulations and practice. For example, apply control measures, wear PPE, harness, gas detector and breathing apparatus required for the task.

B1: Prioritises on health, safety and environment for example, challenges unsafe practice, says 'no' where action could have negative impact.

Policy and procedures/determine action

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
<p>Determines appropriate action to be taken based on operational circumstances and follows appropriate policy and procedures</p> <p>Note: This should be covered when candidate covers the processes sections and carries out an 'adjustment' in 'Clean Water – processes' section.</p>		<p>Gives reasons for their choice of action over other options</p> <p>Note: This may be covered in 'Clean Water – processes' section</p>	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K3: Policy and procedures: operating manual, safety, emergencies, security, isolation – their purpose.

S9: Determine action and follow procedure.

First line operational maintenance: Apprentices must complete two maintenance activities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Completes required first line operational maintenance of assets in line with company instructions		Explains the need to undertake operational maintenance that follows company policies/procedures	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K8: First line operational maintenance: different types - cleaning, greasing, and washing, removing debris and clearing blockages.

S10: Undertake first line operational maintenance of assets.

Tools and equipment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Selects, checks, uses and stores appropriate tools and equipment for the task (including calibrating tools/equipment) in accordance with the specification and manufacturer's/ company's instructions, completing the first line maintenance if required		Justifies their choice of equipment and tools over alternative choices to meet the task requirements.	
		Gives reasons for undertaking equipment/tool checks in compliance with manufacturers guidance and company procedures/policies	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

K9: Maintenance tools and equipment: rakes, spades, pressure washers, brushes, spanners.

S11: Select and use tools and equipment; check/calibrate equipment.

S12: Undertake first line maintenance of tools and equipment, for example cleaning.

S13: Store tools and equipment.

Housekeeping

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	
Maintains housekeeping; keeps work area tidy as they go, segregates and disposes of waste in line with company policy			
Pass Questions Develop some open-ended questions			
Comments: (what was observed)		Summary of response to question(s):	

S14: Maintain housekeeping: tidy, segregate and dispose of waste.

Information/IT

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Provides verbal information and records accurate and full information required for the task; information is suitable for the audience, uses technical terminology accurately and appropriately		Explains how and why they would adapt the communication when presented with a different audience	
Uses appropriate IT correctly to support the task			
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

S18: Communicate – verbal.

S19: Use technology.

S20: Record information/complete documentation.

Takes responsibility

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Takes responsibility to complete the tasks, for example completes action within limits of authority without direction; Asks for help where required		Identifies how effective their actions have been and where improvements to practice could be made to inform similar tasks in the future	
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	
Comments: (what was observed)		Summary of response to question(s):	

B2: Takes responsibility for work for example, completes allocated work, takes proactive approach, knows own limitations and asks for help where required.

Demonstrate professionalism

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	
Behaves professionally, for example presents positive image of self and company – work attire worn correctly, polite and respectful			
Pass Questions No questions required – observation only			
Comments: (what was observed) 			

B3: Professional for example, ethical – does the right thing, trust-worthy; presents positive image of self and company – work attire worn, polite and respectful

Waste Water Samples

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
<p>Uses correct sample method, sample point and collection vessel</p> <p>Notes: Apprentice must take, test and record 3 water samples across the processes from the following list of parameters: turbidity, suspended solids, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), ammonia, phosphate, total nitrogen (TN), Iron, Aluminium, Mixed Liquor Suspended Solids (MLSS), Settled Sludge Volume Index (SSVI), dissolved oxygen, pH</p>		Identifies and explains the reasons why errors can arise in testing, for example sample volume, reagent and time and how they mitigate against errors	
Processes sample in line with company requirements, for example applies test, records result and disposes of sample correctly, or labels, stores and sends sample for testing		Explains the need to follow permit and consent parameters	
Identifies sample requirements in relation to permit and consent parameters		Identifies adverse trends and takes relevant action	

Pass Questions Develop some open-ended questions	Distinction Questions Develop some open-ended questions
Comments: (what was observed)	Summary of response to question(s):

K31: Waste water process operative. Waste water sampling requirements: different types of samples, sample points, storage, labelling, safe disposal, recording results, permits and consent parameters.

S24: Waste water process operative. Take waste water sample; process.

Waste water – process: Apprentice should complete the tasks below across 2 processes

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P (Y/N)	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and eight of the distinction descriptors	D (Y/N)
Reads and interprets information/data, uses measuring equipment and undertakes sensory analysis to correctly determine operating variables		Identifies opportunities for process efficiencies to reduce the costs of water treatment and/or to optimise performance	
Prepares and uses chemicals in line with manufacturer's/company's instructions, ensuring safe use		Explains consequences of process optimisation on upstream and/or downstream processes	
Applies appropriate waste water treatment process in line with company instructions to maintain/address operational performance/parameters within given tolerances			
Operates (adjusts) waste water treatment work assets in line with company instructions to maintain/address operational performance/parameters within given limits			
Pass Questions Develop some open-ended questions		Distinction Questions Develop some open-ended questions	

Comments: (what was observed)	Summary of response to question(s):
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K10: Telemetry and monitoring processes; monitoring variables including flow, quality, turbidity (particles), chemical usage. Limits, consequences of being outside limits.

S4: Read and interpret information/data.

S6: Undertake sensory analysis.

S7: Use measuring equipment.

S15: Prepare and use chemicals.

S25: Waste water process operative. Operate waste water treatment work assets.

S26: Waste water. Apply waste water treatment processes.

Additional Questions

As only naturally occurring work is observed, those criteria that the apprentice did not have the opportunity to demonstrate can be assessed using the relevant following questions.

	Question	Task/ KSB covered by question	Apprentice response
1			
2			
3			

Appendix G: Practice Interview Template

Water Process Operative Clean Water Interview Questions

Full Name of Apprentice	
Full Name of Assessor	
Date	
Start Time	
End Time	
Assessor additional comments	
Provisional Grade:	
To achieve a PASS the apprentice must demonstrate all the pass descriptors To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and four out of six of the distinction descriptors	
By signing below, I confirm that the information provided is correct	
Assessor Full Name and Signature:	Date:

Introduction

At the start of the interview the assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice
- Provide apprentice with information on the format of the with questions, including the timescales they will be working to.

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Give their employer name
- Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360°
- Confirm they are prepared for the interview; and confirm they can continue with the interview
- Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview.

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment

Important points to inform the apprentice

- Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts.
- When the actual live interview takes place the Independent Assessor is not allowed to give you feedback at any point. So you will not be given any indication of your grade and whether you have passed or failed at the end of that interview.
- Please ensure that your mobile off or somewhere where you will not be interrupted during the interview.
- Sign placed on the door of the interview room. Interview in progress 'Do not disturb'.
- This live interview will be fully recorded for the purpose of audit and quality assurance.

Assessor Guidance

Delivery

- The interview will last 60 minutes. 10% is allowed for the apprentice to complete their last answer
- This is an assessor led formal interview and not a professional discussion. You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
- You must ask a minimum of **nine** open questions
- The purpose of the questions is to cover the following topics: water process operative role; chemicals: delivery and storage; identifying trends; fault-finding; stock; team player; customer focus; clean/waste water operating parameters; clean/waste water treatment work assets and equipment; and consequences of asset failure on clean/waste water process'
- Answers to questions, must be recorded.
- Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
- Adapt the questions to the apprentice's circumstances following your review of their portfolio evidence
- Supply brief written notes where each criterion has been met

Water Process Operative Role

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes the water process operative role, position in structure, limits of authority; escalation procedures			Explains the impact of their role on the wider water process operation	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K2 Water process operative role; position in structure, limits of authority; escalation procedures.

Chemicals: Delivery and Storage

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Outline delivery and storage requirements for a (given example) water process chemical <ul style="list-style-type: none">• delivery permits / consignment notes• storage requirements• tank limits• interceptor / bund levels			Explain why it is necessary to follow delivery and storage requirements and the consequences of not following the correct procedures.	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K12 Chemicals: delivery and storage requirements - permits, limits

Identifying Trends/Fault-finding

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes how they have identified a decline trend in process performance and applied a fault-finding technique to find the cause			Explains the action they took to resolve the fault, justifying the option taken	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K11 Water process fault finding techniques – visual, flow, odour, listening.

S5 Identify trends.

S8 Apply fault finding techniques.

Stock

Pass		Achieved Y/N	Distinction		Achieved Y/N
Apprentices must achieve ALL the following pass descriptors			Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors		
Describes how they audit and request chemical and consumables stock; identifying factors that they take into account			Explains how process performance may influence stock usage and how they would manage stock levels		
Describes how they check chemical deliveries for quality and content					
Portfolio reference			Portfolio reference		
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions		
Summary of response to question(s):					

S16 Audit and request chemical and or consumables stock.

S17 Check chemical deliveries – quality/content.

Team Player

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors
Describes being a team player in the workplace, outlining the situation and the role they played			
Portfolio reference			
Pass Questions Develop some open-ended questions			
Summary of response to question(s):			

B4 Team player for example, keeps others informed.

Customer Focus

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors
Describes being customer focused, outlining the situation and the approach they applied			
Portfolio reference			
Pass Questions Develop some open-ended questions			
Summary of response to question(s):			

B5 Customer focus for example, polite, courteous.

Clean Water Operating Parameters

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes the impact of weather and the failure of an operating parameter on the treatment process			Explains the impact of the weather or failure of an operating parameter on downstream and/or upstream processes	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K15 Clean water process operative. Clean water operating parameters, consequences of failure, impact of weather conditions on treatment processes.

Clean Water Treatment Work Assets and Equipment; Consequences of Asset Failure on Clean Water Process

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Identifies the purpose of a given clean water asset			Explains the consequences of that failure on the water treatment works	
Describes the consequences of asset failure on clean water process				
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K16 Clean water process operative. Clean water treatment work assets and equipment: pumps, pressure vessels, reservoirs, tanks, valves.

K17 Clean water process operative. Consequence of asset failure on clean water process.

Additional follow up questions	Apprentice Response

Water Process Operative Waste Water Interview Questions

Full Name of Apprentice	
Full Name of Assessor	
Date	
Start Time	
End Time	
Assessor additional comments	
Provisional Grade:	
<p>To achieve a PASS the apprentice must demonstrate all the pass descriptors</p> <p>To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and four out of six of the distinction descriptors</p>	
By signing below, I confirm that the information provided is correct	
Assessor Full Name and Signature:	Date:

Introduction

At the start of the interview the assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice
- Provide apprentice with information on the format of the with questions, including the timescales they will be working to.

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Give their employer name
- Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360°
- Confirm they are prepared for the interview; and confirm they can continue with the interview
- Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview.

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment

Important points to inform the apprentice

- Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts.
- When the actual live interview takes place the Independent Assessor is not allowed to give you feedback at any point. So you will not be given any indication of your grade and whether you have passed or failed at the end of that interview.
- Please ensure that your mobile off or somewhere where you will not be interrupted during the interview.
- Sign placed on the door of the interview room. Interview in progress 'Do not disturb'.
- This live interview will be fully recorded for the purpose of audit and quality assurance.

Assessor Guidance

Delivery

- The interview will last 60 minutes. 10% is allowed for the apprentice to complete their last answer
- This is an assessor led formal interview and not a professional discussion. You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
- You must ask a minimum of **nine** open questions
- The purpose of the questions is to cover the following topics: water process operative role; chemicals: delivery and storage; identifying trends; fault-finding; stock; team player; customer focus; clean/waste water operating parameters; clean/waste water treatment work assets and equipment; and consequences of asset failure on clean/waste water process'
- Answers to questions, must be recorded.
- Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
- Adapt the questions to the apprentice's circumstances following your review of their portfolio evidence
- Supply brief written notes where each criterion has been met

Water Process Operative Role

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes the water process operative role, position in structure, limits of authority; escalation procedures			Explains the impact of their role on the wider water process operation	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K2 Water process operative role; position in structure, limits of authority; escalation procedures.

Chemicals: Delivery and Storage

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N	
Outline delivery and storage requirements for a (given example) water process chemical <ul style="list-style-type: none">• delivery permits / consignment notes• storage requirements• tank limits• interceptor / bund levels			Explain why it is necessary to follow delivery and storage requirements and the consequences of not following the correct procedures.		
Portfolio reference			Portfolio reference		
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions		
Summary of response to question(s):					

K12 Chemicals: delivery and storage requirements - permits, limits

Identifying Trends/Fault-finding

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes how they have identified a decline trend in process performance and applied a fault-finding technique to find the cause			Explains the action they took to resolve the fault, justifying the option taken	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K11 Water process fault finding techniques – visual, flow, odour, listening.

S5 Identify trends.

S8 Apply fault finding techniques.

Stock

Pass		Achieved Y/N	Distinction		Achieved Y/N
Apprentices must achieve ALL the following pass descriptors			Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors		
Describes how they audit and request chemical and consumables stock; identifying factors that they take into account			Explains how process performance may influence stock usage and how they would manage stock levels		
Describes how they check chemical deliveries for quality and content					
Portfolio reference			Portfolio reference		
Pass Questions <i>Develop some open-ended questions</i>			Distinction Questions <i>Develop some open-ended questions</i>		
Summary of response to question(s):					

S16 Audit and request chemical and or consumables stock.

S17 Check chemical deliveries – quality/content.

Team Player

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	
Describes being a team player in the workplace, outlining the situation and the role they played				
Portfolio reference				
Pass Questions Develop some open-ended questions				
Summary of response to question(s):				

B4 Team player for example, keeps others informed.

Customer Focus

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors
Describes being customer focused, outlining the situation and the approach they applied			
Portfolio reference			
Pass Questions Develop some open-ended questions			
Summary of response to question(s):			

B5 Customer focus for example, polite, courteous.

Waste Water Operating Parameters

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors	Achieved Y/N
Describes the impact of weather and the failure of an operating parameter on the treatment process			Explains the impact of the weather or failure of an operating parameter on downstream and/or upstream processes	
Portfolio reference			Portfolio reference	
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions	
Summary of response to question(s):				

K26 Waste water process operative. Waste water operating parameters, consequences of failure, impact of weather conditions on treatment processes.

Waste Water Treatment Work Assets and Equipment; Consequences of Asset Failure on Clean Water Process

Pass Apprentices must achieve ALL the following pass descriptors		Achieved Y/N	Distinction Apprentices must achieve ALL the pass descriptors and four out of six of the distinction descriptors		Achieved Y/N
Identifies the purpose of a given waste water asset			Explains the consequences of that failure on the water treatment works		
Describes the consequences of asset failure on waste water process					
Portfolio reference			Portfolio reference		
Pass Questions Develop some open-ended questions			Distinction Questions Develop some open-ended questions		
Summary of response to question(s):					

K27 Waste water process operative. Waste water treatment work assets and equipment: primary settlement tanks, biological filters, activated sludge plants, final settlement tank, digesters. Flow meters, pumps, screens.

K28 Waste water process operative. Consequence of waste water asset failure.

Additional follow up questions	Apprentice Response

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