ENERGY & UTILITIES INDEPENDENT ASSESSMENT SERVICE

Portfolio Guidance

Water Process Technician Standard

The aim of this document is to provide guidance regarding the portfolio produced by apprentices on the Water Process Technician apprenticeship standard.

The document is aimed at apprentices, mentors, line managers, employers, assessors, training providers and anyone who has an input into the apprenticeship process and on-programme journey.

The guidance has been produced in conjunction with some of the employer representatives who sit on the final decision panels for this standard.

What does good evidence look like?

Check that any evidence included in the portfolio meets the following requirements:

Is it valid? – Is it done within the timescale of the apprentice starting their course or qualification? Does it relate to work they have done themselves i.e. they have made any of the decisions etc? Is it written in the first person rather than “we”. If they have had someone supervising them then it is OK to reference that but emphasise the part that they played in the activity.

Is it authentic? – Is there other evidence to support write-ups, observations, witness statements e.g. is a log book entry, email or WhatsApp message completed by the apprentice provided? Are there any photographs showing them doing the work? Authorisations for contractors – allow the apprentice to sign it and then get it countersigned by the supervisor/line manager. Witness signatures should be genuine – not photocopied sheets.

Is it reliable? Is it obvious that the apprentice has done the work? Are they doing the right activities and showing the right behaviours?

Is it sufficient? – Quality is more important than quantity e.g. if you are quoting company documents it is OK to just put the front cover in and the key page that is being referred to when relating to a specific issue. Annotate the document to state why and how it has been used (this also then demonstrates knowledge). If a graph is included use a storyboard to explain what is happening and the thought processes that the apprentice has gone through and include annotation on the graph. Ensure that the depth and breadth of the evidence provided covers the full assessment criteria for that part of the standard.

Where ever possible use the first year to gain experience of doing the job and then start to produce the performance evidence in the last 9-12 months of the programme. This will allow you to produce better quality, holistic evidence based on actual issues.

Encourage holistic evidence which tells the whole story of the work completed from the start of the job to completion rather than piece meal evidence.

When the opportunity arises incorporate associated knowledge evidence into performance evidence.

Employers should consider producing their own company checklists which contain reference to the various company specific documents that you would expect to see for the job that is to be carried out.

Use a range of ways to present evidence – vlogs, blogs, write ups, videos, powerpoint presentations/slides, audio files, professional discussions, emails, WhatsApp messages, project work and cases studies. The apprentice can use any method that they prefer to capture the evidence but must ensure that the work is authentic and completed by them. Be careful with the use of templates as this may stifle some apprentices. They may provide better and more varied evidence if templates are not used.

Involvement in action limit breaches, alarms, call outs, incidents, projects, safety groups, comm cells, presentations etc. provide very good opportunities to produce high quality evidence especially if they include evidence of fault finding and problem solving. Look for opportunities to expand away from just day job and routine activities. Line managers should ensure that apprentices have opportunities to be involved in incidents and projects and can shadow stand-by if possible.

Inclusion of critical reflection when an issue has been dealt with provides good evidence of thinking of the wider issues relating to the work completed and of CPD and continued learning.

Behaviours – it is important that the company completes good quality performance appraisals which include SMART targets and individual feedback as these will be required in the portfolio.

<u>Items always expected in a portfolio</u>

The latest company appraisal document.

A copy of the apprentices driving licence.

A copy of the apprentices up to date company training record just prior to entering EPA.

A minimum number of 3 documented risk assessments from real work activities over a period time. These must include reference to the hazard, risk and control measure.

Please consider GDPR and take out personal details from evidence prior to EPA.

The mapping document

The mapping document is critical. If no mapping document is submitted then the portfolio will not be marked. Sufficient time should be allocated to ensure that the mapping can be completed in a timely fashion and to a good standard.

A guideline would be that a maximum number of 20 different pieces of good, holistic evidence are mapped in preparation for portfolio marking (and minimum number of 10). MAP THE BEST BITS!

Good practice is to issue the mapping document to the apprentice early in the programme and encourage them to use it as a live document by mapping the evidence as it is completed. Evidence can be superseded if better evidence is produced later in the programme.

Holistic pieces of evidence can cover multiple criteria and can be mapped against more than 1 section of the mapping document. Ensure that the apprentice focuses on including holistic process evidence for the pathway specific criteria (number 7 onwards.)

Try to ensure that mapped evidence covers the whole range of work that is completed by the role e.g.

- Water Network e.g. customer issues, mains burst, leakage investigation,
- Water Supply e.g. coagulation failure, optimisation of filter monitoring, raw water event, plant/process stream shutdowns,
- Wastewater Network e.g. CCTV survey, jetting, CSO inspection, customer issues
- Wastewater Treatment e.g. pollution event, action limit / consent breaches, process optimisation, plant/process stream shutdowns

Professional discussions and witness statements should not be used as the **sole** pieces of evidence against the criteria on a line of the mapping document. Other evidence must also be included. The discussion or witness testimony is then supplementary validation of that work.

Please be aware that the assessors are allocated a specific period of time to assess a portfolio. Try not to map excessive items of evidence because there is a then a risk that some of the items will be missed.

An example of good apprentice evidence and bad evidence is attached below. In this example, **Text in bold** is an example of how mapping to the Portfolio Grading document can be introduced and Text in red is additional guidance on how the evidence could be improved.

Example of a piece of good, holistic evidence with mapping

Anytown Low level PS telemetry alarm.

I received a job on my Toughbook for a telemetry alarm at Anytown Low level PS. I had received a job like this for the same PS about a week before this.

Task Based Risk Assessment: **(Maps to Water Network Technician - section 1a, 1b and 1d, section 6e – potential distinction if at least 2 other separate pieces of evidence contained different risk assessments, section 8c, section 16a)**

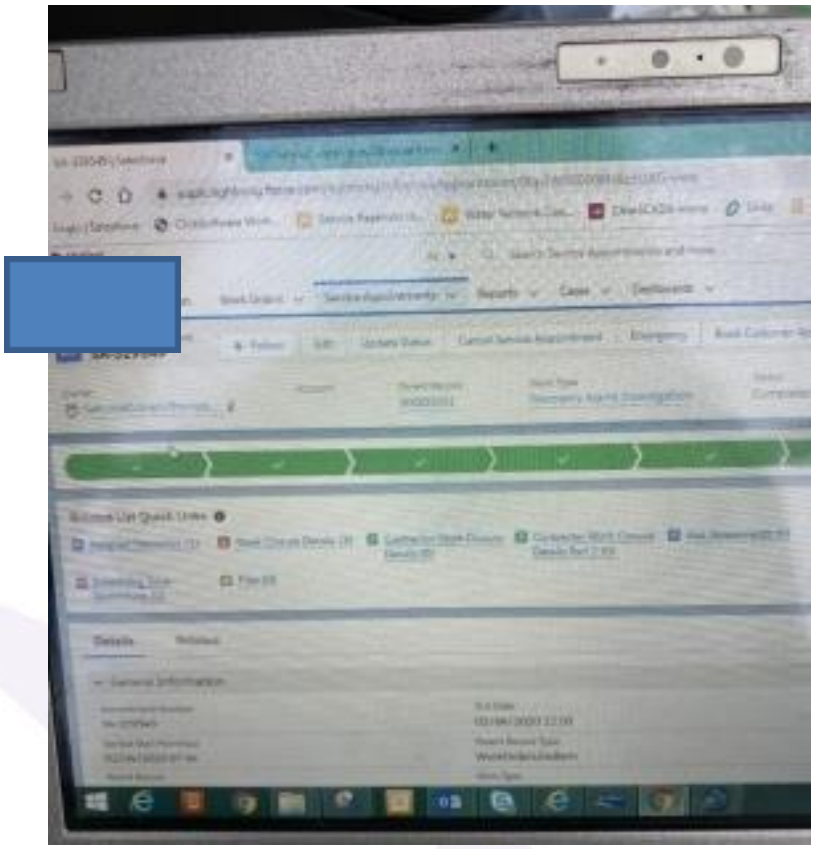
Task	Hazard	Who is affected	Mitigation
Carrying out work on a site containing Asbestos.	Asbestos Fibres	Employees carrying out works on the site with Asbestos. Contractors working on site. Any visitors to the site.	Generic Risk Assessment 10 Asbestos lists all control measures that should be taken to ensure safety while working around this material. All sites containing asbestos will have a sign indicating that asbestos is present and where abouts it is. An asbestos register is on site. Any safety concerns should be reported on the company reporting system. E-learning 'Asbestos Awareness' must be completed. Evidence could be improved by the candidate demonstrating / referencing that this training has been completed in their training record

Using electric panels.	Loose wires on the panel that could cause electrocution/ fires.	Employees carrying out the works on site. Contractors working on site. Any visitors to site.	Generic Risk Assessment 01 Electricity at work lists all control measures that should be taken to ensure safety while working.
Lone working **(Reference Section 6b)**	Not being found after an incident or accident. Risk of injury. Threat of physical assault. Threat or actual assault with a weapon. Verbal abuse. Any form of aggression which is distressing or intimidating.	Employees	Generic Risk Assessment 15 lists control measures that must be followed to ensure safety while working. Every employee who must lone work is given a sky guard device that they must switch on everyday when they set of to work. Every lone worker must also log into the lone worker system and log out at the end of the day. Evidence could be improved by the candidate demonstrating / referencing that this was done on this job.
Attending a pumping station (Noise related activity)	Exposure to noise causing permanent or temporary deafness or tinnitus.	Employees Contractors Visitors.	Generic Risk Assessment 17 lists control measures that must be followed to ensure safety while working.

			All sites with a noise risk has a sign to alert those attending site of this. Ear defenders are a part of company PPE and they must be worn at certain sites if the noise level is suspected to be above 80dB. Evidence could be improved by the candidate demonstrating / referencing whether this needed to be done on the actual job.
Slips, trips and falls	Slipping or tripping over any UU equipment or any wires or water.	Employees Contractors Visitors	All tools used must be put away safely. The owner of the site is responsible for keeping it clean and tidy ensuring rubbish is taken away. Any water (from leaks) must be mopped up straight away.

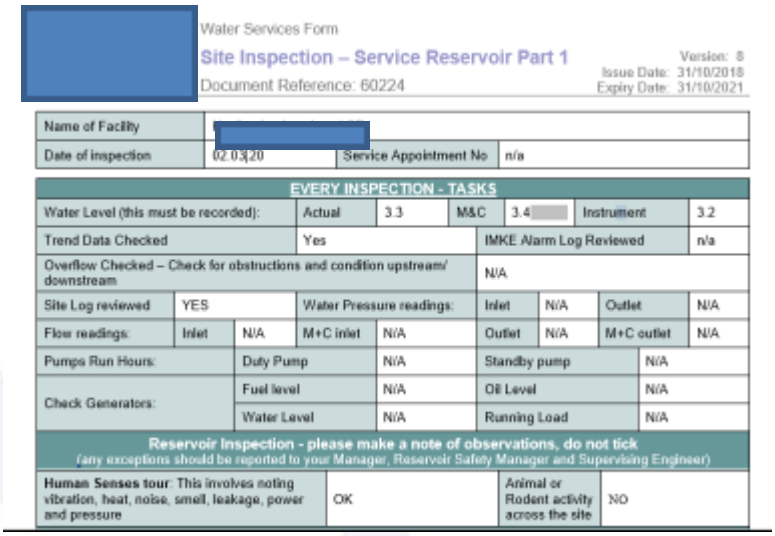
Alarm Job card

information



I drove to Anytown Low Level PS and used my site keys to unlock the gate and then unlock the PS doors. I unset the alarm code when I entered the building. The telemetry alarm that came in was a ‘surge vessel low level’ alarm. This was the same alarm that I was alerted of the week before. I went to the panel and acknowledged the alarms and also reset the alarms so they wouldn’t stay lit up on the screen. I then turned the reset key on the panel which then reset the pumps telemetry so that the pumps would come back on in auto responding to the SR level of Anytown High level (which Anytown Low Level feeds via these pumps). I waited around to make sure that the pumps would come back on properly. **(Maps to Water Network Technician – section 2a, section 3d & e, section 7b, section 8b, section 9a)**

Whilst waiting for the pumps I decided to take advantage of being at this site to complete a site inspection as one was due. I completed a Part 1 site inspection form, checked the hatch security and fence line. I also checked that there were no signs of moles or any other burying wildlife. I also checked for loose wires and potential slips, trips and falls hazards. **(Maps to Water Network Technician section 2a, section 5, section 6a, section 9a,b & c, section 10c, - it could also be used as possible distinction evidence for 10g because doing the site inspection when called out to an alarm is an opex saving/process efficiency, section 15a, section 16b, section 18 a & b)**



Water Services Form

Site Inspection – Service Reservoir Part 1

Document Reference: 60224

Version: 8
Issue Date: 31/10/2018
Expiry Date: 31/10/2021

Name of Facility	[redacted]						
Date of inspection	02.03.20		Service Appointment No	n/a			

EVERY INSPECTION - TASKS							
Water Level (this must be recorded):	Actual	3.3	M&C	3.4	Instrument	3.2	
Trend Data Checked	Yes		IMKE Alarm Log Reviewed	n/a			
Overflow Checked – Check for obstructions and condition upstream/ downstream	N/A						
Site Log reviewed	YES		Water Pressure readings:	Inlet	N/A	Outlet	N/A
Flow readings:	Inlet	N/A	M+C inlet	N/A	Outlet	N/A	M+C outlet	N/A
Pumps Run Hours:	Duty Pump		N/A	Standby pump		N/A	
Check Generators:	Fuel level		N/A	Oil Level		N/A	
	Water Level		N/A	Running Load		N/A	

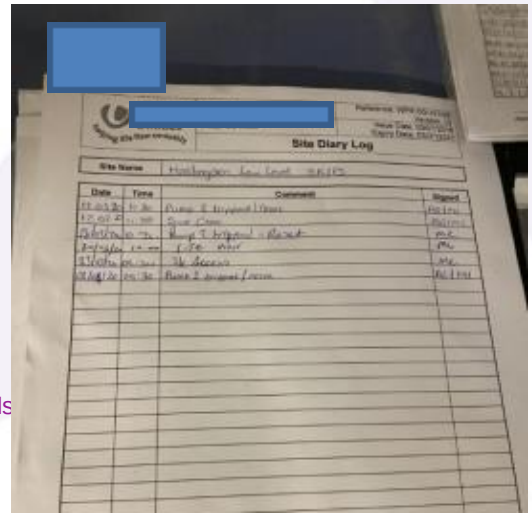
Reservoir Inspection - please make a note of observations, do not tick (any exceptions should be reported to your Manager, Reservoir Safety Manager and Supervising Engineer)			
Human Senses tour: This involves noting vibration, heat, noise, smell, leakage, power and pressure	OK	Animal or Rodent activity across the site	NO

Embankment slope – including any changes since last inspection			
General level and alignment	OK		
General vegetation	OK		
Animal activity (or vandalism)	NO		
Seepage, drainage & flows. Notify any changes	NO		
Access steps to roof	OK		
Embankment mitres (corners)	OK		
If piezometer(s) present, (record readings on appropriate sheet – tick to confirm)	N/A	Other embankment instrument readings (record on appropriate sheet – tick to confirm)	N/A
Embankment Toe (bottom) - Including any changes since last inspection			
General ground surface	OK		
Vegetation or grass growth	OK		
On site access pathways	OK		
Toe drainage (where applicable)	OK		
Reservoir Roof - Including any changes since last inspection			
General condition and level	OK		
General drainage	OK		
General vegetation/grass condition	OK		
Roof vents	OK		
Roof access covers	OK		
Valve houses/up stand structures	OK		

After completing my site check after approximately 40 mins I checked the pumps and they had come on in auto just as they should (the outlet pressure gauge was now reading what it should rather than zero). I could therefore confirm that everything was running as it should. **(Maps to Water Network Technician section 2a, section 3e & f, section 7 c & d, section**

8d, section 10c, section 15a.) I asked the Network Technician (NT) I go to sites with about how I go about raising a job for a maintenance technician (MT) as I've never done it before and confirmed with him and my manager that this would be the correct thing to do. I decided to raise the job for an MT seeing as though I had been up a few times now for the same telemetry alarm. They would come out and check the surge vessel and rectify this outstanding issue. I rang up the MT scheduling team to raise this request for them to attend site. It is vital that this problem is rectified as it interferes with the pumps operation. **(Maps to Water Network Technician section 2a, section 3e & f, section 8b, section 9a & b, section 10b, c, & d, section 17a, section 18a).** These pumps go on to feed another reservoir higher up than Anytown Low, therefore without these pumps this reservoir wouldn't have a feed and it could potentially go dry and we could lose water supply to hundreds of properties. This would have implications for customers who rely on the water supply, the companies brand image and also CMex score which can have financial implications. **(Maps to Water Network Technician section 2a, section 10a, section 18b, section 19 a & b.)**

Whilst on site and before I left I made sure that I completed all relevant site forms including the 'Site Entry Sheet' doc ref: WP/F/001/31/07 and the 'Site Diary Log' doc ref: WP/F/001/31/08. **(Maps to Water Network Technician Reference Section 5.)**



By raising a job for this type of maintenance work to be carried out it will ensure future process efficiencies as we should not have to attend site for future faults or call outs for a while if the maintenance goes well. This means that these pumps will be running in auto as they should be responding to levels of Anytown high level and will not require us to come out on response (call out of hours) to restart the pump. This optimises the efficiency of our network process as the responses of the network assets are instantaneous which will also provide security of the water supply. **(Maps to Water Network Technician section 2a, section 3e, section 8b, section 9a, section 10b,c & d, section 18a & b)**

Critical reflection:

I feel confident that I am able to consult and work with others and bounce off each others knowledge where necessary to investigate, identify and resolve the root cause of the problem and come up with appropriate solutions in a timely fashion. I also monitored this solution for a period of time to ensure that it was an effective solution which it was as the pumps kicked back in as normal. I also followed through with company reporting and recording procedures as I filled out all the correct paperwork surrounding site visits and Site inspections. I also saved a further site visit by completing the routine site inspection while I was here for the alarm. I Understood the importance of ensuring that the pumps run when they are supposed to and show an understanding of hydraulic theories. I feel that I am able to apply everything I have learnt from this job and apply them on similar jobs in the future. I also feel confident that next time I would be able to make the correct decisions independently that would resolve the issue. **(The critical reflection demonstrates various behaviours including - section 15. Ownership, responsibility and customer focus. Accepts ownership and responsibility for own work to accomplish, an activity safely and on time; section 17. Task management. Possesses and enhances appropriate knowledge, skills and experience to perform the duties of the job and section 18. Results driven. Identifies, organises and effectively uses resources to complete tasks in a timely fashion, considering cost, quality, safety, security and environmental impact.)**

Example of a piece of poor evidence

Reflective log sheet

Learner name: Click or tap here to enter text. Date: 12/10/19

Time of day:	Day	Night	Normal working hours	Standby
	☒	☐	☐	☒
Weather conditions:	Overcast, light rain.			
Apprenticeship Pathway (Please tick)	Water Treatment Technician			☐
	Waste Water Treatment Technician			☐
	Waste Water (Sewerage) Technician			☒
	Water Network and Leakage Technician			☐

The boxes below will expand as necessary to accommodate text or pictures.

The work activity

What was the activity?	To find out why the bridge had tripped on the Storm Duty Tank.
What was the job reference number?	N/A
Where did the activity take place?	Anytown STW.
Why was the activity necessary?	Because the bridge on the Storm Tank had tripped and it needed to be reset.
How did you become aware of the need?	Me and Dan noticed on the SCADA alarm page that the bridge had tripped.
What did you do?	We first went to check on the bridge itself, to make sure there was nothing inhibiting it, and also to check if there was a reset button on the tank itself. Once we determined that it was safe to operate, we then went to the kiosk which contained the relevant HMI screen, and we reset the alarms and put the bridge back online.
Why did you do it that way?	Because it was the quickest and most effective way of doing it.
What procedural or legislative requirements were followed?	We made sure we wore the correct and appropriate PPE for the job. This included boots, bump cap, high visibility jacket and gas monitor. We also made sure we operated our vehicle safely when getting from the Storm Tank to the kiosk, adhering to the rules in the driving handbook and site speed limits.
Were any vehicles or items of plant used? If so how was their safe use ensured?	We used a work van to get from the Storm Tank to the kiosk, but that was it. We made sure seatbelts were used in the van and that we adhered to the site speed limit.

How did you ensure that this activity was undertaken safely?	We made sure we were careful with any work we carried out. We used the "take 20 seconds" rule when looking at the Storm Tank, to asses the situation and make sure we carried out our observations safely.
How did you determine this job was completed successfully?	The alarms were cleared and the Storm Tank bridge was put back online.
What did you learn?	I learnt where the HMI for the Storm Tanks was, because I had not previously used it before.
What will you do differently in future similar occurrences?	I will execute the job quicker, because I now know that the resets are all on the HMI, and there is no physical reset button on the tank, which we previously thought.
What records were made? Please attached or include copies.	We wrote in the site logbook, and we also took pictures of the task being done.
Learner signature to confirm that this is a true and accurate account:	Click or tap here to enter text.

Validation

The relevant section below should be completed and signed either by a credible witness to the above activities or a person who is in a position to vouch for the accuracy and authenticity of the above.
Please note that without completion of one of these sections this form has no value as evidence.

Witness testimony: I confirm that I witnessed the above activity and this is an accurate account. The activity was carried out safely and in accordance with relevant procedures. I offer the following feedback:			
Click or tap here to enter text.			
Witness name:	Click or tap here to enter text.		
Witness role:	Click or tap here to enter text.		
Witness signature	Click or tap here to enter text.	Date:	Click or tap here to enter text.

Non- witness validation: I did not witness the above activity but to the best of my knowledge this represents an accurate account. I offer the following feedback:

Click or tap here to enter text.			
Name:	Click or tap here to enter text.		
Role:	Click or tap here to enter text.		
Signature:	Click or tap here to enter text.	Date:	Click or tap here to enter text.

Please upload the completed log to your e-portfolio and tick the standards that you believe you have met by carrying out this activity.