

DRAFT END-POINT ASSESSMENT PLAN FOR THE MARITIME PIPEWORKER APPRENTICESHIP

APPRENTICESHIP REFERENCE NUMBER	LEVEL OF THIS END-POINT ASSESSMENT (EPA)	INTEGRATED
ST1391	3	No

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Key Fields

Introduction and overview

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This document explains the requirements for end-point assessment (EPA) for the [maritime pipeworker](#) apprenticeship. End-point assessment organisations (EPAOs) must follow this when designing and delivering the EPA.

[Maritime Pipeworker](#) apprentices, their employers and training providers should read this document.

A full-time [maritime pipeworker](#) apprentice typically spends **42** months on-programme. The apprentice must spend at least 12 months on-programme and complete the required amount of off-the-job training in line with the apprenticeship funding rules.

The EPA should be completed within an EPA period lasting typically **3** months.

The apprentice must complete their training and meet the gateway requirements before starting their EPA. The EPA will assess occupational competence.

An approved EPAO must conduct the EPA for this apprenticeship. Employers must work with the training provider to select an approved EPAO from the apprenticeship providers and assessment register (APAR).

This EPA has **2** assessment methods.

The grades available for each assessment method are below.

Assessment method **1** - [observation with questioning](#):

- [fail](#)
- [pass](#)

Assessment method **2** - [interview underpinned by a portfolio of evidence](#):

- [fail](#)
- [pass](#)
- [distinction](#)

The result from each assessment method is combined to decide the overall apprenticeship grade. The following grades are available for the apprenticeship:

- [fail](#)
- [pass](#)
- [distinction](#)

Change

EPA summary table

<p>On-programme - typically 42 months</p>	<p>The apprentice must:</p> <ul style="list-style-type: none"> • complete training to develop the knowledge, skills and behaviours (KSBs) outlined in this apprenticeship’s standard • complete training towards English and mathematics qualifications in line with the apprenticeship funding rules • compile a portfolio of evidence
<p>End-point assessment gateway</p>	<p>The apprentice’s employer must be content that the apprentice is occupationally competent.</p> <p>The apprentice must:</p> <ul style="list-style-type: none"> • confirm they are ready to take the EPA • have achieved English and mathematics qualifications in line with the apprenticeship funding rules <p>For the interview underpinned by a portfolio of evidence, the apprentice must submit a portfolio of evidence. Gateway evidence must be submitted to the EPAO, along with any organisation specific policies and procedures requested by the EPAO.</p>
<p>End-point assessment - typically 3 months</p>	<p>The grades available for each assessment method are below</p> <p>Observation with questioning:</p> <ul style="list-style-type: none"> • fail • pass <p>Interview underpinned by a portfolio of evidence:</p> <ul style="list-style-type: none"> • fail • pass • distinction <p>Overall EPA and apprenticeship can be graded:</p> <ul style="list-style-type: none"> ○ fail ○ pass ○ distinction
<p>Professional recognition</p>	<p>This apprenticeship aligns with:</p> <ul style="list-style-type: none"> • Institution of Mechanical Engineers (IMechE) for Engineering Technician <p>This apprenticeship aligns with:</p> <ul style="list-style-type: none"> • Institution of Engineering and Technology (IET) for Engineering Technician
<p>Re-sits and re-takes</p>	<ul style="list-style-type: none"> • re-take and re-sit grade cap: pass • re-sit timeframe: typically 3 months • re-take timeframe: typically 6 months

Show summary change sections

Duration of end-point assessment period

[Edit duration of end-point assessment period form](#)

The EPA is taken in the EPA period. The EPA period starts when the EPAO confirms the gateway requirements have been met and is typically 3 months.

The EPAO should confirm the gateway requirements have been met and start the EPA as quickly as possible.

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EPA gateway

[Edit epa gateway form](#)

The apprentice's employer must be content that the apprentice is occupationally competent. That is, they are deemed to be working at or above the level set out in the apprenticeship standard and ready to undertake the EPA. The employer may take advice from the apprentice's training provider, but the employer must make the decision. The apprentice will then enter the gateway.

The apprentice must meet the gateway requirements before starting their EPA.

They must:

- confirm they are ready to take the EPA
- have achieved English and mathematics qualifications in line with the apprenticeship funding rules
- submit a [portfolio of evidence](#) for the [interview underpinned by a portfolio of evidence](#)

Portfolio of evidence requirements:

The apprentice must compile a portfolio of evidence during the on-programme period of the apprenticeship. It should only contain evidence related to the KSBs that will be assessed by the interview. It will typically contain 12 discrete pieces of evidence. Evidence must be mapped against the KSBs. Evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is suggested.

Evidence sources may include:

- [workplace documentation and records, for example:](#)
- [workplace policies and procedures](#)
- [witness statements](#)
- [annotated photographs](#)
- [video clips with a maximum total duration 10 minutes; the apprentice must be in view and identifiable](#)

This is not a definitive list; other evidence sources can be included.

The portfolio of evidence should not include reflective accounts or any methods of self-assessment. Any employer contributions should focus on direct observation of performance, for example, witness statements, rather than opinions. The evidence provided

should be valid and attributable to the apprentice; the portfolio of evidence should contain a statement from the employer and apprentice confirming this.

The EPAO should not assess the portfolio of evidence directly as it underpins the interview. The independent assessor should review the portfolio of evidence to prepare questions for the interview. They are not required to provide feedback after this review.

Gateway evidence must be submitted to the EPAO, along with any organisation specific policies and procedures requested by the EPAO.

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Order of assessment methods

[Edit order of assessment methods form](#)

The assessment methods can be delivered in any order.

The result of one assessment method does not need to be known before starting the next.

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Observation with questioning

[Edit observation with questioning form](#)

Overview

In the observation with questions, an independent assessor observes the apprentice in their workplace and asks questions. The apprentice completes their day-to-day duties under normal working conditions. Simulation is not allowed. It gives the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method.

Rationale

This assessment method is being used because:

- this is a practical role
- it can assess KSBs holistically
- it should give employers assurance about an apprentice's competence as it takes place in a real work setting
- the familiar environment should allow the apprentice to perform at their best
- it is cost effective, tasks completed during the observation should contribute to workplace productivity and it makes use of the employer's resources and equipment

Delivery

The [observation with questioning](#) must be structured to give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

An independent assessor must conduct and assess the [observation with questioning](#).

The independent assessor must only observe one apprentice at a time to ensure quality and rigour. They must be as unobtrusive as possible.

The EPAO must give the apprentice **2 weeks'** notice of the observation with questions. The observation must take **4 hours**.

The independent assessor can increase the time of the observation with questions by up to 10%. This time is to allow the apprentice to complete a task or respond to a question if necessary.

The observation with questions cannot be split, except for comfort breaks or to allow the apprentice to move from one location to another. Such breaks will not count towards the total observed time.

The EPAO must manage invigilation of the apprentice during the assessment, to maintain security of the EPA, in line with their malpractice policy. This includes breaks and moving between locations.

The independent assessor must explain to the apprentice the format and timescales of the observation with questions before it starts. This does not count towards the assessment time.

The independent assessor should observe the following during the observation:

- interpreting data or documentation
- working safely
- using resources
- following approved processes
- using tools
- measuring and marking out components
- applying assembly and installation methods
- fabricating pipe systems
- installing pipe systems
- completing checks
- restoring the work area
- completing documentation

These activities provide the apprentice with the opportunity to demonstrate the KSBs mapped to this assessment method.

The independent assessor must ask questions.

The purpose of the questions is:

- to seek clarification where required
- to assess the level of competence against the grading descriptors

Questioning can occur during the observation. The time for questions asked during the observation is included in the overall assessment time. The independent assessor must ask at least **4** questions during the observation. To remain as unobtrusive as possible, the independent assessor should ask questions during natural stops between tasks rather than disrupting the apprentice's flow. Follow-up questions are allowed where clarification is

required. The independent assessor must use the questions from the EPAO's question bank or create their own questions in line with the EPAO's training. Follow-up questions are allowed where clarification is required.

The independent assessor must ask questions about KSBs that were not observed to gather assessment evidence. These questions are in addition to the set number of questions for the observation with questions and should be kept to a minimum.

The apprentice may choose to end the assessment method early. The apprentice must be confident they have demonstrated competence against the assessment requirements for the assessment method. The independent assessor or EPAO must ensure the apprentice is fully aware of all assessment requirements. The independent assessor or EPAO cannot suggest or choose to end the assessment methods early, unless in an emergency. The EPAO is responsible for ensuring the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues. The independent assessor must document the apprentice's request to end the assessment early.

The independent assessor must make the grading decision. The independent assessor must assess the observation and responses to questions holistically when deciding the grade.

The independent assessor must keep accurate records of the assessment. They must record:

- the KSBs observed
- the apprentice's answers to questions
- the KSBs demonstrated in answers to questions

- the grade achieved

Assessment location

The **observation with questioning** must take place in the apprentice's normal place of work for example, their employer's premises or a customer's premises. Equipment and resources needed for the observation must be confirmed to be available by the EPAO, who can liaise with the employer to provide these. They must be in good and safe working condition.

Questioning that occurs after the observation should take place in a suitable environment, for example a quiet room, free from distractions and influence.

Question and resource development

The EPAO must develop a purpose-built assessment specification and question bank. It is recommended this is done in consultation with employers of this occupation. The EPAO must maintain the security and confidentiality of EPA materials when consulting with employers. The assessment specification and question bank must be reviewed at least once a year to ensure they remain fit-for-purpose.

The assessment specification must be relevant to the occupation and demonstrate how to assess the KSBs mapped to this assessment method. The EPAO must ensure that questions are refined and developed to a high standard. The questions must be unpredictable. A question bank of sufficient size will support this.

The EPAO must produce the following materials to support the **observation with questioning**:

- independent assessor assessment materials which include:
 - training materials
 - administration materials
 - moderation and standardisation materials

- guidance materials
- grading guidance
- question bank
- EPA guidance for the apprentice and the employer

The EPAO must ensure that the EPA materials are subject to quality assurance procedures including standardisation and moderation.

Change

Interview underpinned by a portfolio of evidence

Edit interview underpinned by a portfolio of evidence form

Overview

In the interview, an independent assessor asks the apprentice questions. It gives the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method. The apprentice can refer to and illustrate their answers with evidence from their portfolio of evidence.

Rationale

This assessment method is being used because:

- it assesses KSBs holistically and objectively
- it allows for the assessment of KSBs that do not occur on a predictable or regular basis
- it allows for assessment of responses where there are a range of potential answers
- it can be conducted remotely, potentially reducing cost

Delivery

The **interview** must be structured to give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

An independent assessor must conduct and assess the **interview**.

- working sustainably
- problem solving
- quality and improvement
- communication and teamwork
- professional knowledge and behaviour
- maintenance and repair

The EPAO must give an apprentice **2 weeks'** notice of the **interview**.

The independent assessor must have at least **2 weeks** to review the supporting documentation.

The apprentice must have access to their **portfolio of evidence** during the **interview**.

The apprentice can refer to and illustrate their answers with evidence from their **portfolio of evidence** however, the **portfolio of evidence** is not directly assessed.

The **interview** must last for 60 minutes. The independent assessor can increase the time of the **interview** by up to 10%. This time is to allow the apprentice to respond to a question if necessary.

The independent assessor must ask at least 6 questions. The independent assessor must use the questions from the EPAO's question bank or create their own questions in line with the EPAO's training. Follow-up questions are allowed where clarification is required.

The apprentice may choose to end the assessment method early. The apprentice must be confident they have demonstrated competence against the assessment requirements for the assessment method. The independent assessor or EPAO must ensure the apprentice is fully aware of all assessment requirements. The independent assessor or EPAO cannot suggest or choose to end the assessment methods early, unless in an emergency. The EPAO is responsible for ensuring the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues. The independent assessor must document the apprentice's request to end the assessment early.

The independent assessor must make the grading decision.

The independent assessor must keep accurate records of the assessment. They must record:

- the apprentice's answers to questions
- the KSBs demonstrated in answers to questions
- the grade achieved

Assessment location

The **interview** must take place in a suitable venue selected by the EPAO for example, the EPAO's or employer's premises.

The **interview** can be conducted by video conferencing. The EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided.

The **interview** should take place in a quiet room, free from distractions and influence.

Question and resource development

The EPAO must develop a purpose-built assessment specification and question bank. It is recommended this is done in consultation with employers of this occupation. The EPAO must maintain the security and confidentiality of EPA materials when consulting with employers. The assessment specification and question bank must be reviewed at least once a year to ensure they remain fit-for-purpose.

The assessment specification must be relevant to the occupation and demonstrate how to assess the KSBs mapped to this assessment method. The EPAO must ensure that questions are refined and developed to a high standard. The questions must be unpredictable. A question bank of sufficient size will support this.

The EPAO must ensure that the apprentice has a different set of questions in the case of re-sits or re-takes.

The EPAO must produce the following materials to support the **interview underpinned by a portfolio of evidence**:

- independent assessor assessment materials which include:
 - training materials
 - administration materials
 - moderation and standardisation materials
 - guidance materials
 - grading guidance
 - question bank
- EPA guidance for the apprentice and the employer

The EPAO must ensure that the EPA materials are subject to quality assurance procedures including standardisation and moderation.

Change

Grading

[Edit add grade descriptor form](#)[Edit mapping of ksbs to grade themes form](#)[Edit available grades form](#)

Observation with questioning

Fail - does not meet pass criteria

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS
Planning, preparation and resources K2 K7 K20 S1 S3	Obtains, reads, analyses and interprets engineering data, drawings or documentation as per the task requirements. (K2, K7, S1) Identifies, organises and uses resources to complete the task, with consideration for cost, quality, safety, security and environmental impact. (K20, S3)
Working safely K1 K6 S2 S4 B1	Undertakes the work activity using approved processes and procedures in line with company requirements. (K6, S4) Puts health and safety first and applies health and safety procedures and safe systems of work in compliance with regulations and standards. (K1, S2, B1)
Tools K11 K26 S9	Selects and uses hand, power tools, and fabrication equipment to cut, shape and finish maritime pipework components in line with required specifications. (K11, K26, S9)
Measuring and marking out K22 S8	Measures and marks out maritime pipework components to meet the required specifications. (K22, S8)
Fabrication and installation K3 K9 K23 K27 S10 S11 S21 B6	Fabricates pipe systems to meet the required specification. (K3, K23, S10) Takes responsibility for completing work by installing maritime pipework systems in accordance with the task requirements. (K27, S21, B6)

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS
	Applies maritime pipework assembly methods and techniques to meet the task requirements. (K23, S11)
Quality assurance K24 S5	Carries out required maritime pipework quality assurance checks to ensure that components and systems meet the required standards of quality and functionality in line with organisational procedures. (K24, S5)
Restoring the work area K25 S7	Restores the work area on completion of the activity and returns any resources and consumables. (K25, S7)
Documentation K13 S18	Records or enters information in line with task requirements and organisational procedures. (K13, S18)

Interview underpinned by a portfolio of evidence

Fail - does not meet pass criteria

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS	DISTINCTION APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS AND ALL OF THE DISTINCTION DESCRIPTORS
Working sustainably K14 S19 B3	Explains how they take responsibility for their own sustainable working practices and how they apply environmental and sustainability procedures in compliance with regulations and standards. (K14, S19, B3)	Justifies how they apply environmental and sustainability procedures to their working practices. (K14, S19)
Problem solving K4 K5 K16 S6 S12 B5	Describes how they resolve problems with maritime pipework components and systems and how they escalate issues outside their limits of authority in	Justifies their selection of testing, inspection and fault finding methods and techniques to help

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS	DISTINCTION APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS AND ALL OF THE DISTINCTION DESCRIPTORS
	<p>line with organisational procedures. (K4, K16, S6, B5)</p> <p>Describes how they undertake testing, inspection and fault finding activities in a maritime pipework environment to ensure safe and efficient operation of components, equipment or systems. (K5, S12)</p>	<p>solve maritime mechanical problems. (K5, S12)</p>
<p>Quality and improvement K19 S14</p>	<p>Explains how they apply continuous improvement techniques and how they devise suggestions for improvements. (K19, S14)</p>	<p>Outlines the benefits to the organisation of continuous improvement. (K19, S14)</p>
<p>Communication and teamwork K8 K12 K18 S15 S16</p>	<p>Explains how they use verbal communication techniques suitable for the context, adapting style and use of industry terminology to suit the audience. (K12, S15)</p> <p>Explains the different roles and functions within the organisation and how they interact. Explains how they apply team working principles to meet work goals. (K8, K18, S16)</p>	<p>Outlines the impact and the benefits of teamwork to the organisation and the wider team. (K18, S16)</p>
<p>Professional knowledge and behaviours K15 K17 S17 S20 B2 B4</p>	<p>Explains how they follow equality, diversity, and inclusion procedures. (K15, S20, B4)</p>	<p>Outlines the benefits of supporting a diverse and inclusive culture</p>

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS	DISTINCTION APPRENTICES MUST DEMONSTRATE ALL OF THE PASS DESCRIPTORS AND ALL OF THE DISTINCTION DESCRIPTORS
	<p>Explains how they complete continued professional development to maintain and enhance competence in own area of practice in line with organisational and professional requirements. (S17, B2)</p> <p>Explains business operational considerations including efficiency, customer satisfaction, competitiveness, minimising risks to operation, and ethical issues. (K17)</p>	<p>for the business. (K15, S20)</p>
<p>Maintenance and repair K10 K21 S13 S22</p>	<p>Explains how they undertake maintenance activities on pipework systems in line with organisational procedures. (K21, S13)</p> <p>Explains how they undertake repair activities on maritime pipework systems in line with organisational procedures. (K10, S22)</p>	<p>Justifies the benefits of pipework maintenance activities to the organisation. (K21, S13)</p>

Overall EPA grading

[Edit overall epa grading form](#)

Performance in the EPA determines the overall grade of:

- fail
- pass
- distinction

An independent assessor must individually grade the [observation with questioning and interview underpinned by a portfolio of evidence](#) in line with this EPA plan.

The EPAO must combine the individual assessment method grades to determine the overall EPA grade.

If the apprentice fails one assessment method or more, they will be awarded an overall fail.

To achieve an overall pass, the apprentice must achieve at least a pass in all the assessment methods. [To achieve a distinction, the apprentice must gain a pass in the observation and a distinction in the interview.](#)

Grades from individual assessment methods must be combined in the following way to determine the grade of the EPA overall.

Change

OBSERVATION WITH QUESTIONING	INTERVIEW UNDERPINNED BY A PORTFOLIO OF EVIDENCE	OVERALL GRADING
Any grade	Fail	Fail
Fail	Any grade	Fail
Pass	Pass	Pass
Pass	Distinction	Distinction

Re-sits and re-takes

[Edit re-sits and re-takes form](#)

If the apprentice fails one assessment method or more, they can take a re-sit or a re-take at their employer's discretion. The apprentice's employer needs to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, whereas a re-take does. The apprentice should have a supportive action plan to prepare for a re-sit or a re-take.

The employer and the EPAO should agree the timescale for a re-sit or re-take. A re-sit is typically taken within 3 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 6 months of the EPA outcome notification.

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

Re-sits and re-takes are not offered to an apprentice wishing to move from pass to a higher grade.

The apprentice will get a maximum EPA grade of pass if they need to re-sit or re-take one or more assessment methods, unless the EPAO determines there are exceptional circumstances.

Change

Roles and responsibilities

[Edit roles and responsibilities form](#)

Change

ROLES	RESPONSIBILITIES
Apprentice	<p>As a minimum, the apprentice should:</p> <ul style="list-style-type: none"> • complete on-programme training to meet the KSBs as outlined in the apprenticeship standard for a minimum of 12 months • complete the required amount of off-the-job training specified by the apprenticeship funding rules and as arranged by the employer and training provider • understand the purpose and importance of EPA • prepare for and undertake the EPA including meeting all gateway requirements
Employer	<p>As a minimum, the apprentice's employer must:</p> <ul style="list-style-type: none"> • select the training provider • work with the training provider to select the EPAO • work with the training provider, where applicable, to support the apprentice in the workplace and to provide the opportunities for the apprentice to develop the KSBs • arrange and support off-the-job training to be undertaken by the apprentice • decide when the apprentice is working at or above the apprenticeship standard and is ready for EPA • ensure the apprentice is prepared for the EPA • ensure that all supporting evidence required at the gateway is submitted in line with this EPA plan • confirm arrangements with the EPAO for the EPA in a timely manner, including who, when, where • provide the EPAO with access to any employer-specific documentation as required for example, company policies • ensure that the EPA is scheduled with the EPAO for a date and time which allows appropriate opportunity for the apprentice to meet the KSBs • ensure the apprentice is given sufficient time away from regular duties to prepare for, and complete the EPA • ensure that any required supervision during the EPA period, as stated within this EPA plan, is in place

ROLES	RESPONSIBILITIES
	<ul style="list-style-type: none"> • ensure the apprentice has access to the resources used to fulfil their role and carry out the EPA for workplace based assessments • remain independent from the delivery of the EPA • pass the certificate to the apprentice upon receipt
EPAO	<p>As a minimum, the EPAO must:</p> <ul style="list-style-type: none"> • conform to the requirements of this EPA plan and deliver its requirements in a timely manner • conform to the requirements of the apprenticeship provider and assessment register • conform to the requirements of the external quality assurance provider (EQAP) • understand the apprenticeship including the occupational standard and EPA plan • make all necessary contractual arrangements including agreeing the price of the EPA • develop and produce assessment materials including specifications and marking materials, for example mark schemes, practice materials, training material • maintain and apply a policy for the declaration and management of conflict of interests and independence. This must ensure, as a minimum, there is no personal benefit or detriment for those delivering the EPA or from the result of an assessment. It must cover: <ul style="list-style-type: none"> ○ apprentices ○ employers ○ independent assessors ○ any other roles involved in delivery or grading of the EPA • have quality assurance systems and procedures that ensure fair, reliable and consistent assessment and maintain records of internal quality assurance (IQA) activity for external quality assurance (EQA) purposes • appoint independent, competent, and suitably qualified assessors in line with the requirements of this EPA plan • appoint administrators, invigilators and any other roles where required to facilitate the EPA

ROLES	RESPONSIBILITIES
	<ul style="list-style-type: none"> • deliver induction, initial and on-going training for all their independent assessors and any other roles involved in the delivery or grading of the EPA as specified within this EPA plan. This should include how to record the rationale and evidence for grading decisions where required • conduct standardisation with all their independent assessors before allowing them to deliver an EPA, when the EPA is updated, and at least once a year • conduct moderation across all of their independent assessors' decisions once EPAs have started according to a sampling plan, with associated risk rating of independent assessors • monitor the performance of all their independent assessors and provide additional training where necessary • develop and provide assessment recording documentation to ensure a clear and auditable process is in place for providing assessment decisions and feedback to all relevant stakeholders • use language in the development and delivery of the EPA that is appropriate to the level of the apprenticeship • arrange for the EPA to take place in a timely manner, in consultation with the employer • provide information, advice, and guidance documentation to enable apprentices, employers and training providers to prepare for the EPA • confirm the gateway requirements have been met before they start the EPA for an apprentice • arrange a suitable venue for the EPA • maintain the security of the EPA including, but not limited to, verifying the identity of the apprentice, invigilation and security of materials • where the EPA plan permits assessment away from the workplace, ensure that the apprentice has access to the required resources and liaise with the employer to agree this if necessary • confirm the overall grade awarded • maintain and apply a policy for conducting appeals
Independent assessor	As a minimum, an independent assessor must:

ROLES	RESPONSIBILITIES
	<ul style="list-style-type: none"> • be independent, with no conflict of interest with the apprentice, their employer or training provider, specifically, they must not receive a personal benefit or detriment from the result of the assessment • have, maintain and be able to evidence up-to-date knowledge and expertise of the occupation • have the competence to assess the EPA and meet the requirements of the IQA section of this EPA plan • understand the apprenticeship’s occupational standard and EPA plan • attend induction and standardisation events before they conduct an EPA for the first time, when the EPA is updated, and at least once a year • use language in the delivery of the EPA that is appropriate to the level of the apprenticeship • work with other personnel, where used, in the preparation and delivery of assessment methods • conduct the EPA to assess the apprentice against the KSBs and in line with the EPA plan • make final grading decisions in line with this EPA plan • record and report assessment outcome decisions • comply with the IQA requirements of the EPAO • comply with external quality assurance (EQA) requirements
Training provider	<p>As a minimum, the training provider must:</p> <ul style="list-style-type: none"> • conform to the requirements of the apprenticeship provider and assessment register • ensure procedures are in place to mitigate against any conflict of interest • work with the employer and support the apprentice during the off-the-job training to provide the opportunities to develop the KSBs as outlined in the occupational standard • deliver training to the apprentice as outlined in their apprenticeship agreement • monitor the apprentice’s progress during any training provider led on-programme learning • ensure the apprentice is prepared for the EPA

ROLES	RESPONSIBILITIES
	<ul style="list-style-type: none"> • work with the employer to select the EPAO • advise the employer, upon request, on the apprentice's readiness for EPA • ensure that all supporting evidence required at the gateway is submitted in line with this EPA plan • remain independent from the delivery of the EPA

Reasonable adjustments

Edit reasonable adjustments form

The EPAO must have reasonable adjustments arrangements for the EPA.

This should include:

- how an apprentice qualifies for a reasonable adjustment
- what reasonable adjustments may be made

Adjustments must maintain the validity, reliability and integrity of the EPA as outlined in this EPA plan.

Special considerations

The EPAO must have special consideration arrangements for the EPA.

This should include:

- how an apprentice qualifies for a special consideration
- what special considerations will be given

Special considerations must maintain the validity, reliability and integrity of the EPA as outlined in this EPA plan.

Change

Internal quality assurance

Edit internal quality assurance form

Internal quality assurance refers to the strategies, policies and procedures that an EPAO must have in place to ensure valid, consistent and reliable EPA decisions.

EPAOs for this EPA must adhere to the requirements within the roles and responsibilities table.

They must also appoint independent assessors who:

- have recent relevant experience of the occupation or sector to at least occupational level 3 gained in the last 3 years or significant experience of the occupation or sector

Change

Value for money

[Edit value for money form](#)

Affordability of the EPA will be aided by using at least some of the following:

- utilising digital remote platforms to conduct applicable assessment methods
- using the employer's premises
- conducting assessment methods on the same day

Change

Professional recognition

[Edit professional recognition form](#)

This apprenticeship aligns with:

- Institution of Mechanical Engineers (IMechE) for Engineering Technician

This apprenticeship aligns with:

- Institution of Engineering and Technology (IET) for Engineering Technician

Change

Mapping of KSBs to assessment methods

[Edit mapping of ksbs to assessment methods form](#)

Change

KNOWLEDGE	ASSESSMENT METHODS
K1 Awareness of health and safety regulations, relevance to the occupation and the maritime pipeworker's responsibilities. Control of Substances Hazardous to Health (COSHH). Display Screen Equipment. Due diligence. Electrical safety and compliance. Electricity at work regulations. Emergency evacuation procedures. Health and Safety at Work Act – responsibilities. Isolation and emergency stop procedures. L8 Legionella. Lifting Operations and Lifting Equipment Regulations (LOLER). Lone working. Manual handling. Near miss reporting. Noise regulation. Provision and use of Work Equipment Regulations (PUWER). Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations (RIDDOR). Risk assessments. Safe systems of work. Safety equipment: guards, signage, fire extinguishers. Situational awareness. Slips, trips and falls. Types of hazards. Personal Protective Equipment (PPE). Working at height. Working in confined spaces.	Observation with questioning
K2	Observation with questioning

KNOWLEDGE	ASSESSMENT METHODS
Engineering, mathematical and scientific principles, methods, techniques, graphical expressions, symbols, formulae and calculations used in a maritime pipework environment.	
K3 The structure, properties and characteristics of common materials (ferrous, non-ferrous and non-metallic) used for pipework activities in the maritime sector.	Observation with questioning
K4 Problem solving techniques.	Interview underpinned by a portfolio of evidence
K5 Testing, inspection and fault finding methods and techniques for maritime pipework problems.	Interview underpinned by a portfolio of evidence
K6 Approved processes and procedures for maritime pipework activities: how to access and follow.	Observation with questioning
K7 Principles of interpreting engineering data and documentation in a maritime pipework environment including isometric drawings.	Observation with questioning
K8 The different roles and functions in the organisation and how they interact.	Interview underpinned by a portfolio of evidence
K9 Principles of fabrication including pipework forming of pipework systems in a maritime environment.	Observation with questioning
K10 Principles of repairing pipework systems in a maritime environment	Interview underpinned by a portfolio of evidence
K11 The function and operation of hand tools, power tools, jigs, fabrication equipment and forming machines used in a maritime pipework environment.	Observation with questioning

KNOWLEDGE	ASSESSMENT METHODS
<p>K12 Verbal communication techniques. Giving and receiving information. Matching style to audience. Barriers in communication and how to overcome them. Maritime engineering terminology.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K13 Documentation: methods and requirements - electronic and paper.</p>	<p>Observation with questioning</p>
<p>K14 Principles of sustainability and circular economy. Energy efficiency and reuse of materials. Environmental and sustainability procedures. Principles of control and management of emissions and waste. Efficient use of resources.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K15 Equality Act. Equality, diversity, and inclusion in the workplace. Unconscious bias.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K16 Escalation procedures.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K17 Business operation considerations: efficiency, customer satisfaction, competitiveness, minimising risks to operation, and ethical issues.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K18 Team working principles.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K19 Continuous improvement techniques.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>K20 Planning techniques: resources, tools, equipment, access, time management.</p>	<p>Observation with questioning</p>
<p>K21 Maritime pipework maintenance practices and techniques and their frequency.</p>	<p>Interview underpinned by a portfolio of evidence</p>

KNOWLEDGE	ASSESSMENT METHODS
<p>K22 Techniques for measuring and marking out maritime pipework components and systems.</p>	<p>Observation with questioning</p>
<p>K23 Maritime pipework assembly methods and techniques: brazing, welding, mechanical fasteners, seals, gaskets and jointing, alignment of pipework, threading pipework and crimping joints.</p>	<p>Observation with questioning</p>
<p>K24 Principles of quality assurance in a maritime pipework environment.</p>	<p>Observation with questioning</p>
<p>K25 Principles and practices of restoring the work area on completion of work.</p>	<p>Observation with questioning</p>
<p>K26 Techniques for cutting, shaping and finishing maritime pipework components.</p>	<p>Observation with questioning</p>
<p>K27 Principles of installing pipework systems in a maritime environment.</p>	<p>Observation with questioning</p>
SKILL	ASSESSMENT METHODS
<p>S1 Obtain, read, analyse and interpret engineering data, drawings or documentation used in the design, build, operation and repair of maritime vessels such as job instructions, drawings, plans, quality control documentation.</p>	<p>Observation with questioning</p>
<p>S2 Apply health and safety procedures and safe systems of work in compliance with regulations and standards.</p>	<p>Observation with questioning</p>
<p>S3 Identify, organise and use resources to complete tasks, with consideration for cost, quality, safety, security and environmental impact.</p>	<p>Observation with questioning</p>
<p>S4</p>	<p>Observation with questioning</p>

KNOWLEDGE	ASSESSMENT METHODS
Use approved processes and procedures for maritime pipeworker work.	
S5 Carry out maritime pipework quality assurance checks.	Observation with questioning
S6 Resolve maritime pipework problems within the limits of their responsibility. Escalate un-resolved issues and problems.	Interview underpinned by a portfolio of evidence
S7 Restore the work area on completion of the activity. Return any resources and consumables.	Observation with questioning
S8 Measure and mark out maritime pipework components, pipework and pipework systems.	Observation with questioning
S9 Select and use hand tools, power tools and fabrication equipment for example forming machines and jigs to cut, shape and finish maritime pipework components.	Observation with questioning
S10 Fabricate pipe systems in a maritime environment using techniques such as such as pipe forming.	Observation with questioning
S11 Apply maritime pipework assembly methods and techniques such as brazing, welding, mechanical fasteners, seals, gaskets and jointing.	Observation with questioning
S12 Apply testing and inspection fault finding techniques used in the maritime pipework environment.	Interview underpinned by a portfolio of evidence
S13 Apply maintenance techniques on pipework components and systems.	Interview underpinned by a portfolio of evidence
S14 Apply continuous improvement techniques. Devise suggestions for improvement.	Interview underpinned by a portfolio of evidence

KNOWLEDGE	ASSESSMENT METHODS
<p>S15 Communicate with others verbally for example, colleagues and stakeholders.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>S16 Apply team working principles.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>S17 Carry out and record planned and unplanned learning and development activities.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>S18 Record and enter information - paper based or electronic. For example, energy usage, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and any legal reporting requirements.</p>	<p>Observation with questioning</p>
<p>S19 Apply environmental and sustainability procedures in compliance with regulations and standards for example, segregate resources for reuse, recycling and disposal.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>S20 Follow equality, diversity and inclusion procedures.</p>	<p>Interview underpinned by a portfolio of evidence</p>
<p>S21 Install pipe systems in a maritime environment.</p>	<p>Observation with questioning</p>
<p>S22 Repair pipe systems in a maritime environment.</p>	<p>Interview underpinned by a portfolio of evidence</p>
BEHAVIOUR	ASSESSMENT METHODS
<p>B1 Put health and safety first.</p>	<p>Observation with questioning</p>
<p>B2 Committed to continued professional development (CPD) to maintain and enhance competence in their own area of practice.</p>	<p>Interview underpinned by a portfolio of evidence</p>

BEHAVIOUR	ASSESSMENT METHODS
B3 Take personal responsibility for their own sustainable working practices.	Interview underpinned by a portfolio of evidence
B4 Take account of diversity and inclusion requirements.	Interview underpinned by a portfolio of evidence
B5 Respond and adapt to work demands and situations.	Interview underpinned by a portfolio of evidence
B6 Take responsibility for completing work.	Observation with questioning

Mapping of KSBS to grade themes

[Edit add grade themes form](#) [Edit mapping of ksbs to grade themes form](#)

Change

Observation with questioning

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
Planning, preparation and resources K2 K7 K20 S1 S3	<p>Engineering, mathematical and scientific principles, methods, techniques, graphical expressions, symbols, formulae and calculations used in a maritime pipework environment. (K2)</p> <p>Principles of interpreting engineering data and documentation in a maritime pipework environment including isometric drawings. (K7)</p> <p>Planning techniques: resources, tools, equipment, access, time management. (K20)</p>	<p>Obtain, read, analyse and interpret engineering data, drawings or documentation used in the design, build, operation and repair of maritime vessels such as job instructions, drawings, plans, quality control documentation. (S1)</p> <p>Identify, organise and use resources to complete tasks, with consideration for cost, quality, safety, security and environmental impact. (S3)</p>	None

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
<p>Working safely K1 K6 S2 S4 B1</p>	<p>Awareness of health and safety regulations, relevance to the occupation and the maritime pipeworker's responsibilities. Control of Substances Hazardous to Health (COSHH). Display Screen Equipment. Due diligence. Electrical safety and compliance. Electricity at work regulations. Emergency evacuation procedures. Health and Safety at Work Act – responsibilities. Isolation and emergency stop procedures. L8 Legionella. Lifting Operations and Lifting Equipment Regulations (LOLER). Lone working. Manual handling. Near miss reporting. Noise regulation. Provision and use of Work Equipment Regulations (PUWER). Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations (RIDDOR). Risk assessments. Safe systems of work. Safety equipment: guards, signage, fire extinguishers. Situational awareness. Slips, trips and falls. Types of hazards. Personal Protective Equipment (PPE). Working at height. Working in confined spaces. (K1)</p>	<p>Apply health and safety procedures and safe systems of work in compliance with regulations and standards. (S2)</p> <p>Use approved processes and procedures for maritime pipeworker work. (S4)</p>	<p>Put health and safety first. (B1)</p>

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
	Approved processes and procedures for maritime pipework activities: how to access and follow. (K6)		
Tools K11 K26 S9	The function and operation of hand tools, power tools, jigs, fabrication equipment and forming machines used in a maritime pipework environment. (K11) Techniques for cutting, shaping and finishing maritime pipework components. (K26)	Select and use hand tools, power tools and fabrication equipment for example forming machines and jigs to cut, shape and finish maritime pipework components. (S9)	None
Measuring and marking out K22 S8	Techniques for measuring and marking out maritime pipework components and systems. (K22)	Measure and mark out maritime pipework components, pipework and pipework systems. (S8)	None
Fabrication and installation K3 K9 K23 K27 S10 S11 S21 B6	The structure, properties and characteristics of common materials (ferrous, non-ferrous and non-metallic) used for pipework activities in the maritime sector. (K3) Principles of fabrication including pipework forming of pipework systems in a maritime environment. (K9) Maritime pipework assembly methods and techniques: brazing, welding, mechanical fasteners, seals, gaskets and jointing, alignment	Fabricate pipe systems in a maritime environment using techniques such as such as pipe forming. (S10) Apply maritime pipework assembly methods and techniques such as brazing, welding, mechanical fasteners, seals, gaskets and jointing. (S11) Install pipe systems in a maritime environment. (S21)	Take responsibility for completing work. (B6)

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
	<p>of pipework, threading pipework and crimping joints. (K23)</p> <p>Principles of installing pipework systems in a maritime environment. (K27)</p>		
<p>Quality assurance K24 S5</p>	<p>Principles of quality assurance in a maritime pipework environment. (K24)</p>	<p>Carry out maritime pipework quality assurance checks. (S5)</p>	<p>None</p>
<p>Restoring the work area K25 S7</p>	<p>Principles and practices of restoring the work area on completion of work. (K25)</p>	<p>Restore the work area on completion of the activity. Return any resources and consumables. (S7)</p>	<p>None</p>
<p>Documentation K13 S18</p>	<p>Documentation: methods and requirements - electronic and paper. (K13)</p>	<p>Record and enter information - paper based or electronic. For example, energy usage, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and any legal reporting requirements. (S18)</p>	<p>None</p>

Interview underpinned by a portfolio of evidence

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
Working sustainably K14 S19 B3	Principles of sustainability and circular economy. Energy efficiency and reuse of materials. Environmental and sustainability procedures. Principles of control and management of emissions and waste. Efficient use of resources. (K14)	Apply environmental and sustainability procedures in compliance with regulations and standards for example, segregate resources for reuse, recycling and disposal. (S19)	Take personal responsibility for their own sustainable working practices. (B3)
Problem solving K4 K5 K16 S6 S12 B5	Problem solving techniques. (K4) Testing, inspection and fault finding methods and techniques for maritime pipework problems. (K5) Escalation procedures. (K16)	Resolve maritime pipework problems within the limits of their responsibility. Escalate un-resolved issues and problems. (S6) Apply testing and inspection fault finding techniques used in the maritime pipework environment. (S12)	Respond and adapt to work demands and situations. (B5)
Quality and improvement K19 S14	Continuous improvement techniques. (K19)	Apply continuous improvement techniques. Devise suggestions for improvement. (S14)	None
Communication and teamwork K8 K12 K18 S15 S16	The different roles and functions in the organisation and how they interact. (K8) Verbal communication techniques. Giving and receiving information. Matching style to audience. Barriers in communication and how to overcome them.	Communicate with others verbally for example, colleagues and stakeholders. (S15) Apply team working principles. (S16)	None

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
	<p>Maritime engineering terminology. (K12)</p> <p>Team working principles. (K18)</p>		
<p>Professional knowledge and behaviours K15 K17 S17 S20 B2 B4</p>	<p>Equality Act. Equality, diversity, and inclusion in the workplace. Unconscious bias. (K15)</p> <p>Business operation considerations: efficiency, customer satisfaction, competitiveness, minimising risks to operation, and ethical issues. (K17)</p>	<p>Carry out and record planned and unplanned learning and development activities. (S17)</p> <p>Follow equality, diversity and inclusion procedures. (S20)</p>	<p>Committed to continued professional development (CPD) to maintain and enhance competence in their own area of practice. (B2)</p> <p>Take account of diversity and inclusion requirements. (B4)</p>
<p>Maintenance and repair K10 K21 S13 S22</p>	<p>Principles of repairing pipework systems in a maritime environment (K10)</p> <p>Maritime pipework maintenance practices and techniques and their frequency. (K21)</p>	<p>Apply maintenance techniques on pipework components and systems. (S13)</p> <p>Repair pipe systems in a maritime environment. (S22)</p>	<p>None</p>

Supporting information

External quality assurance

[Edit external quality assurance - eqa form](#)

Option selected: Ofqual

Involved employers

Babcock International, BAE Systems, Royal Navy, Cammell Laird