ST0292/V1.1

DRAFT END-POINT ASSESSMENT PLAN FOR THE NUCLEAR WELDING INSPECTION TECHNICIAN APPRENTICESHIP

APPRENTICESHIP REFERENCE NUMBER	LEVEL OF THIS END-POINT ASSESSMENT (EPA)	INTEGRATION
ST0292	4	Mandatory qualification

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Introduction and overview

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This document explains the requirements for end-point assessment (EPA) for the nuclear welding inspection technician apprenticeship. This apprenticeship has an integrated qualification which means both the qualification and apprenticeship need to be completed, passed and awarded during the same period.
The awarding body (AB) is accountable for the integrated assessment method. The end-point assessment organisation (EPAO) must take responsibility for all other assessment methods in the EPA. EPAOs and ABs must work collaboratively to manage the delivery of the EPA.
Nuclear welding inspection technician apprentices, their employers, training providers and other interested parties should read this document.
A full-time nuclear welding inspection technician apprentice typically spends 48 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 2 months.
The apprentice must complete their training and meet the gateway requirements before starting their EPA. The EPA will assess occupational competence.

EPA summary table

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On-programme - typically 48 months	The apprentice must: • 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 • The apprentice must have completed and passed all required elements on-programme of the following qualifications. CSWIP or PCN level 2 Dye Penetrant Inspection (DPI) and CSWIP or PCN level 2 Magnetic Particle Inspection (MPI) and BTEC L4 Higher National Certificate in Engineering (QAN 610/3635/3) • compile a portfolio of evidence • complete training towards the qualifications listed in the nuclear welding inspection technician apprenticeship standard

End-point assessment gateway	The apprentice's employer must be content that the apprentice is occupationally competent. The apprentice must: • confirm they are ready to take the EPA • have achieved English and mathematics qualifications in line with the apprenticeship funding rules • have passed CSWIP or PCN level 2 Dye Penetrant Inspection (DPI) • have passed CSWIP or PCN level 2 Magnetic Particle Inspection (MPI) • have passed BTEC L4 Higher National Certificate in Engineering (QAN 610/3635/3) 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.
End-point assessment - typically 2 months	**The grades available for each assessment method are below** Professional discussion underpinned by a portfolio of evidence: • fail • pass • distinction CSWIP 3.1 or PCN Level 2 welding inspector: • fail • pass **Overall EPA and apprenticeship can be graded:** ○ fail ○ pass ○ distinction
Professional recognition	This apprenticeship aligns with: • The Welding Institute for Engineering technician (EngTech) This apprenticeship aligns with: • British Institute of Non-Destructive Testing for Engineering technician (EngTech)
Re-sits and re-takes	The details for re-sits and re-takes are below: • re-take and re-sit grade cap: pass • re-sit timeframe: typically 2 months • re-take timeframe: typically 4 months

Duration of end-point assessment period

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

EPA gateway

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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
- have passed the following qualifications on programme to reach gateway:
- CSWIP or PCN level 2 in Dye Penetrant Inspection (DPI) and
- CSWIP or PCN level 2 in Magnetic Particle Inspection (MPI) and
- BTEC L4 Higher National Certificate in Engineering (QAN 610/3635/3)
- submit a portfolio of evidence for the professional discussion underpinned by a portfolio of evidence

The apprentice must complete the following qualification as an integrated assessment for EPA:

- CSWIP 3.1 or PCN level 2 Welding Inspector

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 professional discussion. It will typically contain 10 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
- welding procedure specification (WPS)
- welding procedure qualification records (WPQR)
- welding procedure approval records (WPAR)
- inspection reports
- annotated photographs
- video clips with a maximum total duration of 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 professional discussion. The independent assessor should review the portfolio of evidence to prepare questions for the professional discussion. 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.

Order of assessment methods

Edit order of assessment methods form

The assessment methods must be delivered in the following order:

The assessment methods can be delivered in the following order. The integrated assessment method must be delivered after the non-integrated assessment method has been attempted.
The rationale is the CSWIP 3.1 or PCN level 2 welding inspector qualification and the EPA are achieved at the same time.

Professional discussion underpinned by a portfolio of evidence

Edit professional discussion underpinned by a portfolio of evidence form

Overview

In the professional discussion, an independent assessor and apprentice have a formal two-way conversation. It gives the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method.

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 professional discussion 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 professional discussion.
The purpose of the independent assessor's questions will be to assess the apprentice's competence against the following themes:

- health and safety and the environment and sustainability
- nuclear regulations
- quality assurance
- welding practices
- business improvement
- human factors and team working

- digital systems and information technology
- equity, diversity and inclusion

The EPAO must give an apprentice 2 weeks' notice of the professional discussion.
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 professional discussion.
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 professional discussion must last for 75 minutes. The independent assessor can increase the time of the professional discussion 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 10 questions. The independent assessor must use the questions from the EPAO's question bank. 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 professional discussion must take place in a suitable venue selected by the EPAO for example, the EPAO's or employer's premises.
The professional discussion 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 professional discussion 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 professional discussion 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.

CSWIP 3.1 or PCN Level 2 welding inspector

Edit cswip 3.1 or pcn level 2 welding inspector form

This is an integrated assessment method. This integrated assessment method forms part of the apprenticeship's EPA as well as the awarding of the qualification.
The KSBs aligned to this integrated assessment method will be assessed and graded by the awarding body and contribute to the overall outcome of the apprenticeship and the qualification.

Overview

In the CSWIP 3.1 or PCN level 2 Welding Inspector assessment, an independent assessor observes the apprentice completing a task or series of tasks set by the AB. The AB decides where it takes place. It gives the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method.

Rationale

This assessment method is being used because:

- allows for the assessment of knowledge and skills aligned to complex testing technologies, national and international standards qualifications
- this is a practical role, which can be demonstrated through completing theory and practical tasks
- it allows for consistency of opportunity for apprentices to demonstrate their competence against the mapped KSBs
- it is a valid assessment because it involves direct testing under controlled conditions
- it reduces the assessment burden on the apprentice

Delivery

The delivery of the CSWIP 3.1 or PCN level 2 welding inspector must align with the conditions set out by the AB for the integrated qualification.
The AB must give the apprentice notice of the CSWIP 3.1 or PCN level 2 welding inspector assessment.
The AB 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 AB must explain to the apprentice the format and timescales of the CSWIP 3.1 or PCN level 2 Welding Inspector assessment before it starts.
The CSWIP 3.1 or PCN level 2 welding inspector cannot be split, other than for comfort breaks or to allow apprentices to move from one location to another. Where breaks occur, they will not count towards the total EPA time.
The independent assessor must keep accurate records of the assessment. They must record:

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

Assessment location

CSWIP 3.1 or PCN level 2 welding inspector may take place in a simulated environment selected by the AB for example, the AB's or training provider's premises, a training facility in the employer's premises, a test centre or a similar simulated environment.

Question and resource development

The AB must develop a purpose-built assessment specification. It is recommended this is done in consultation with employers or subject matter experts for this occupation. The AB should maintain the security and confidentiality of EPA materials when consulting with employers. The assessment specification must be reviewed 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 AB must ensure that the theory and practical tests are refined and developed to a high standard.

The AB must produce the following materials to support the CSWIP 3.1 or PCN level 2 Welding Inspector assessment:

- administration materials
- guidance materials
- test specification
- grading guidance
- moderation and standardisation materials

The AB must ensure that the integrated qualification materials are subject to quality assurance procedures including standardisation and moderation.

Grading

Edit add grade descriptor formEdit mapping of ksbs to grade themes formEdit available grades form

Professional discussion 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
Health and safety and the environment and sustainability K2 K3 B1	Explains how they commit to and promote safety in the nuclear industry, and how the health and safety and industry regulations, guidance and procedures impact their working practices. (K2, B1) Describes how they consider the environment, pollution, waste, and recycling, and the application of control measures following environmental and sustainability regulations and	None.

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
	procedures in line with organisational guidance. (K3)	
Nuclear regulations and standards K1 S1 S6	Explains how they comply with nuclear regulatory and legislative guidance whilst undertaking their role. (K1, S1) Explains how they comply and meet the relevant engineering standard for specific work undertaken in their role. (S6)	None.
Quality assurance K12	Describes the quality control requirements at the following stages, before, during and after welding to confirm materials and welding processes. (K12)	Explains the quality control requirements at the following stages, before, during and after welding to confirm analysis of materials storage requirements and welding equipment certification, welding process, consumables and control weld defects. (K12)
Welding practices K10 S11	Explains how they use welding information, documents or welding procedures to carry out welder approval process, and parameter monitoring, verification of records in line with organisational procedures. (K10, S11)	None.
Business improvement K15 S15	Describes how they collate business operational considerations and explains how	Explains the importance of completing business improvement activities and the impact on the

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
	they apply business improvement techniques in line with organisational requirements. (K15, S15)	organisation of not doing so. (K15, S15)
Human factors and team working K4 K16 S4 S17 B2	Explains how they apply team working principles whilst collaborating across disciplines and with external stakeholders as required for the task. (K16, S17, B2) Explains how they apply human factors and human performance principles in line with nuclear safety culture within their role. and organisational procedures. (K4, S4)	Explains how compliance with human factors and human performance principles preserves nuclear safety culture for themselves and others. (K4, S4)
Digital systems and information technology K19	Describes the digital systems and information technology used and how they comply with GDPR and cyber security regulations, policies and procedures when carrying out their role in line with organisational requirements. (K19)	Explains the importance to the business of ensuring GDPR and cyber security regulations, policies and procedures are followed. (K19)
Equity, diversity and inclusion K17 S18 B4	Describes how they follow equity, diversity and inclusion rules, contributing to an inclusive workplace, including being respectful of others and the impact this has on their work. (K17, S18, B4)	Explains the benefits to themselves and the organisation of supporting a diverse and inclusive culture. (K17, S18)

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

CSWIP 3.1 or PCN Level 2 welding inspector

Fail - does not meet pass criteria

INTEGRATED QUALIFICATIONS KSBS
CSWIP 3.1 or PCN level 2 welding inspector examinations K5 K6 K7 K8 K9 K11 K13 K14 K18 K20 S2 S3 S5 S7 S8 S9 S10 S12 S13 S14 S16 S19 S20 S21

INTEGRATED QUALIFICATIONS KSBS

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 professional discussion underpinned by a portfolio of evidence and the AB must grade the integrated assessment for the

- CSWIP 3.1 or PCN Level 2 welding inspector

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 an overall EPA distinction the apprentice must achieve a distinction in the professional discussion underpinned by a portfolio of evidence and pass the CSWIP 3.1 or PCN level 2 welding inspector qualification.
Awarding bodies should make clear in their marking criteria which grade boundary for the integrated assessment method represents a pass grade for the EPA. This pass grade must reflect demonstration of occupational competence in the KSBs.
Grades from individual assessment methods must be combined in the following way to determine the grade of the EPA overall.

PROFESSIONAL DISCUSSION UNDERPINNED BY A PORTFOLIO OF EVIDENCE	CSWIP 3.1 OR PCN LEVEL 2 WELDING INSPECTOR	OVERALL GRADING
Any grade	Fail	Fail
Fail	Pass	Fail
Pass	Pass	Pass
Distinction	Pass	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 2 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 4 months of the EPA outcome notification.
Non-integrated assessment methods must be attempted before the integrated assessment method is attempted. The re-sit or re-take opportunities for the integrated assessment method must fall within the typical EPA period timeframes. This is to ensure that apprentices are not disadvantaged by the assessment of qualifications being available within an assessment window occurring once a year.
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.

Roles and responsibilities

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ROLES	RESPONSIBILITIES
Apprentice	As a minimum, the apprentice should: • 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 • apply for any reasonable adjustments and special considerations • prepare for and undertake the EPA including meeting all gateway requirements • ensure that all supporting evidence required at the gateway is submitted in line with this EPA plan
Employer	As a minimum, the apprentice's employer must: • select the training provider • work with the training provider to select the EPAO • ensure that the apprentice is enrolled on mandated qualifications in line with the occupational standard • 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

ROLES	RESPONSIBILITIES
	• arrange and support off-the-job training to be undertaken by the apprentice • decide when the apprentice is working at or above the occupational 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 (who, when, where) in a timely manner • ensure that the EPA is scheduled with the EPAO for a date and time in line with EPA requirements • ensure that the integrated assessment method is scheduled with the AB for a date and time in line with EPA requirements • provide access to any employer-specific documentation as required for example, company policies • 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 • 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 from the EPAO

EPAO	As a minimum, the EPAO must:
	• conform to the requirements of this EPA plan and deliver its requirements in a timely manner
	• conform to the requirements of the APAR
	• conform to the requirements of the external quality assurance provider (EQAP)
	• understand the apprenticeship including the occupational standard, EPA plan and funding
	• make all necessary contractual arrangements including agreeing the price of the EPA
	• have third party arrangements in place with the AB to:
	  ○ work collaboratively to manage the delivery of the EPA
	  ○ ensure the EPA is arranged to meet the scheduling requirements set out in this EPA plan
	  ○ to share the outcomes of the integrated assessment methods in a timely manner. The sharing of information is strictly related to the apprentice's details and the outcome of their performance of the qualification. Employer and training provider details should not be shared between these organisations.

ROLES	RESPONSIBILITIES

	• develop and produce assessment materials including specifications and marking materials (for example mark schemes, practice materials, training material) for the non-integrated assessment methods
	• 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:
	  ○ 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
	• deliver induction, initial and on-going training for all their independent assessors and any other roles involved in the delivery or grading of the non-integrated assessment methods 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
	• 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
	• maintain and apply a policy for reasonable adjustment and special considerations for apprentices
	• use language in the development and delivery of the EPA that is appropriate to the level of the apprenticeship
	• 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
	• host and facilitate the EPA or make suitable alternative arrangements
	• maintain the security of the EPA including, but not limited to, verifying the identity of the apprentice, invigilation and security of materials

ROLES	RESPONSIBILITIES
	• arrange for the non-integrated assessment methods of the EPA to take place in a timely manner, in consultation with the employer • deliver the non-integrated assessment methods in line with this EPA plan • 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 including the outcomes of the integrated and non-integrated assessment methods in line with this EPA plan • conduct moderation of all their independent assessors' decisions once EPAs have started • monitor the performance of all their independent assessors and provide re-training where necessary • maintain and apply a policy for conducting appeals • arrange the certification of the apprenticeship
Awarding body	As a minimum, the awarding body must: • conform to the requirements of this EPA plan and deliver its requirements in a timely manner • conform to the requirements of any regulators for the mandated qualification • understand the apprenticeship including the occupational standard, EPA plan and funding • confirm that they agree to the conditions of integration for the integrated assessment method, as outlined in the EPA plan • make all necessary contractual arrangements • have third party arrangements in place with the EPAO to: o work collaboratively to manage the delivery of the EPA o ensure the EPA is arranged to meet the scheduling requirements set out in this EPA plan o to share the outcomes of the integrated assessment method in a timely manner. The sharing of information is strictly related to the apprentice's details and the outcome of their performance of the qualification. Employer and training provider details should not be shared between these organisations. • develop and produce assessment materials including specifications and marking materials (for example mark schemes, practice materials, training material) for the integrated assessment method • maintain and apply a policy for the declaration and management of conflict of interests and independence relating to the EPA of an apprentice (including by way of moderation).

ROLES	RESPONSIBILITIES

	• have quality assurance systems and procedures that ensure fair, reliable and consistent assessment and maintain records of internal quality assurance (IQA) activity
	• source a suitably qualified and independent person who must administer all aspects of the integrated assessment method. This means that they must not:
	  ○ be connected to the apprentice
	  ○ have been involved in the management or training of the apprentice
	  ○ have a vested interest in the outcome.
	• Where this is not possible, by exception, a person who has delivered the assessed content may administer the assessment. This is providing they are not the sole administrator.
	• source a suitably qualified and independent person who must grade all aspects of the integrated assessment method. The person making the grading judgement must not be employed by:
	  ○ the same organisation as the apprentice
	  ○ the apprentice's training provider.
	• This means that the integrated assessment method/aspects must be marked by either:
	  ○ the awarding body,
	  ○ an independent person appointed by the awarding body, or an independent assessor sourced by, or from, the EPAO,
	  ○ or a combination of the above.
	• In rare circumstances, training provider staff may mark the integrated assessment method. This will only be to mark tests where there is a right or wrong answer, for example, multiple-choice tests. Strict arrangements must be in place for monitoring, moderation and quality assurance.
	• develop and produce assessment materials including specifications and marking materials (for example mark schemes, practice materials, training material) for the integrated assessment methods
	• deliver induction, initial and on-going training for all their independent assessors and any other roles involved in the administration or grading of the integrated assessment method of the EPA as specified within this EPA plan. This should include how to record the rationale and evidence for grading decisions where required
	• provide information, advice, and guidance documentation to enable apprentices, employers and training providers to prepare for the integrated assessment method
	• arrange for the integrated assessment methods of the EPA to take place in a timely manner, in consultation with the employer
	• maintain the security of the integrated assessment method including, but not limited to, verifying the identity of the apprentice, invigilation and security of materials

ROLES	RESPONSIBILITIES
	• must externally set and externally mark the integrated assessment method • maintain and apply a policy for reasonable adjustment and special considerations for apprentices • deliver the integrated assessment method in line with this EPA plan • conduct moderation of all their independent assessors' decisions for integrated assessment methods • monitor the performance of all their independent assessors and provide re-training where necessary • an auditable process is in place for providing assessment decisions and feedback to all relevant stakeholders • maintain and apply a policy for conducting appeals • continue to follow the rules and regulations applicable to the qualification, for example, those of Ofqual and industry regulators. • must give IfATE at least 6 months' notice of any changes to mandated qualifications
Independent assessor	As a minimum, an independent assessor must: • 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, including additional assessors 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	As a minimum, the training provider must: • conform to the requirements of the apprenticeship provider and assessment register (APAR)

ROLES	RESPONSIBILITIES
	• 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 • 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 • not make any adaptations to aspects of the integrated assessment method • remain independent from the delivery of the non-integrated assessment methods in EPA • remain independent from the integrated assessment method, except with the marking of tests where there is a right or wrong answer for example multiple-choice tests • remain independent from the administration of the integrated assessment method. This person must also be independent of the apprentice. Where this is not possible, by exception and agreed by the awarding body, a person who has delivered the assessed content may administer the assessment. This is providing they are not the sole administrator.

Reasonable adjustments

Edit reasonable adjustments form

Reasonable adjustments
The EPAO and AB 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 and AB 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.

Internal quality assurance

Edit internal quality assurance form

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

EPAOs and ABs for this end-point assessment plan 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 4 gained in the last 3 years or significant experience of the occupation or sector

Value for money

Edit value for money form

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

- completing applicable assessment methods online, for example computer-based assessment
- utilising digital remote platforms to conduct applicable assessment methods
- using the employer's premises

Professional recognition

Edit professional recognition form

This apprenticeship aligns with:

- The Welding Institute for Engineering technician (EngTech)

This apprenticeship aligns with:

- British Institute of Non-Destructive Testing for Engineering technician (EngTech)

Mapping of KSBs to assessment methods

Edit mapping of ksbs to assessment methods form

KNOWLEDGE	ASSESSMENT METHODS
K1 Regulatory and legislative guidance: Nuclear Installations Act (NIA); Ionising Radiation Regulations (IRR); Radiation (Emergency Preparedness and Public Information) Regulations (REPPIR).	Professional discussion underpinned by a portfolio of evidence

KNOWLEDGE	ASSESSMENT METHODS
K2 Health and safety: nuclear environment safety culture, safe working practices, risk assessments, control measures for associated radiation sources and hazards. Confined spaces, Health and safety at work act. Control of Substances Hazardous to Health (COSHH). Manual handling. Personal Protective Equipment (PPE). Respiratory Protection Equipment (RPE). Slips, trips and falls. Safety equipment: guards, signage, fire extinguishers. Working at height.	Professional discussion underpinned by a portfolio of evidence
K3 Environment and sustainability regulations and guidance. Types of pollution and control measures in the nuclear sector, including spills and waste. Waste reduction and waste streams. Recycling and reuse. Sustainable use of equipment and materials.	Professional discussion underpinned by a portfolio of evidence
K4 Human performance and human factors and their effect on nuclear safety culture.	Professional discussion underpinned by a portfolio of evidence
K5 British standards for engineering representations, drawings, and fabrication and dimensional requirements.	CSWIP 3.1 or PCN Level 2 welding inspector
K6 Engineering standards and regulations for the nuclear industry, relevant to the occupation and technician's responsibilities. British Standards (BS). International Organisation for Standardisation standards (ISO). European Norm (EN).	CSWIP 3.1 or PCN Level 2 welding inspector
K7 Material science: properties, characteristics, composition, failure mechanisms, and behaviours of metal types for selection of welding processes for nuclear applications.	CSWIP 3.1 or PCN Level 2 welding inspector
K8 Destructive testing methods (DTM): fundamental techniques, point of failure analysis of materials.	CSWIP 3.1 or PCN Level 2 welding inspector
K9 Weldability and joining methods: weldability of material, welding consumable selection, joining dissimilar materials, heat treatment and effects on metallurgical structure.	CSWIP 3.1 or PCN Level 2 welding inspector
K10	Professional discussion underpinned by a portfolio of evidence

KNOWLEDGE	ASSESSMENT METHODS
Welding practices: welding information, representation and terminology, standards and abbreviations. Welding procedures. Welder approval process, documentation and records.	
K11 Tools and equipment used in welding and welding inspection, processes and parameters for their use.	CSWIP 3.1 or PCN Level 2 welding inspector
K12 Approved nuclear industry quality control requirements before, during and after welding, and categorisation of weld defects: Material and welding equipment storage, condition and certification. Welding process, consumables and approved procedures.	Professional discussion underpinned by a portfolio of evidence
K13 Non-destructive testing techniques: liquid penetrant testing and inspection (LPI), magnetic particle inspection (MPI), radiographic testing (RT) and ultrasonic testing (UT). Suitable selection of test method. Advantages and limitations of their use.	CSWIP 3.1 or PCN Level 2 welding inspector
K14 Documentation and recording information: methods of inspection reporting, and verification of certification data.	CSWIP 3.1 or PCN Level 2 welding inspector
K15 Business operational considerations: business efficiency, customer satisfaction, technical support, competitiveness, minimising risks to operation, finance, business ethics and licenses.	Professional discussion underpinned by a portfolio of evidence
K16 Principles of team working.	Professional discussion underpinned by a portfolio of evidence
K17 Principles of equity, diversity, and inclusion in the workplace and the impact on their work.	Professional discussion underpinned by a portfolio of evidence
K18 Verbal and written communication techniques.	CSWIP 3.1 or PCN Level 2 welding inspector
K19 Digital systems and information technology: management information systems, spreadsheets, presentation, document production, email and messaging systems, virtual communication and learning platforms. General data protection regulation. Cyber security.	Professional discussion underpinned by a portfolio of evidence

KNOWLEDGE	ASSESSMENT METHODS
K20 Workplace training and development activities: continual professional development (CPD).	CSWIP 3.1 or PCN Level 2 welding inspector
SKILL	**ASSESSMENT METHODS**
S1 Comply with nuclear regulatory and legislative guidance.	Professional discussion underpinned by a portfolio of evidence
S2 Comply with health and safety and industry regulations, procedures, and guidance.	CSWIP 3.1 or PCN Level 2 welding inspector
S3 Comply with environmental and sustainability regulations and procedures. For example, identify and segregate resources for reuse, waste reduction, recycling, and disposal.	CSWIP 3.1 or PCN Level 2 welding inspector
S4 Apply human performance and human factors nuclear culture.	Professional discussion underpinned by a portfolio of evidence
S5 Receive, read and interpret engineering data and information for welding processes, procedures and inspections. For example, interrogate engineering drawings, fabrication and dimensional requirements.	CSWIP 3.1 or PCN Level 2 welding inspector
S6 Comply with nuclear engineering standards and regulations. For example, British Standards (BS), International Organisation for Standardisation standards (ISO), European Norm (EN).	Professional discussion underpinned by a portfolio of evidence
S7 Read, interpret, and record welding information and technologies. For example, welding abbreviations and terminology and relevant weld procedures, welder approval processes.	CSWIP 3.1 or PCN Level 2 welding inspector
S8 Confirm and validate tools and welding equipment used in the welding process.	CSWIP 3.1 or PCN Level 2 welding inspector
S9 Select and use welding inspection tools.	CSWIP 3.1 or PCN Level 2 welding inspector
S10	CSWIP 3.1 or PCN Level 2 welding inspector

KNOWLEDGE	ASSESSMENT METHODS
Validate materials, equipment and consumables storage, condition and certification and the welding process is in accordance with an approved procedure. Verify qualified status of welder and check weld fit up and weld faces.	
S11 Carry out process and parameter monitoring and verification. For example, check current, voltage, heat and travel speed are in accordance with the welding procedure and inspect the weld root and verify inter run.	Professional discussion underpinned by a portfolio of evidence
S12 Carry out visual inspection, non-destructive testing techniques, for example, liquid penetrant testing (LPI), magnetic particle inspection (MPI), for weld appearance and identification checks.	CSWIP 3.1 or PCN Level 2 welding inspector
S13 Check subsequent repairs are completed and recorded and test post-weld heat treatment.	CSWIP 3.1 or PCN Level 2 welding inspector
S14 Produce welding inspection reports, and verification of certification data, recording information and the results on paper or electronically.	CSWIP 3.1 or PCN Level 2 welding inspector
S15 Apply business improvement techniques. For example, identify areas for improvement, resolve business problems, business efficiencies.	Professional discussion underpinned by a portfolio of evidence
S16 Record or enter information - paper based or electronic. For example, job sheets, handover documents and manufacturers' documentation, work sheets, checklists, waste environmental records.	CSWIP 3.1 or PCN Level 2 welding inspector
S17 Apply team working principles.	Professional discussion underpinned by a portfolio of evidence
S18 Apply and promote policies and practices to support equity, diversity and inclusion.	Professional discussion underpinned by a portfolio of evidence
S19 Communicate verbally with colleagues and stakeholders.	CSWIP 3.1 or PCN Level 2 welding inspector
S20	CSWIP 3.1 or PCN Level 2 welding inspector

KNOWLEDGE	ASSESSMENT METHODS
Communicate in writing with colleagues and stakeholders.	
S21 Use information technology. For example, for document creation, communication, and information management in line with breakdown, repair and maintenance activities. Comply with GDPR and other regulations relating to personal and commercial data.	CSWIP 3.1 or PCN Level 2 welding inspector
S22 Carry out and record formal and informal workplace training and development activities, continual professional development (CPD).	CSWIP 3.1 or PCN Level 2 welding inspector
BEHAVIOUR	**ASSESSMENT METHODS**
B1 Commit to and promote safety in the nuclear industry for all stakeholders.	Professional discussion underpinned by a portfolio of evidence
B2 Collaborate within teams, across disciplines and external stakeholders.	Professional discussion underpinned by a portfolio of evidence
B3 Promote professional conduct, ethics, integrity, honesty and resilience.	CSWIP 3.1 or PCN Level 2 welding inspector
B4 Support a diverse and inclusive culture.	Professional discussion underpinned by a portfolio of evidence
B5 Consider human performance and human factors principles in the workplace.	CSWIP 3.1 or PCN Level 2 welding inspector
B6 Seek learning and development opportunities, continual professional development (CPD).	CSWIP 3.1 or PCN Level 2 welding inspector

Mapping of KSBs to grade themes

Edit add grade themes formEdit mapping of ksbs to grade themes form

Professional discussion underpinned by a portfolio of evidence

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
Health and safety and the environment and sustainability K2 K3 B1	Health and safety: nuclear environment safety culture, safe working practices, risk assessments, control measures for associated radiation sources and hazards. Confined spaces, Health and safety at work act. Control of Substances Hazardous to Health (COSHH). Manual handling. Personal Protective Equipment (PPE). Respiratory Protection Equipment (RPE). Slips, trips and falls. Safety equipment: guards, signage, fire extinguishers. Working at height. (K2) Environment and sustainability regulations and guidance. Types of pollution and control measures in the nuclear sector, including spills and waste. Waste reduction and waste streams. Recycling and reuse. Sustainable use of equipment and materials. (K3)	None	Commit to and promote safety in the nuclear industry for all stakeholders. (B1)
Nuclear regulations and standards K1 S1 S6	Regulatory and legislative guidance: Nuclear Installations Act (NIA); Ionising Radiation Regulations (IRR); Radiation (Emergency Preparedness and Public Information) Regulations (REPPIR). (K1)	Comply with nuclear regulatory and legislative guidance. (S1) Comply with nuclear engineering standards and regulations. For example, British Standards (BS), International Organisation for Standardisation standards (ISO), European Norm (EN). (S6)	None
Quality assurance K12	Approved nuclear industry quality control requirements before, during and after welding, and categorisation of weld defects: Material and welding	None	None

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
	equipment storage, condition and certification. Welding process, consumables and approved procedures. (K12)		
Welding practices K10 S11	Welding practices: welding information, representation and terminology, standards and abbreviations. Welding procedures. Welder approval process, documentation and records. (K10)	Carry out process and parameter monitoring and verification. For example, check current, voltage, heat and travel speed are in accordance with the welding procedure and inspect the weld root and verify inter run. (S11)	None
Business improvement K15 S15	Business operational considerations: business efficiency, customer satisfaction, technical support, competitiveness, minimising risks to operation, finance, business ethics and licenses. (K15)	Apply business improvement techniques. For example, identify areas for improvement, resolve business problems, business efficiencies. (S15)	None
Human factors and team working K4 K16 S4 S17 B2	Human performance and human factors and their effect on nuclear safety culture. (K4) Principles of team working. (K16)	Apply human performance and human factors nuclear culture. (S4) Apply team working principles. (S17)	Collaborate within teams, across disciplines and external stakeholders. (B2)
Digital systems and information technology K19	Digital systems and information technology: management information systems, spreadsheets, presentation, document production, email and messaging systems, virtual communication and learning platforms. General data protection regulation. Cyber security. (K19)	None	None

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
Equity, diversity and inclusion K17 S18 B4	Principles of equity, diversity, and inclusion in the workplace and the impact on their work. (K17)	Apply and promote policies and practices to support equity, diversity and inclusion. (S18)	Support a diverse and inclusive culture. (B4)

Cswip 3.1 or pcn level 2 welding inspector

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
CSWIP 3.1 or PCN level 2 welding inspector examinations K5 K6 K7 K8 K9 K11 K13 K14 K18 K20 S2 S3 S5 S7 S8 S9 S10 S12 S13 S14 S16 S19 S20 S21 S22 B3 B5 B6	British standards for engineering representations, drawings, and fabrication and dimensional requirements. (K5) Engineering standards and regulations for the nuclear industry, relevant to the occupation and technician's responsibilities. British Standards (BS). International Organisation for Standardisation standards (ISO). European Norm (EN). (K6) Material science: properties, characteristics, composition, failure mechanisms, and behaviours of metal types for selection of welding processes for nuclear applications. (K7) Destructive testing methods (DTM): fundamental techniques, point of failure analysis of materials. (K8) Weldability and joining methods: weldability of material, welding consumable selection, joining dissimilar materials,	Comply with health and safety and industry regulations, procedures, and guidance. (S2) Comply with environmental and sustainability regulations and procedures. For example, identify and segregate resources for reuse, waste reduction, recycling, and disposal. (S3) Receive, read and interpret engineering data and information for welding processes, procedures and inspections. For example, interrogate engineering drawings, fabrication and dimensional requirements. (S5) Read, interpret, and record welding information and technologies. For example, welding abbreviations and terminology and relevant weld procedures, welder approval processes. (S7) Confirm and validate tools and welding equipment used in the welding process. (S8)	Promote professional conduct, ethics, integrity, honesty and resilience. (B3) Consider human performance and human factors principles in the workplace. (B5) Seek learning and development opportunities, continual professional development (CPD). (B6)

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
	heat treatment and effects on metallurgical structure. (K9) Tools and equipment used in welding and welding inspection, processes and parameters for their use. (K11) Non-destructive testing techniques: liquid penetrant testing and inspection (LPI), magnetic particle inspection (MPI), radiographic testing (RT) and ultrasonic testing (UT). Suitable selection of test method. Advantages and limitations of their use. (K13) Documentation and recording information: methods of inspection reporting, and verification of certification data. (K14) Verbal and written communication techniques. (K18) Workplace training and development activities: continual professional development (CPD). (K20)	Select and use welding inspection tools. (S9) Validate materials, equipment and consumables storage, condition and certification and the welding process is in accordance with an approved procedure. Verify qualified status of welder and check weld fit up and weld faces. (S10) Carry out visual inspection, non-destructive testing techniques, for example, liquid penetrant testing (LPI), magnetic particle inspection (MPI), for weld appearance and identification checks. (S12) Check subsequent repairs are completed and recorded and test post-weld heat treatment. (S13) Produce welding inspection reports, and verification of certification data, recording information and the results on paper or electronically. (S14) Record or enter information - paper based or electronic. For example, job sheets, handover documents and manufacturers' documentation, work sheets, checklists, waste environmental records. (S16) Communicate verbally with colleagues and stakeholders. (S19)	

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
		Communicate in writing with colleagues and stakeholders. (S20) Use information technology. For example, for document creation, communication, and information management in line with breakdown, repair and maintenance activities. Comply with GDPR and other regulations relating to personal and commercial data. (S21) Carry out and record formal and informal workplace training and development activities, continual professional development (CPD). (S22)	

Supporting information

External quality assurance

Edit external quality assurance - eqa form

Option selected: Ofqual

Involved employers

Altrad Babcock Ltd, Bendalls Engineering, Bureau Veritas UK, Cavendish Nuclear Ltd, Costain Limited, EDF Energy, Hargreaves Ductwork Ltd, Jacobs, Morgan Sindall, National Nuclear Laboratory, Nuclear Restoration Services, Nuclear Waste Services, Nuvia Ltd, Sellafield Ltd, Stork Technical Services, TSP, West Cumberland Engineering Ltd, Westinghouse Springfields Fuels Ltd

EPA menu