

# End-point assessment plan for Gas network operative apprenticeship standard

Apprenticeship standard number	Apprenticeship standard level	Integrated end-point assessment
ST0204	2	No

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## Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Gas network operative apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to gas network operative apprentices, their employers and training providers.

Full time apprentices will typically spend 24 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices must require and spend a minimum of 12 months on-programme.

The EPA period should only start and the EPA be arranged, once all of the pre-requisite gateway requirements for EPA have been met and they can be evidenced/available to an EPAO. The employer must be satisfied that the apprentice is consistently working at or above the level set out in the occupational standard. The apprentice must have achieved Network Construction Operations (Gas) level 1 qualification, as a minimum. In addition, the apprentice must have compiled a portfolio of evidence, which will underpin the interview.

For level 2 apprenticeships, apprentices without English and mathematics at level 2 must achieve level 1 English and mathematics and take the tests for level 2 prior to taking their EPA.<sup>1</sup>

The EPA will be completed within an EPA period lasting typically three months, after the apprentice has met the EPA gateway requirements.

EPA must be conducted by an organisation approved to offer services against this apprenticeship standard, as selected by the employer, from the Education & Skills Funding Agency's Register of End-Point Assessment Organisations (RoEPAO).

The EPA consists of three discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1 – practical assessment with questioning

- fail
- pass
- distinction

Assessment method 2 – interview underpinned by portfolio of evidence

- fail
- pass

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<sup>1</sup> For those with an education, health and care plan or a legacy statement the apprenticeship's English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualifications are an alternative to English qualifications for whom this is their primary language

Assessment method 3 – multiple-choice test

- fail
- pass

Performance in the EPA will determine the overall apprenticeship grade of:

- fail
- pass
- distinction

## EPA summary table

<p><b>On-programme</b> (typically 24-months)</p>	<p>Training to develop the occupation standard's knowledge, skills and behaviours</p> <p>Training towards English and mathematics level 1 and 2, if required</p> <p>Compiling a portfolio of evidence</p> <p>Working towards Network Construction Operations level 1 qualification, as a minimum</p>
<p><b>End-point assessment gateway</b></p>	<p>Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard</p> <p>Apprentice has achieved English and mathematics at level 1 and taken the tests for level 2. For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.</p> <p>Apprentice has compiled a portfolio of evidence, which will underpin the interview</p> <p>Apprentice has achieved Network Construction Operations (Gas) level 1 qualification, as a minimum</p>
<p><b>End-point assessment</b> (typically, three-months)</p>	<p>Assessment method 1: practical assessment with questioning; graded fail, pass, distinction</p> <p>Assessment method 2: interview underpinned by portfolio of evidence; graded fail, pass</p> <p>Assessment method 3: multiple-choice test; graded fail, pass</p> <p>Overall EPA/apprenticeship graded fail, pass, distinction</p>

## Length of end-point assessment period

The EPA (including all assessment methods) will be completed typically three months after the gateway.

## Order of end-point assessment methods

The assessment methods can be delivered in any order. The result of one assessment method does not have to be known before an apprentice starts the next one.

## Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition, an apprentice must have completed the following gateway requirements prior to beginning EPA:

- apprentices without English and mathematics at level 2 must achieve level 1 English and mathematics and have taken the tests for level 2  
For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.
- for the interview underpinned by portfolio of evidence, the apprentice must have compiled and submitted a portfolio of evidence – see requirements below
- achieved Network Construction Operations (Gas) level 1 qualification

**Portfolio of evidence requirements:**

- apprentices must compile a portfolio of evidence during the on-programme period of the apprenticeship
- it must contain evidence related to the KSBs that will be assessed by the interview
- the portfolio of evidence will typically contain ten 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 required
- evidence sources may include:
  - workplace documentation/records, for example job task sheets/job cards/time sheets, equipment maintenance/service records
  - witness statements
  - annotated photographs
  - video clips (maximum duration in total 10-minutes)

This is not a definitive list; other evidence sources are allowable

- it should not include any methods of self-assessment
- any employer contributions should focus only direct observation of evidence (for example witness statements) rather than opinions
- the evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer confirming this
- the portfolio of evidence must be submitted to the EPAO at the gateway point

The portfolio is not assessed, it informs the questioning for the interview and allows the apprentice to refer to it to demonstrate competence.

## End-point assessment methods

### Assessment method 1: practical assessment with questioning

#### Overview

This assessment method has one component – Practical assessment with questioning.

A practical assessment with questions involves an independent assessor observing and questioning an apprentice undertaking a set task or a series of set tasks in a simulated environment. The simulated environment must closely relate to their natural working environment.

The independent assessor will ask questions in relation to underpinning knowledge and/or skills and behaviours where an opportunity to observe them has not occurred.

The rationale for this assessment method is:

- it allows for a range of tasks to be observed that could not be achieved through an observation in the workplace
- this is a practical role, best demonstrated through completing tasks in a realistic work setting
- it makes use of existing test facilities, which will be familiar to the apprentice and thus allow them to perform at their best
- it allows for consistency of activities to be completed and efficiency in scheduling
- questioning allows for the testing of related underpinning knowledge and/or skills and behaviours where an opportunity to observe them has not occurred
- it is a holistic assessment method

#### Delivery

Apprentices must be observed by an independent assessor completing tasks set by the EPAO and questioned in relation to the tasks' underpinning knowledge, skills and/or behaviours where an opportunity to observe them has not occurred.

An independent assessor may observe two apprentices at any one time, to allow for quality and rigour. The rationale for this ratio is this as a relatively long assessment, constant observation is not required to gain assurance of competence and work outputs will also provide evidence of competence. The EPAO must ensure that an apprentice cannot gain advantage from seeing what the other apprentice being assessed is doing or by hearing questioning.

Apprentices will be assessed against the KSBs assigned to this assessment method – as shown in mapping of KSBs.

Practical assessment with questioning specifications must be of equal challenge, capable

of being completed by a competent gas network operative.

The EPAO must arrange for the practical assessment with questioning, in consultation with the apprentice's employer.

The practical assessment with questioning must be carried out over a total assessment time of 12 hours – 11 hours for completing the practical assessment and one hour for the questioning. Questioning will take place after the practical assessment. The practical assessment with questioning may be split into discrete sections held over a maximum of two working days. The length of a working day is typically considered to be 7.5 hours. There may be breaks during the practical assessment with questioning to allow the apprentice to move from one location to another and for meal/comfort breaks. During these breaks, the clock must be stopped and then restarted to ensure that the practical assessment with questioning assessment duration is not reduced.

The independent assessor has the discretion to increase the time of the practical assessment and the questioning by up to 10%, to allow the apprentice to complete a task or complete an answer to a question.

Apprentices must be provided with both written and verbal instructions on the tasks they must complete during the practical assessment, including the timescales they are working to. Such instruction time is exclusive of the practical assessment with questioning assessment time.

The practical assessment specification must require the apprentice to:

### **Undertake health and safety/risk and waste management**

- complete a risk assessment
- set out of signing, lighting and guarding
- dispose of waste materials
- making the site safe, removing plant and equipment

### **Determine action/organize tasks**

- interpret work instructions as defined in the job task sheet
- prepare for tasks, including selecting a minimum of six tools/equipment, resources, and personal protective equipment (PPE)

### **Check and operate tools and equipment**

#### **Locate utility network assets**

#### **Excavate**

#### **Communicate**

- at least one other person for example a co-worker

### **Demonstrate professionalism**

### **Construct, repair, commission, decommission of gas network assets / Test and purge, gas network assets**

- service laying techniques 16mm – 63mm diameter
- mains laying techniques - install mains of diameter >90mm:
- complete the installation of gas service pipes from the mains to a property using a variety of techniques. Techniques will include laying services

through both 'open cut' and 'insertion' methods, electro-fusion of Polyethylene (PE) pipe of diameter range 16mm to 63mm, mains to service connection for both polyethylene (PE) and metallic mains supply, mains diameters must be a minimum of 90mm PE and 100mm (4") metallic, positioning and connection of service entry points

- test, purge and commission a new service pipe at both low and medium pressure
- complete the butt fusion and electro-fusion of PE pipe of diameter range - 90mm to 355mm
- use both PE and Metallic (Squeeze off and Bag Stop) flow stopping techniques on a pressurised system <75mb
- connect, test and commission of a new low pressure (LP) PE main of diameter range - 90mm to 355mm utilising at least one metallic to plastic (PECAT adapter) connection
- decommission of a low pressure (LP) gas main through direct purging methods

#### **Demonstrate emergency procedures**

- use of breathing apparatus
- apply of gas emergency procedures

The independent assessor must be unobtrusive whilst observing the practical assessment.

Apprentices must have access to work instructions/manuals relating to the equipment/service for reference purposes. These can be electronic and/or hard copy.

Where a task requires the apprentice to work with an additional person, the EPAO is responsible for arranging a second competent person. The second competent person can be from the employer, but cannot be someone who worked with the apprentice during the on-programme period, cannot be another apprentice and must be working at or above the level of the occupational standard. The second competent person must be briefed by the independent assessor and cannot influence the assessment outcome. All of the task must be attributable to the apprentice and the second competent person should provide a written statement to confirm this.

Questioning allows for the testing of related underpinning knowledge and/or skills and behaviours where an opportunity to demonstrate them has not occurred.

Questioning must take place after the practical assessment has been completed, so as not to interrupt the apprentices work and to enable sufficiently deep questioning to take place.

The independent assessor must ask a minimum of six questions to test related underpinning knowledge and behaviours. Additional follow up questions are allowed, to seek clarification and to make an assessment against the grading descriptors.

The EPAO must produce a bank of sample questions to assist the independent assessor,



but these are for illustration only and the independent assessor should adapt their questions to the apprentice's individual circumstances.

KSBs observed, and answers to questions, must be documented by the independent assessor.

Evidence from the practical assessment with questioning must be assessed holistically using the grading criteria for this assessment method.

Independent assessors will make all grading decisions.

EPAOs must ensure that apprentices have a different practical assessment with questioning specification and set of questions in the case of re-sits/re-takes.

### Venue

Practical assessment with questioning must be conducted in one of the following locations:

- an employer's premises
- a suitable venue selected by the EPAO, for example, a training provider's premises or another employer's premises

The EPAO is responsible for ensuring that the apprentice is observed under normal conditions, in a familiar environment, which is representative of normal workplace conditions for this occupation.

It is anticipated that practical demonstrations will be held on employers sites and will make the necessary equipment and tools available to an EPAO free of charge, for example electrofusion boxes, alignment clamps, squeeze offs, hand shovels, road breakers, mechanical plant, hacksaws, pipe scrapers, torque wrench, socket sets, spanners and stilson wrench. This is to ensure cost viability of the EPA.

Where practical demonstrations take place off-site, the EPAO is responsible for ensuring the apprentice has the appropriate tools and equipment to complete the task. The EPAO may liaise with the employer to provide these resources.

The EPAO must ensure that the venue has the necessary equipment, tools and controlled conditions to allow practical assessment with questioning to take place.

Questioning must take place in a quiet room, free from distractions and influence.

## Support material

EPAOs will produce the following material to support this assessment method:

- guidance for apprentices, employers and training providers that outlines in detail how the practical assessment with questioning will operate
- practical assessment with questioning specification bank. The practical assessment with questioning specification bank must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose. The specifications, including questions relating to underpinning KSBs must be varied, yet allow assessment of the relevant KSBs. It is recommended specification banks are developed in consultation with employers of this occupation. EPAOs should put measures and procedures in place to maintain the security and confidentiality of their specifications if employers are consulted. Specifications must be standardised by the EPAO
- assessment recording documentation

## Assessment method 2: Interview underpinned by portfolio of evidence

This assessment method has one component – Interview underpinned by portfolio of evidence.

An interview consists of an independent assessor asking an apprentice a series of questions to assess their competence against the KSBs. The independent assessor's role is restricted to asking set questions. The independent assessor leads this process to obtain information from the apprentice to enable a structured assessment decision-making process.

The rationale for this assessment method is:

- allows for assessment of KSBs that do not occur on a predictable or regular basis
- it allows for testing of responses where there are a range of potential answers that can't be tested through the multiple-choice test
- it is cost effective, as whilst seeking assurance of competence across a range of KSBs, it does not require the independent assessor to directly observe all of them thus reducing their time cost

## Delivery

Independent assessors must conduct and assess the interview on a one-to-one basis. The interview must be appropriately structured to draw out the best of the apprentice's competence.

Apprentices will be assessed against the KSBs assigned to this assessment method –

as shown in mapping of KSBs.

EPAOs must make arrangements for the interview with the apprentice's employer.

The interview must last for 45 minutes. The independent assessor has the discretion to increase the time of the interview by up to 10%, to allow the apprentice to complete their last answer.

The independent assessor must ask a minimum of nine open questions. Additional follow up questions are allowed, to seek clarification.

The EPAO must produce a bank of sample questions to assist the independent assessor, but these are for illustration only and the independent assessor should adapt their questions to the apprentice's individual circumstances following a review of their portfolio of evidence. EPAOs must ensure the independent assessor has sufficient time to review the portfolio ahead of the interview.

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

Apprentices are expected to understand and use relevant occupational language that would be typical of a competent person in this occupation.

Questions must cover the following topics, a minimum of one question per topic:

- tools and equipment – maintenance and storage (K5ii, S9ii)
- excavation techniques (K7)
- reporting channels; limits of authority (K13)
- Information technology and recording information (K16, S14)
- gas detection (S12)
- trench installation (S13)
- adaptability and customer focus (B2, B7)
- team player (B3)
- continued professional development (CPD) (B8)

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the interview.

Evidence from the interview underpinned by portfolio of evidence must be assessed holistically using the grading criteria for this assessment method.

Independent assessors will make all grading decisions.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of interviews and reaching consistent judgement.

## Venue

The interview underpinned by portfolio of evidence must take place in a quiet room, free from distractions and influence.

The interview underpinned by portfolio of evidence can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO, for example a training provider's premises or another employer's premises

Video conferencing can be used to conduct the interview underpinned for portfolio of evidence, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way for example, by using a 360-degree camera.

## Support material

EPAOs will produce the following material to support this assessment method:

- guidance for apprentices, employers and training providers that outlines in detail how the interview underpinned by portfolio of evidence will operate
- interview question bank. The interview question bank must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers
- assessment recording documentation

## Assessment method 3: multiple-choice test

### Overview

This assessment method has one component: multiple-choice test.

A test is a controlled assessment which consists of a series of questions in which apprentices are asked to provide a response.

The rationale for this assessment method is:

- it allows for the efficient testing of knowledge where there is a right or wrong answer
- it does not require independent assessor time, reducing cost
- it allows for flexibility in terms of when, where and how it is taken
- it allows larger volumes of apprentices to be assessed at one time

### Delivery

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Apprentices must be assessed against the knowledge assigned to this assessment method – as shown in mapping of KSBs.

The test can be:

- computer based
- paper based

It will consist of 40 questions.

These questions will consist of closed response multiple-choice questions. Apprentices must choose one correct answer from a choice of four.

Each question answered correctly will be awarded one mark. Any incorrect or missing answers must be assigned zero marks.

Apprentices must have 75 minutes to complete the test.

The test is closed book, which means that the apprentice cannot refer to manuals, reference books or materials.

The test must be taken in the presence of an invigilator, under examination conditions. The invigilator may be the independent assessor or another external person employed by the EPAO or specialised (proctor) software, if the test is taken on-line. The EPAO is required to have an invigilation policy that will set out how the test is to be carried out. This will include specifying the most appropriate ratio of apprentices to invigilators to best take into account the setting and security required in administering the test.

Tests must be marked by independent assessors or markers employed by the EPAO following a marking guide produced by the EPAO. Alternatively, marking by computer is permissible.

The EPAO must verify the suitability of the venue for taking the test and the identity of the person taking the test.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

### Grading boundaries

The following grade boundaries apply to the multiple-choice test:

Grade	Minimum mark	Maximum mark
Fail	0	27
Pass	28	40

## Venue

Apprentices must take the test in a suitably controlled environment (examination conditions) that is a quiet space, free of distractions and influence, in the presence of an invigilator. The test can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO, for example a training provider's premises or another employer's premises

## Supporting material

EPAOs must produce the following material to support this method:

- a test specification. This must prevent predictability and be reviewed regularly (at least once a year) to ensure it is fit for purpose
- sample tests and marking schemes
- live tests and marking schemes
- analysis reports which show areas of weakness for completed tests and an invigilation policy
- question bank. Question banks must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure they, and the questions they contain, are fit for purpose. It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers

## Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustment and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

## Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA pass grade. Performance in the practical assessment with questioning will determine whether a pass or distinction grade is awarded.

## Overall EPA grading

Performance in the EPA will determine the apprenticeship grade of fail, pass, or distinction.

Independent assessors must individually grade each assessment method, according to the requirements set out in this plan.

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

Apprentices who fail one or more assessment methods will be awarded an overall EPA 'fail.'

In order to gain an overall EPA 'pass' apprentices must achieve a pass in all three assessment methods.

In order to achieve an overall EPA 'distinction' apprentices must achieve a distinction in the practical assessment with questioning and a pass in the interview underpinned by portfolio of evidence and the multiple-choice test.

Grades from individual assessment methods should be combined in the following way to determine the grade of the overall EPA as a whole:

Assessment method 1 – Practical assessment with questioning	Assessment method 2 – Interview underpinned by portfolio of evidence	Assessment method 3 – Multiple-choice test	Overall grading
Fail	Any grade	Any grade	<b>Fail</b>
Any grade	Fail	Any grade	<b>Fail</b>
Any grade	Any grade	Fail	<b>Fail</b>
Pass	Pass	Pass	<b>Pass</b>
Distinction	Pass	Pass	<b>Distinction</b>

Any grade = fail, pass or distinction

## Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit any failed assessment methods only.

Re-sits/re-takes must be taken and passed within three-months of the fail notification, otherwise the entire EPA must be re-taken, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

There are no restrictions on overall EPA grading where apprentices need to re-sit/re-take the multiple-choice test or interview underpinned by portfolio but do not need to re-sit/re-take the practical assessment with questioning. That means, apprentices can still get an overall distinction if they achieved a distinction in their practical assessment with questioning on first attempt even if they need to re-sit or re-take one of the other assessment methods. Apprentices who need to re-sit/re-take the practical assessment with questioning will only be able to achieve a pass for this assessment method and thus will only be able to achieve an overall EPA pass, subject to gaining a pass in the other two assessment methods.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to distinction.



## Roles and responsibilities

Role	Responsibility
Apprentice	<p>As a minimum, apprentices should:</p> <ul style="list-style-type: none"> <li>• participate in and complete on-programme training to meet the KSBs as outlined in the occupational standard for a minimum of 12 months</li> <li>• undertake 20% off-the-job training as arranged by the employer and EPAO</li> <li>• understand the purpose and importance of EPA</li> <li>• undertake the EPA including meeting all gateway requirements</li> </ul>
Employer	<p>As a minimum, employers should:</p> <ul style="list-style-type: none"> <li>• work with the training provider (where applicable) to support the apprentice in the workplace to provide the opportunities to develop the KSBs</li> <li>• arrange and support a minimum of 20% off-the-job training to be undertaken by the apprentice</li> <li>• decide when the apprentice is working at or above the occupational standard and so is ready for EPA</li> <li>• select the EPAO</li> <li>• ensure that all supporting evidence required at the gateway is submitted in accordance with this EPA plan</li> <li>• remain independent from the delivery of the EPA</li> <li>• confirm arrangements with the EPAO for the EPA (who, when, where) in a timely manner (including providing access to any employer specific documentations as required, for example company policies)</li> <li>• ensure that the EPA is scheduled with the EPAO for a date and time which allow appropriate opportunity for the KSBs to be met</li> <li>• ensure the apprentice is well prepared for the EPA</li> <li>• ensure the apprentice is given sufficient time away from regular duties to prepare for and complete any post-gateway elements of the EPA,</li> </ul>

	<p>and that any required supervision during this time (as stated within this EPA plan) is in place</p> <ul style="list-style-type: none"> <li>• where the apprentice is assessed in the workplace, ensure that the apprentice has access to the resources used on a daily basis</li> </ul>
EPAO	<p>As a minimum, EPAOs should:</p> <ul style="list-style-type: none"> <li>• agree the EPA price</li> <li>• understand the occupational standard</li> <li>• appoint administrators (and invigilators where required) to administer the EPA as appropriate</li> <li>• provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading</li> <li>• provide adequate information, advice and guidance documentation to enable apprentices, employers and training providers to prepare for the EPA</li> <li>• arrange for the EPA to take place, in consultation with the employer</li> <li>• deliver the EPA as outlined in this EPA plan in a timely manner</li> <li>• where the apprentice is not assessed in the workplace, ensure that the apprentice has access to required resources and liaise with the employer to agree this if necessary</li> <li>• use appropriate assessment recording documentation to ensure a clear and auditable process is in place for providing assessment decisions and feedback to all relevant stakeholders</li> <li>• have no direct connection with the apprentice, their employer or training provider. In all instances including when the EPAO is the training provider (i.e. HEI) there must be no conflict of interest</li> <li>• have policies and procedures for internal quality assurance (IQA), and maintain records of regular and robust IQA activity and moderation for external quality assurance (EQA) purposes</li> <li>• conform to the requirements of the nominated external quality assurance provider (EQAP)</li> </ul>

	<ul style="list-style-type: none"> <li>• conform to the requirements of the Register of End-Point Assessment Organisations (RoEPAO)</li> <li>• deliver induction training for independent assessors, and for invigilators and markers where used</li> <li>• undertake standardisation activity on this apprenticeship standard for all independent assessors before they conduct an EPA for the first time, if the EPA is updated and periodically as appropriate (a minimum of annually)</li> <li>• manage invigilation of apprentices in order to maintain security of the assessment in line with their malpractice policy</li> <li>• verify the identity of the apprentice being assessed</li> <li>• use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard</li> <li>• request certification via the Apprenticeship Service upon successful achievement of the EPA</li> </ul>
Independent assessor	<p>As a minimum, an independent assessor should:</p> <ul style="list-style-type: none"> <li>• have the competence to assess the apprentice at this level and hold any required qualifications and experience in line with the requirements of the independent assessor as detailed in the IQA section of this EPA plan</li> <li>• understand the occupational standard and the requirements of this EPA</li> <li>• have, maintain and be able to evidence up to date knowledge and expertise of the subject matter</li> <li>• deliver the end-point assessment in-line with the EPA plan</li> <li>• comply with the IQA requirements of the EPAO</li> <li>• have no direct connection or conflict of interest with the apprentice, their employer or training provider; in all instances including when the EPAO is the training provider (i.e. HEI)</li> <li>• attend induction training</li> <li>• attend standardisation events when they begin working for the EPAO, before they conduct an</li> </ul>

	<p>EPA for the first time and a minimum of annually on this apprenticeship standard</p> <ul style="list-style-type: none"> <li>• assess each assessment method, as determined by the EPA plan, and without extending the EPA unnecessarily</li> <li>• assess against the KSBs assigned to each assessment method, as shown in the mapping of assessment methods and as determined by the EPAO, and without extending the EPA unnecessarily</li> <li>• make all grading decisions</li> <li>• record and report all assessment outcome decisions, for each apprentice, following instructions and assessment recording documentation provided by the EPAO in a timely manner</li> <li>• use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard</li> </ul>
Training provider	<p>As a minimum, the training provider should:</p> <ul style="list-style-type: none"> <li>• work with the employer and support the apprentice during the off-the-job training to provide the opportunities to develop the knowledge, skills and behaviours as listed in the occupational standard</li> <li>• conduct training covering any knowledge, skill or behaviour requirement agreed as part of the Commitment Statement (often known as the Individual Learning Plan).</li> <li>• monitor apprentices progress during any training provider led on-programme learning</li> <li>• advise the employer, upon request, on the apprentice's readiness for EPA</li> <li>• remain independent from delivery of the EPA. Where the training provider is the EPA (i.e. HEI) there must be procedures in place to mitigate against any conflict of interest</li> </ul>
Marker	<p>As a minimum, the marker should:</p> <ul style="list-style-type: none"> <li>• attend induction training</li> <li>• have no direct connection or conflict of interest with the apprentice, their employer or training</li> </ul>

	<p>provider in all instances including when the EPAO is the training provider (i.e. HEI)</p> <ul style="list-style-type: none"> <li>• mark multiple-choice test answers accurately according to the EPAO's mark scheme</li> </ul>
Invigilator	<p>As a minimum, the invigilator should:</p> <ul style="list-style-type: none"> <li>• attend induction training</li> <li>• have no direct connection or conflict of interest with the apprentice, their employer or training provider; in all instances, including when the EPAO is the training provider (i.e. HEI)</li> <li>• invigilate and supervise apprentices during tests and in breaks during assessment methods to prevent malpractice</li> </ul>
Competent person for practical assessment	<p>As a minimum, the competent person will:</p> <ul style="list-style-type: none"> <li>• be occupationally competent and at the same level as the apprenticeship standard or higher</li> <li>• follow a brief provided by the independent assessor which confirms what is required</li> <li>• be at the assessment venue and be in situ prior to the assessment</li> <li>• be briefed prior to assessment by the independent assessor</li> <li>• adhere to confidentiality about all aspects of the assessment and the brief they have been provided with</li> <li>• act as a colleague for only those elements of the practical assessment which can only be completed in pairs and where it is normal practice to do so</li> <li>• not direct any activity and must take instruction from the apprentice</li> <li>• not ask questions that indicate how to complete the practical assessment successfully</li> <li>• not provide guidance or influence the assessment outcome in any way</li> <li>• have no direct connection or conflict of interest with the apprentice</li> <li>• provide a written statement to confirm that all of the task is attributable to the apprentice</li> </ul>

## Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPAOs must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPAOs for this EPA must:

- appoint independent assessors who have:
  - have recent relevant experience of the occupation/sector gained in the last two years or significant experience of the occupation/sector and evidence of continued professional development. This should be at least at the same level as the apprenticeship standard.
  - hold or be working towards an independent assessor qualification, for example TAQA (Training and Quality Assessment)
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this apprenticeship standard and before they deliver an updated assessment method for the first time

## Affordability

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

- using employers' existing facilities for the practical assessment with questioning
- using an employer's venue for the interview underpinned by portfolio of evidence and multiple-choice test
- using video conferencing for the interview underpinned by portfolio of evidence
- the possibility of scheduling the interview underpinned by portfolio of evidence and multiple-choice test on the same day

# Mapping of knowledge, skills and behaviours (KSBs)

## Assessment method 1: Practical assessment with questioning

Knowledge
<b>K2.i</b> Health and safety standards, regulations and practice, including risk assessments and safe systems of work, permits to work, working in confined spaces, personal protective equipment (PPE), manual handling
<b>K4</b> Principles and processes that underpin the location of gas utility network assets, including health and safety guidance on avoiding damage to underground utility services.
<b>K5.i</b> Checks and operation requirements for commonly used gas utility network operations equipment and tools, for example utility location equipment/tools, pneumatic gun, hand/power tools – power disc cutter, chain saw, drills.
<b>K8</b> Procedures for the construction, testing, purging, repair commissioning and decommissioning of gas network assets.
<b>K12</b> Communication techniques – written, verbal; customer service techniques.
Skills
<b>S1</b> Identify hazards and implement controls to reduce risks.
<b>S2</b> Interpret work instructions, engineering instructions and determine actions.
<b>S3</b> Identify and organise resources to undertake activities.
<b>S4</b> Comply with workplace health, safety & environmental policy and practice; including use of Personal Protective Equipment (PPE) and safety equipment.
<b>S5</b> Set out signing, lighting and guarding.
<b>S6</b> Excavate holes for gas utility network services.
<b>S7</b> Monitor and maintain site conditions, including good housekeeping.
<b>S8</b> Identify, locate and avoid utility supply apparatus and sub-structures.
<b>S9.i</b> Check and operate equipment and tools; report faults if required.
<b>S10</b> Communicate with colleagues and/or stakeholders, for example, statutory agencies and members of the public, customers.
<b>S11</b> Use breathing apparatus.
<b>S15</b> Construct new and replacement gas services to internal and external service termination positions using a range of techniques.
<b>S16</b> Carry out squeeze off activities on gas services (low and medium pressure).
<b>S17</b> Construct new and replacement gas mains using a range of techniques.
<b>S18</b> Carry out flow stopping on gas mains by use of squeeze off and bag stop.
<b>S19</b> Disconnect gas meters.
<b>S20</b> Repair gas assets including valves and fittings using a range of techniques.
<b>S21</b> Join materials by electro-fusion.
<b>S22</b> Join materials by butt fusion processes.
<b>S23</b> Exchange emergency control valve.
<b>S24</b> Test gas network assets at low and medium pressure.
<b>S25</b> Purge, commission and decommission gas network assets.
<b>S26</b> Apply gas network emergency procedures, including the analysis of gas readings.

<b>S27</b> Apply water extraction techniques for gas mains and services.
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<b>Behaviours</b>
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<b>B1</b> Prioritises health, safety and environment when undertaking work to safeguard life and property.
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<b>B4</b> Professional, for example punctual, trustworthy, polite, courteous, presentable, maintains security of business specific and personal data, takes account of equality and diversity in interactions.
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<b>B5</b> Self-motivated, for example manages own time effectively, takes responsibility to complete the job.
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<b>B6</b> Pride in work, for example works to agreed quality targets and standards
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## Assessment method 2: Interview underpinned by portfolio of evidence

<b>Knowledge</b>
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<b>K5.ii</b> Maintenance and storage requirements for commonly used gas utility network operations equipment and tools, for example utility location equipment/tools, pneumatic gun, hand/power tools – power disc cutter, chain saw, drills.
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<b>K7</b> Excavation techniques, for example, open cut, moling, vacuum extraction. Trench support for example, proprietary systems, sheeting and mechanical.
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<b>K13</b> Reporting channels; limits of authority.
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<b>K16</b> Information technology, for example to support an accurate audit trail using electronic equipment including handheld and mobile devices.
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<b>Skills</b>
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<b>S9.ii</b> Maintain and store equipment and tools.
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<b>S12</b> Use gas detection equipment.
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<b>S13</b> Carry out trench installation for example, sheeting, lightweight and proprietary systems.
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<b>S14</b> Record information, for example job reports, time sheets.
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<b>Behaviours</b>
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<b>B2</b> Adaptable, for example willing to accept changing priorities and working requirements.
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<b>B3</b> Team player, for example keeps others informed, recognises personal and professional limitations and seeks advice when necessary.
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<b>B7</b> Customer focus, for example keeps customers informed.
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<b>B8</b> Committed to continued professional development.
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## Assessment method 3: multiple choice test

Knowledge
<b>K1</b> Utility industry structure and regulatory requirements, including the Gas Act and regulatory surveys.
<b>K2.ii</b> Health and Safety at Work Act, New Roads and Street Works Act, working at heights, Provision and Use of Work Equipment Regulations (PUWER), Control of Substances Hazardous to Health (COSHH), Lifting Operations Lifting Equipment Regulations (LOLER), first aid, fire safety, asbestos awareness.
<b>K3</b> Environmental regulatory requirements: Environment Protection Act, disposal of waste and recycling.
<b>K6</b> Principles of traffic management and control.
<b>K9</b> Procedures for gas network emergencies.
<b>K10</b> Electrical safety, including equipotential bonding.
<b>K11</b> Emergency services and statutory authorities – local authorities, highway authorities and Environment Agency; who they are, what they do; escalation procedures.
<b>K14</b> Equality & diversity considerations in the workplace.
<b>K15</b> Data – purpose and protection, for example asset records.

## Grading descriptors

KSBs	Pass, apprentices must meet all of the following	Distinction, in addition to the pass descriptors apprentices must demonstrate all the following distinction descriptors statements
<p><b>Undertake Health and safety/ Risk and waste management</b></p> <p><b>K2.i</b></p> <p><b>S1 S4 S5 S7 S11</b></p> <p><b>B1</b></p>	<p>Wears correct Personal Protective Equipment (PPE) for the task, including breathing apparatus and gas detection equipment</p> <p>Identifies correct reasons why the PPE that they are using is needed</p> <p>Identifies risks and hazards in the workplace and control measures; conducts dynamic risk assessment</p> <p>Conducts work in line with safe systems of work (method statement), for example uses safety equipment, correct storage of materials</p> <p>Sets out signing, lighting and guarding to meet task requirements.</p> <p>Monitors and maintains site conditions, keeps work environment tidy and organised, for example storage of tools when not in use, no litter, no hazards</p> <p>Explains the implications of non-compliance with relevant health and safety standards, regulations and practice</p> <p>Provides an example of how they have prioritised health and safety in the task</p> <p>Uses breathing apparatus at appropriate times and in line</p>	

	with instructions for use and safety guidelines	
<b>Determine action/organize tasks</b>  <b>S2 S3</b>  <b>B5</b>	<p>Identifies job task requirements; seeks clarification where necessary</p> <p>Plans tasks; there is a rationale for sequence of work followed</p> <p>Identifies and organises the correct resources, including tools and equipment for tasks</p> <p>Completes tasks in allocated time</p> <p>Takes responsibility to complete the tasks, for example completes action within limits of authority without direction</p>	<p>Preparation optimises use of time, for example grouping tasks for efficiency, multi-tasking</p> <p>Justifies their choice of equipment and tools over alternative choices to meet the job task requirements</p>
<b>Check and operate tools and equipment</b>  <b>K5.i</b>  <b>S9.i</b>	<p>Confirms the suitability of equipment to be used and conducts equipment/tool set-up/checks correctly</p> <p>Uses equipment and tools in line with manufacturers' instructions and company specific method statement</p> <p>Outlines equipment/tool checks and operator requirements required for a piece of equipment/tool as identified by the independent assessor</p>	<p>Analyses and explains the potential consequences of not undertaking equipment/tool checks and not following manufacturers and company specific method statement, for piece of equipment/tool as identified by the independent assessor</p>
<b>Locate utility network assets</b>  <b>K4</b>  <b>S8</b>	<p>Identifies, locates and avoids utility supply apparatus and sub-structures in accordance with HSG47 (avoiding danger from underground services)</p> <p>Describes principles and processes followed to locate utility network assets and how they should avoid damage</p>	
<b>Excavate</b>	Excavates holes for gas utility	

<b>S6</b>	network services in line with work instructions	
<b>Communicate</b> <b>K12</b> <b>S10</b>	Communicates with co-workers to explain the task for example, communication is clear and can be understood by the audience; industry terminology used accurately and appropriately	Explains how and why they would adapt the communication methods used when presented with a different audience as identified by the independent assessor
<b>Demonstrate professionalism</b> <b>B4</b>	Wears work attire according to company specific requirements  Polite and respectful, for example uses appropriate language, adapts communication to the needs of the audience	
<b>Construct, repair, commission, decommission of gas network assets</b>  <b>K8</b>  <b>S15 S16 S17</b> <b>S18 S19 S20</b> <b>S21 S22 S23</b> <b>S24 S27</b>	Outlines procedures followed and correctly identifies their importance/purpose in relation to at least one activity completed in the practical assessment, as identified by the independent assessor  Constructs new and replacement gas services to internal and external service termination positions using a range of techniques, in line with work instructions  Installs pressure regulating equipment on gas services, in line with work instructions  Carries out squeeze off activities on gas services (low and medium pressure), in line with work instructions  Construct new and replacement gas mains using a range of techniques, in line with work instructions  Carries out flow stopping on gas mains by use of squeeze off and bag stop in line with work	Completed tasks are of high quality, for example, right first time; balances safety with the need to work effectively and efficiently, mitigating inconvenience to members of the public/stakeholders  Evaluates completed work and suggest how improvements could have been made, for example in terms of efficiency, effectiveness, safety etc

	<p>instructions</p> <p>Disconnects gas meters in line with work instructions</p> <p>Repairs gas assets including valves and fittings using a range of techniques, in line with work instructions</p> <p>Joins materials by electro-fusion, in line with work instructions</p> <p>Joins materials by butt fusion processes, in line with work instructions</p> <p>Exchanges emergency control valve, in line with work instructions</p> <p>Applies water extraction techniques for gas mains and services, in line with work instructions</p>	
<p><b>Test and purge, gas network assets</b></p> <p><b>S24 S25</b></p> <p><b>B6</b></p>	<p>Tests and purge and commission gas network assets, in line with specifications and company specific work instructions</p> <p>Interprets results from data to inform actions</p>	
<p><b>Demonstrate emergency procedures</b></p> <p><b>S26</b></p>	<p>Applies gas network emergency procedures, including correct analysis of gas readings</p>	
<p>Fail – apprentice does not meet all the pass criteria</p>		

## Assessment method 2: Interview underpinned by portfolio

KSBs	Pass, apprentices must meet all of the following
<b>Tools and equipment (O)</b>  <b>K5.ii</b>  <b>S9.ii</b>	Provides an example of how they have correctly completed maintenance checks for equipment/tool, as identified by the independent assessor  Provides two examples of how they have correctly stored equipment/tools, as identified by the independent assessor
<b>Reporting channels</b>  <b>K13</b>	Describes their own limits of autonomy, when to escalate tasks and issues and to whom  Provides an example of how and to whom they report the outcome of their work
<b>Information Technology and Reporting</b>  <b>K16</b>  <b>S14</b>	Provides two full, accurate examples of completed work documentation required for a task using IT or handheld devices and explains the data requirements  Outlines the potential consequences of poor communication, in relation to a situation as identified by the independent assessor
<b>Gas detection</b>  <b>S12</b>	Provides an example of when and how they correctly used gas detection equipment
<b>Excavation and trench installation</b>  <b>K7</b> <b>S13</b>	Describes different excavation techniques, for example open cut, moling, vacuum extraction.  Provides at least two examples of when and how they have correctly carried out trench installation using different methods for example, sheeting, lightweight and proprietary systems as directed by the independent assessor
<b>Adaptable and Customer focused</b>  <b>B2 B7</b>	Provides an example of where they have been adaptable and customer focused, due to changing priorities and/or working requirements
<b>Team player</b>  <b>B3</b>	Provides an example of being a team player in the workplace, outlining the situation and the role they played
<b>Continued Professional Development)</b>  <b>B8</b>	Outlines at least two different types of CPD  Provides a detailed example of CPD activity they have completed
<b>Fail – apprentice does not meet all the pass criteria</b>	

