

ASSESSMENT PLAN

Gas engineering

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Overview

This assessment plan is to accompany the Gas engineering level 3 apprenticeship standard.

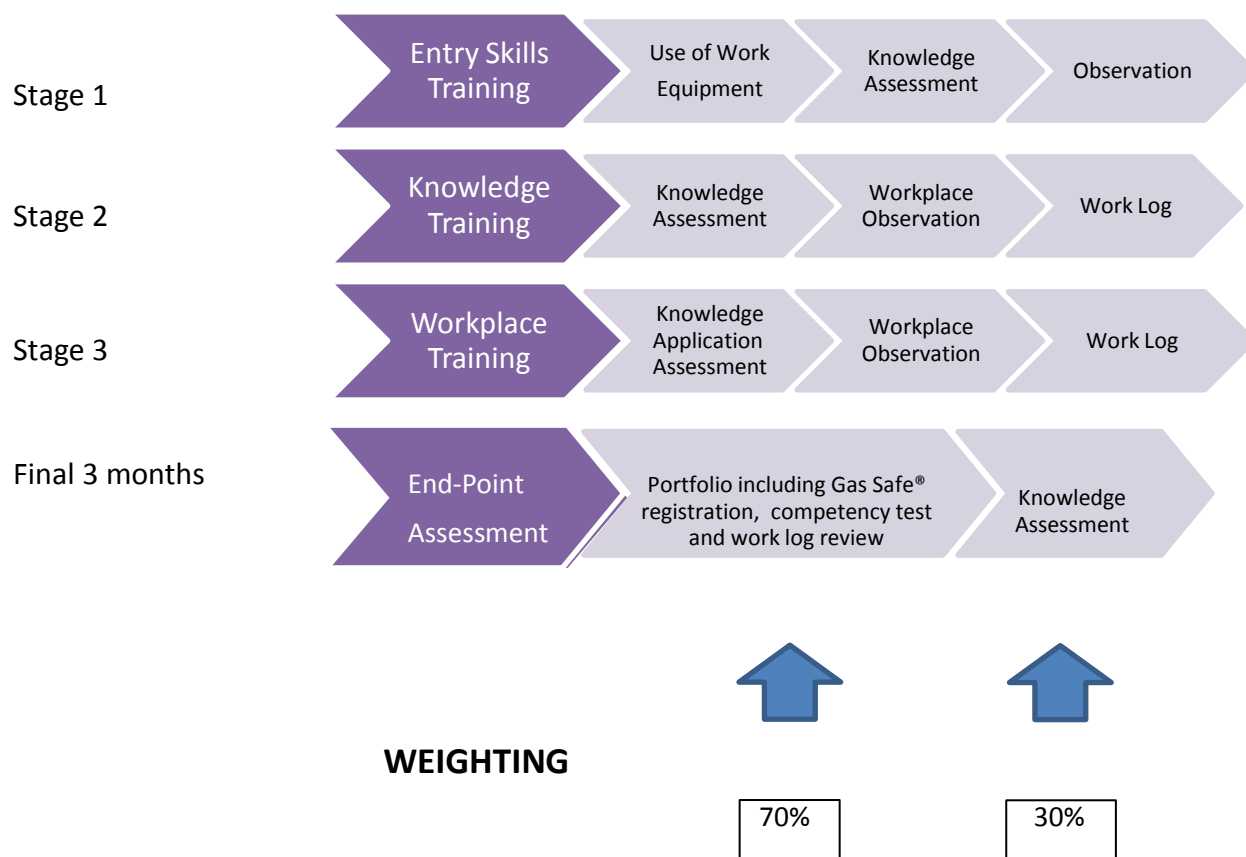
Gas engineering involves the safe installation, commission, decommission and the ongoing service and repair of gas appliances in either a domestic or non-domestic setting. Appliances can include, but are not limited to, a range of work categories such as central heating boilers, unvented hot water storage, ducted air heaters, cookers, space heaters, meters, alternative fuel, boosters and testing and purging for industrial pipework.

Roles in gas engineering will include explaining how installations and appliances work, providing energy efficiency advice and ensuring customer service excellence at all times. Gas engineering operates strictly within the requirements of health and safety legislation. All gas engineers must achieve Gas Safe® registration for each appliance in which they are competent to undertake work on.

This plan outlines the end-point assessment that apprentices must successfully complete to achieve their apprenticeship. The gas engineering apprenticeship will typically take 18 months, with the end-point assessment taken in the last three months. Performance in the end-point assessment will determine the grade awarded: distinction, pass or fail.

The employer group has also developed a suggested training plan that employers and training providers may use to develop skills, knowledge and behaviours. This is summarised below.

Suggested training/assessment timescales and methods prior to the end-point assessment



Suggested On – Programme Training and Assessment Plan

The suggested training and assessment plan of the apprenticeship can be divided into three distinct stages:

Induction and Core Skills Training (Stage 1)

The aim of this stage is to ensure all apprentices are trained to work safely at all times. It should provide insight on employer and co-worker expectations and how and where the apprentice can seek guidance and support. The acquisition of these key skills provides a vital foundation for the apprenticeship.

Knowledge Training (Stage 2)

This should cover the basic technical skills and knowledge required for the apprenticeship standard. Training should include engineering and maths, which is relevant to the apprentice's role and the respective skills requirement. This should be set in a context that provides the range of underpinning knowledge required to accelerate skills development. There are various routes to knowledge attainment, such as pre-existing qualifications, and /or through technical skills and knowledge solutions that are to be developed to underpin the apprenticeship standard. Further development work by the gas engineering employer development group will respond to the employers' desire to develop an industry standard knowledge solution, which will become the industry's recognised qualification. The training may be training centre and/or workplace based.

Suggested Technical Knowledge - Assessment activities may consist of:

- Assignments – written or practical work set, marked and graded against the specific module/options
- Knowledge assessments – set, marked and graded against the specific core modules and specific requirements

Workplace Training (Stage 3)

Stage 3 supports greater technical skill and knowledge acquisition. As the apprentice progresses through their training, it is suggested that they are assessed on particular tasks or technical standards or items of equipment. This will enable apprentices to build up the full range of skills, knowledge and behaviours required to successfully complete the end-point assessment.

Suggested workplace training and development - Assessment activities may consist of:

- Work log – write-up of practical activities, of skills and competences
- Observation – practical observation of work activity in terms of quality and behaviour

English and Mathematics

Apprentices who haven't already achieved English and mathematics at level 2 (or higher) must do so before being entered for the end-point assessment.

Work Log

As the apprentice progresses through their training, they are required to gather evidence on the full range of skills, knowledge and behaviours required by the standard and be assessed on particular tasks or procedures or items of equipment - 'competency assessments.' Safe isolation of operational equipment for maintenance is one example of this type of competency assessment, applicable to those working in gas engineering. It is industry practice that assessments are recorded in a work log. The work log must be sufficient to evidence the apprentice can apply skills, knowledge and behaviours required in a variety of tasks. Progress review documentation should also be included. The apprentice's supervisor will typically support the development of the work log in accordance with company policy and procedures, although assessment organisations will provide guidance on the content of the work log. A summative assessment of the work log will form part of the end point assessment portfolio assessment – see below.

Suggested Observation of Behaviours and Skills

Apprentices work in an environment where their safety, the safety of those around them and the equipment they work on are of paramount importance. Therefore, observation of behaviours and approach are an integral and developing part of the apprentice progression throughout the apprenticeship and should be assessed using existing supervisory practice and as part of the on-going assessment.

Suggested Training/Development Review Meetings

It is suggested that training and assessment is agreed and documented in a personal training/development plan. Regular review

meetings should be programmed to ensure training/development needs are met and supported. This could include additional training, or ways of accelerating learning, as required by the apprentice. This will typically be an interview with the apprentice's line manager, but may include colleagues from Human Resources. Feedback from mentors and team members may be included to contribute towards individual personalised training/development plans. Review documentation should be included in the apprentice's work log - see above.



End-Point Assessment (Last 3 Months)

Successful achievement of the end-point assessment will lead to final certification of the apprenticeship and demonstrate that the apprentice is a fully authorised competent worker, who can work safely and confidently to install, maintain or repair at least four types of appliance. It uses the following assessment tools:

- Portfolio assessment, incorporating Gas Safe[®] registration, competency test and work log review, which includes an interview. This will be marked by technical experts usually sourced from the apprentice's employer (weighting 70%)
- Knowledge assessment; independently marked by an Apprentices Assessment Organisation (weighting 30%).

The end-point assessment may be completed over a 3 month period to accommodate work scheduling and cost effective planning of resources. See annex A for the assessment method per element of the standard.

Although the apprentice should only be recommended for end-point assessment when they are ready; employers should have a remediation process in place to support any candidate who fails to meet the conditions of the end-point assessment.

Further details on each assessment tool are provided below.

Portfolio Assessment

The apprentice will submit a portfolio consisting of a Gas Safe[®] registration certificate, competency test and a work log review (typically developed during the apprenticeship – see above) including an interview, completed in the final 3 months. The portfolio provides the opportunity to demonstrate skills, knowledge and behaviours across the standard - core and specific requirements. The portfolio elements must be undertaken in order, as shown below. The elements of the portfolio will be individually assessed and scored. A technical expert, will then combine the scores and to award a preliminary mark out of 100. Further information on Gas Safe[®] registration, the competency test and work log review are provided below.

Gas Safe[®] Registration – stage 1

All gas engineering apprentices legally must achieve Gas Safe[®] registration for the setting specialism and each appliance in which they are demonstrating competence in either Natural Gas or Liquid Petroleum Gas (LPG). An apprentice cannot achieve an overall pass grade without Gas Safe[®] registration for a minimum of four appliances. The Nationally Accredited Certification Scheme for Individual Gas Fitting Operatives (ACS) is the industry recognised and accepted route for operatives to gain a certificate of competence, needed to become a member of the Gas Safe[®] Register. The aim of the initial part of the end point assessment is to ensure apprentices are assessed to gain the core competences in the 'Matters of Gas Safety' criteria to achieve Gas Safe[®] registration, however, whole job competence and knowledge assessment is situated within the other end point elements. A pass in the four appliances means that 10 marks can be awarded towards the overall portfolio mark. Annex A shows which knowledge, skills and behaviours will be assessed by this element.

Competency Test – stage 2

Apprentices will complete a practical assessment known as 'competency test' in the last three months after the achievement of Gas Safe[®] registration, providing the opportunity to synoptically demonstrate core and specific skills, knowledge and behaviours in a 'real world' environment to an independent technical expert. This will offer the opportunity to bring together and apply their learning. The competency test may take place over a number of days to enable the assessment of four appliances in different realistic working environments. Apprentices can expect to be assessed on a range that could include the safe gas and electrical installation, commissioning, decommissioning and/or ongoing service and repair on a minimum of four appliances. For example, the apprentice could be assigned a task to diagnose and rectify fault(s). The apprentice will need to apply the appropriate principles, procedures and knowledge and explain what and why they are undertaking a particular approach. They will be expected to select and use the appropriate equipment and tools, protect themselves and others from potential harm that can arise from their work, while ensuring other processes on site continue to function; effectively and efficiently maintaining production.

Assessment organisations will develop and hold a bank of competency tests and questions covering core and specific requirements. Annex A contains the assessment criteria against which the competency test will be based. Approved tests will be released to the technical expert, to be completed in the specified end-point period. A Competency Test must demonstrate safe practice; outstanding diagnostic, fault finding, and repair skills, excellent communication, recording and customer service skills including relevant energy advice. Competency tests will be administered and marked by a technical expert appointed by the appointed assessment organisation, which may or may not be the same person as the technical expert who undertakes the portfolio review. Assessment organisations will provide the template upon which to record the assessment outcomes. A maximum of 20 marks are available to contribute towards the overall portfolio mark. Criteria for marking the competency test is shown in table 1. Annex A shows which knowledge, skills and behaviours will be assessed by this element.

Work Log Review - stage 3

A technical expert will review the apprentice's work log and undertake a summative assessment of competence against the standard's knowledge, skills and behaviours. This will include a work log interview with the technical expert where currency of knowledge will be checked by verbal questioning around reasons for choices, methods, materials, risk, health and safety. This will typically last one hour and will confirm understanding and ability to apply knowledge as part of their total job competence. Assessment organisations will hold a bank of standardised questions in relation to the knowledge, skills and behaviour criteria identified in annex A. The work log interview will consist of 10 questions. This interview will be conducted under examination conditions. The responses will be graded fail, pass or distinction. Assessment Organisations will provide a standardised responses to each question and each grade indicator. The candidate responses will be documented by the technical expert during the work log interview and included in the portfolio. There will be a maximum of 70 marks available for the work log review. Criteria for marking the work log review is shown in table 1. Annex A shows which knowledge, skills and behaviours will be assessed by this element.

The work log review and interview will be carried out by a technical expert, who will then combine the scores for each portfolio element to award the final overall preliminary mark for the portfolio.

Technical Experts

Technical experts will be appointed by assessment organisations. They may be nominated from within the apprentice's own organisation or external if required, to respond to the needs of smaller employers. They will not have directly worked with the apprentice or participated in their learning and training; must be able to demonstrate an appropriate level of competence i.e. training and experience to undertake the role and hold an assessor qualification to be approved by assessment organisations for the purposes of conducting elements of the end-point assessment. This sector is sensitive from a safety and regulatory perspective. This means decisions on competence have implications not only for individual safety, but also reputation and litigation. As a result judgements of competence and moderation are required to be by necessity reliable, rigorous and robust. Assessment organisations will monitor technical experts through observations and moderation decisions on a risk sampling basis.

Knowledge Assessment

Apprentices will be required to complete a standardised knowledge assessment in the last three months that will be administered and marked by independent assessment organisations. The assessment will enable apprentices to demonstrate knowledge across the Gas engineering standard - core and specific requirements, as detailed in annex A. The assessment will be a one hour electronic or paper-based scenario based 40 question multiple choice paper and taken by the apprentice under examination conditions. The invigilator may be sourced from the employer but will be approved by the appointed assessment organisation. A pass will be a minimum of 80% with a distinction for this element awarded to those with 90% or above. Apprentices will be allowed one re-sit opportunity.

Assessment Organisation Final Decision

Independent assessment organisations will make the final decision on the grade awarded. They will moderate end-point Portfolio assessments on a 'risk based' sampling basis. It can be expected that decisions by 'new' technical experts will receive 100% checks, reducing to a minimum 20% for experienced technical experts where there has been consistency and comparability of assessment decisions demonstrated over time. The moderated portfolio mark will be combined with the knowledge assessment outcome to award a final grade, by applying the points criteria described in the grading section below. There will be close scrutiny and audit to ensure assessment organisations maintain confidence in the rigour and robustness of the preliminary assessment decisions and grades awarded

Grading

Grading will be standardised to ensure consistency across the sector. The apprenticeship will be graded distinction, pass or fail. The final grade will be determined by collective performance in the two assessment tools in the end-point assessment. The weighting of the apprenticeship is 70% on the portfolio, which incorporates the gas safe registration, competency test and work log review and 30% on the independent knowledge assessment. A points system will determine if the apprentice has achieved a distinction, pass or fail and is described below:

Distinction – 10 Points (7.0 Points portfolio + 3 Points Knowledge Assessment). An apprentice will only achieve a distinction if they have performed at distinction level in both the portfolio and knowledge assessment.

Pass – 5 Points (3.5 Points Portfolio + 1.5 Points Knowledge Assessment). An apprentice will only achieve a pass if they have performed at pass level in both the portfolio and knowledge assessment.

Portfolio %	Points	Grade	Knowledge Assessment %	Points	Grade
85-100	7.0	Distinction	90 – 100	3.0	Distinction
70 – 84	3.5	Pass	80 – 89	1.5	Pass
<69	0	Fail	<79	0	Fail

To achieve 'Distinction' the apprentice will be demonstrating performance over and above the standard. To achieve a 'pass' the apprentice will be demonstrating competence across the standard. The following table outlines the scoring criteria that must be applied; detailed guidance will be developed by the assessment organisations.

Table 1

End Point Element	Distinction Criteria	Pass Criteria	Fail Criteria
Portfolio (Maximum 100 Marks) Gas Safe® Mandatory Pass for each appliance to proceed for final portfolio assessment Maximum Marks for each component: <ul style="list-style-type: none"> Gas Safe® registration for four appliances (10 marks) Competency Test (20 Marks) Work Log Review (70 Marks) 	Distinction (85-100) <u>Gas Safe® registration</u> <ul style="list-style-type: none"> Achieve Gas Safe® registration for four appliances <u>Competency Test</u> <ul style="list-style-type: none"> demonstrates outstanding application of knowledge and skills to undertake diagnostic, fault finding, and repair; excellent verbal and written communication and reporting; high levels of customer service including relevant 	Pass (70-84) <u>Gas Safe® registration</u> <ul style="list-style-type: none"> Achieve Gas Safe® registration for four appliances <u>Competency Test</u> demonstrates good application of knowledge and skills to undertake diagnostic, fault finding and repair skills; good verbal and written communication and reporting; good customer service including relevant energy advice for each of the four appliances	Fail <69% <u>Gas Safe® registration</u> <ul style="list-style-type: none"> Not Gas Safe® registered for four appliances <u>Competency Test</u> demonstrates unsafe practice, poor application of knowledge and skills to undertake diagnostic/ fault finding and repair skills; poor verbal and written communication and reporting; poor customer service and inadequate energy advice for one or more of the four appliances

	<p>energy advice for each of the four appliances</p> <p><u>Work Log Review</u></p> <ul style="list-style-type: none"> • Outstanding track record application of knowledge in the real world context demonstrated as per assessment indicators in annex A over and above the requirements of the standard • The Work Log is systematic and contains evidence over and above the standard to demonstrate knowledge, skills and competency as per assessment indicators in annex A • High level of critical reasoning skills displayed on practical tasks demonstrated in the work log interview and progress reviews as per assessment indicators in annex A • Outstanding team and interpersonal skills and the ability to respect the opinion of others demonstrated through the progress reviews 	<p><u>Work Log Review</u></p> <ul style="list-style-type: none"> • Good track record of application of knowledge in a real world context demonstrated as per assessment indicators in annex A • The Work Log is well- structured and contains sufficient and robust evidence to demonstrate knowledge, skills and competency across the standard as per assessment indicators in annex A. • Good critical reasoning skills displayed on practical tasks demonstrated in the work log interview and progress reviews as per assessment indicators in annex A • Good team working and interpersonal skills and ability to respect the opinion of others demonstrated through the progress reviews 	<p><u>Work Log Review</u></p> <ul style="list-style-type: none"> • Poor application of knowledge in a real world context demonstrated as per assessment indicators in annex A • The Work Log lacks sufficient evidence and structure to demonstrate knowledge, skills and competency across the standard as per assessment indicators in annex A • Poor reasoning skills displayed on practical tasks demonstrated in the work log interview and progress reviews as per assessment indicators in annex A • Negative team working and interpersonal skills demonstrated through the progress reviews • Apprentice subject to a company disciplinary procedure
Knowledge Assessment	Score 90% and Above	Score 80-89%	Score <79%

Apprentice Assessment Organisations

The model involves greater employer leadership in the apprenticeship development, implementation and operation, whilst maintaining a high level of scrutiny and assurance within a quality framework.

Assessment organisations will make the final grading decision and ensure the technical experts' contributory decisions are consistent, credible and undertaken with integrity, they will:

- provide documentation and guidance in relation to the requirements of the apprenticeship, work log/interview competency test, marking of the portfolio and quality assurance
- monitor technical experts and provide remedial support to ensure consistency and reliability of judgements on a risk based basis, including observations and moderation of portfolios on a risk banding basis
- develop a range of competency tests for the specialised role. Assessment organisations must consult with representative technical experts when developing competency tests. Assessment organisations must ensure that there is consistency and comparability in terms of the breadth and depth of each competency test assessment, to ensure assessments are reliable, robust and valid and ensure competency accord across the industry
- develop knowledge assessments to meet the needs of each specialised role. Assessment organisations must consult with representative technical experts when developing the knowledge assessment. Assessment organisations must ensure that there is consistency and comparability in terms of the breadth and depth of each knowledge assessment, to ensure assessments are reliable, robust and valid and ensure competency accord across the industry
- develop compensatory assessment for learners with special requirements to allow reasonable adjustments to be made to assess the knowledge, skills and competence of the apprentice through alternative assessment techniques. Whilst, these will remove barriers to participation, they must be designed to ensure judgements are not compromised to health and safety and legal requirements
- appoint and approve technical experts for the purposes of conducting competency test assessments, summative work log review, portfolio marking and initial grading, based on check of knowledge, experience, assessment qualifications and independence
- provide training for technical experts in terms of the requirements of the apprenticeship and operation and marking of the assessment tools and portfolio initial grading
- provide training for technical experts in undertaking fair and impartial assessment and making judgements about performance and the application of knowledge and behaviours within a workplace setting
- hold regular standardisation events for technical experts and panel members to ensure consistent application of the guidance
- ensure assessment organisation staff are trained in assessment and assurance processes and undertake regular continuing professional development
- develop and manage a complaints and appeals procedure.

All assessment organisations must be on the Skills Funding Agency's Register of Apprentice Assessment Organisations (RoAAO). Assessment organisations must work collaboratively to ensure standardisation in delivery of assessment services for the standard e.g. hold cross-organisation standardisation events.

Professional Body Recognition

The Institution of Gas Engineers & Managers (IGEM) has supported the development of the apprenticeship standard and assessment plan. The current edition of the UK Standard for professional engineering competence (UK-SPEC) has been used as a guide throughout. The continuing support and guidance of this and other relevant professional bodies will ensure the apprentices who qualify in Gas engineering, hold eligibility for registration as Engineering Technicians (EngTech).

Recognition at the professional grade of Engineering Technician will follow successful completion of the apprenticeship, through a standard administrative process established with the relevant professional institution.

Employers in the sector recognise the greater opportunity of continuing career development post-apprenticeship that professional registration offers. They are confident that retention and development of highly skilled apprentices will be enhanced by Engineering Technician registration as it will encourage the employee to identify opportunities for career progression and take responsibility for their own professional development.

External Quality Assurance

External quality assurance for this apprenticeship standard will be managed by the Institute for Apprenticeships.

Implementation

Affordability

The initial, indicative end point assessment costs are expected to be in the region of £2,530, approximately 5 % of the total external apprenticeship costs. The development work required will allow the best market solutions to emerge which satisfy employer requirements within the developing co-investment apprenticeship model. The standardised approach will ensure affordability.

Manageability/Feasibility of the Standard and Assessment Plan

While we envisage a three year 'approval' cycle (extending to five if no change looks to be required), we also acknowledge that we need to be prepared to monitor and evaluate early adopters reactions and performance to ensure manageability/feasibility. It is expected that there would be in the region of 309 new starts initially, rising to approximately 785 starts annually.

To help with manageability, and afforded by the existence of knowledge specifications, a number of existing qualifications and training programmes can be mapped to the gas engineering requirements and approved as able to deliver the knowledge requirements for this apprenticeship. This also allows knowledge to be delivered via knowledge 'solutions' (including training programmes) rather than just qualifications.

Employers have internal technical expert capability and links to external partners capable of delivering the required number of apprentices. Employers are expecting to increase the numbers of apprentices and are looking at ways to stagger intakes and make effective use of their internal resources. Employers are planning to build their internal capacity and capability for assessment. Employers across the sector work collaboratively to share best practice and training and assessment resources.

Approved assessment organisations will need to undertake work to develop the end-point assessment.

Annex A Assessment Method by Element of the Standard

Assessment Tool	Key to assessment method identification	
IEA	Subset	Independent End Point Assessment activity – identifies which assessment method to be used for that section of the standard.
Portfolio	P1-3	Portfolio Components
P1	GS	Matters of Gas Safety covered within the Independent Gas Safe® assessment for four appliances – mandatory pass to be eligible for final portfolio assessment.
P2	CT	Competency test
P3	WLR	Work Log Review
KT		Independent Knowledge Test

Core Requirements

Knowledge	EPA
Current Health, Safety and Environmental legislation and regulations applicable to work in the gas industry	GS KT WL
Safe gas and electrical installation, commissioning, decommissioning and/or ongoing service and repair procedures of gas installations and appliances needed to establish the safe operation of the equipment and installation in accordance with industry standards	GS CT WL

Gas and electrical theories and procedures involved in the practical installation, commissioning, decommissioning and/or ongoing service and repair of gas installations, appliances and associated equipment	GS WL KT
Relevant electrical/mechanical principles and how they are applied in work processes and procedures	WL KT
Up to date energy efficiency advice and guidance to be given to the customer	CT WL
Product knowledge to be able to discuss and advise the customer	CT WL
Current regulatory compliance, current Gas Safety (Installation and Use) Regulations and the current Electricity at Work Regulations	GS WL KT
Company rules, policies and procedures as defined by the employer	CT WL

Core Requirements – Skills

Skills	EPA
Undertake and document rigorous risk assessments to ensure the safety of all affected by the work activities	GS CT WL
Take personal responsibility for maintaining safety standards and achieving job objectives	CT WL

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Use and maintain tools, equipment and personal protective equipment (PPE) in a safe and appropriate manner	GS WL
Safe gas and electrical installation, commissioning, decommissioning and/or ongoing service and repair of gas installations and appliances needed to establish the safe operation of the equipment and installation accordance with industry standards	GS CT WL
Work with focus and clear purpose in all conditions and locations, covering business requirements, including lone working and safely adapt working methods to reflect changes in working environments	CT WL
Work on customer premises/property showing appropriate care and respect whilst focusing on safety	CT WL
Use a variety of appropriate and effective communication methods to interact with customers and others to give/receive information accurately, in a timely and positive manner in order to deliver the best possible service	CT WL
Identify where situations or conditions are to unsafe standards and take appropriate actions within your range of competency	GS CT WL
Achieve individual and team tasks which align to overall work objectives, be self-motivated and disciplined in the approach to work activities	WL
Work effectively and efficiently with people from different trades/disciplines, backgrounds and expertise to accomplish an activity in a safe manner, on time, to meet customer expectations	WL
Identify, organise and use resources effectively and sustainably to complete the task with consideration to cost, quality, safety, security and environmental impact	CT WL
Be able to read and follow technical documentation associated with equipment and installation requirements	CT WL

Core Requirements – Behaviours

Behaviours	EPA
<ul style="list-style-type: none"> • Ensure personal wellbeing and the safety of customers and others is a priority • Be risk aware showing the desire to reduce risks through systematic monitoring and checking information and the strict compliance with appropriate regulations and normative documents • Demonstrate an awareness of how the work impacts on others in the work environment • Confidently deliver a polite, courteous, professional service to all customers and members of the public whilst safeguarding customer welfare and recognising vulnerability, equality and diversity • Undertake Continuous Professional Development to enhance knowledge and skills to maintain competence • Recognise personal and professional limitations and seek appropriate advice when necessary • Display self-discipline and self-motivated approach • Exercise responsibilities in an ethical manner 	GS CT WL

Technical Requirements – must be completed in either a domestic or non-domestic setting carrying out service and repair and/or installation

Knowledge	EPA	Skills	EPA
Electrical awareness and be able to carry out safe isolation and essential electrical safety checks	KT WL	Carry out safe isolation essential electrical safety checks	CT WL

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Combustion, combustion analysis, gas properties, carbon monoxide (CO), and types of burners	GS WL KT	Demonstrate ambient air testing/carbon monoxide/dioxide atmosphere testing	GS CT WL
Flues and ventilation principles	GS WL KT	Carry out flue testing	GS CT WL
The necessary safety checks following gas work on an appliance (regulation 26/9)	GS WL KT	Undertake the necessary safety checks following gas work on an appliance (regulation 26/9)	GS CT WL
		Identify faults and take the appropriate action	GS CT WL
		Identify gas safety controls and prove their safe operation	GS CT WL
The range and suitability of appliances	GS WL KT	Undertake the installation and/or repair and maintenance of appliances	GS CT WL
		Complete records and maintain records accordingly	CT WL
		Reinstate following completion of works cleaning up and making good	CT WL
The statutory and normative documentation including building regulations, water regulations and electrical regulations	WL KT	Work in compliance with statutory and normative documentation including building regulations, water regulations and electrical regulations	GS CT WL
Emergency procedures, including gas escapes, report of fumes and for unsafe situations	GS WL KT	Access and comply with technical guidance, bulletins and safety alerts e.g. Gas Industry Unsafe Situations Procedures (GIUSP)	CT WL
A knowledge and understanding of four appliances	WL KT	Demonstrate tightness testing, purging and relight procedures on gas installations	GS CT WL

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System design, location, controls, flue types for appliances and smart controls	GS WL KT	Demonstrate pipework installations/pipework skills, pressure and flow/pipework sizing, meter installations	GS CT WL
An awareness of green technologies	WIL KT		
The properties of Liquid Petroleum Gas (LPG)	WL KT		
An awareness of fuel storage – tanks and bottles (Liquid Petroleum Gas - LPG)	WL KT		